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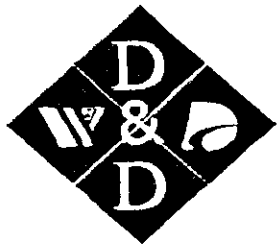

OMEGA WEST DECOMMISSIONING FINAL PROJECT REPORT

Volume 1

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September 8, 2003
OWR-02-112

Subject: Omega West Reactor Demolition and Decontamination
Subcontract No. 41968-000-02 CJ, Task Order No. 01

Dear Mr. Rendell:

Enclosed please find the Omega West Decommissioning Final Project Report. In addition to the report, included are the health and safety monitoring data and inspection forms.

Should you have any questions or require additional information, please do not hesitate to give me a call at (704) 805-2711.

Sincerely,

Joe B. Stringer
President

Enclosure

cc: Scott Havemann, MS M986
James Staehr
Dana Williams
Project File
Correspondence File

WD3
Omega West D&D Project

OMEGA WEST DECOMMISSIONING FINAL PROJECT REPORT

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WD3 Project Manager

OMEGA WEST DECOMMISSIONING FINAL PROJECT REPORT

August 2003

Contract No.
41968-000-02-CJ

Prepared by:
WD-3

Prepared for:
Los Alamos National Laboratory

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LIST OF ACRONYMS AND ABBREVIATIONS

ALARA	as low as reasonably achievable
ANSI	American National Standards Institute
bgs	below ground surface
CGRP	Cerro Grande Rehabilitation
Ci	curies
cm	centimeter
CO	carbon monoxide
cpm	counts per minute
D&D	Decontamination and Dismantlement (or Decontamination and Decommissioning)
DCGLw	Derived Concentration Guideline Level
DOE	United States Department of Energy
dpm	disintegrations per minute
ER	Environmental Restoration
ESH	LANL Environment, Safety and Health Division
FSS	Final Status Survey
ft	feet
HAZWOPER	Hazardous Waste Operator
HEPA	high efficiency particulate air
HP	health physics
LANL	Los Alamos National Laboratory
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
mR	milli Roentgen
mrem	millirem
mSv	milli Sievert
MTR	Material Testing Reactor
MW	megawatt
NaI	sodium iodide
OSHA	Occupational Safety and Health Administration
OWR	Omega West Reactor
PCB	polychlorinated biphenyl
PDSP	Pre-Demolition Survey Plan
PRS	Potential Release Site
R/hr	Roentgen/hour
RCT	Radiation Control Technician
rem	Roentgen equivalent man
RP	Radiation Protection
RWP	Radiological Work Permit
SOW	statement of work
SSHASP	Site Specific Health and Safety Plan
WD3	Washington, Duke Decommissioning and Decontamination

1.0 EXECUTIVE SUMMARY

The contract for the decontamination and decommissioning (D&D) of the Omega West Reactor (OWR) Facility was awarded on June 6, 2002.

Los Alamos National Laboratory (LANL) had the requirement that all structures associated with TA-2 (2-1, 2-44, 2-47, 2-49, 2-51, 2-63, 2-89, and 2-90) and TA-61 (61-24, 61-25, and 61-26) be demolished and the waste removed to an appropriate off-site disposal facility. A complete listing of all items removed and disposed of is detailed in the Facility Description and History Section of this Final Project Report. The area occupied by these structures was returned to original contour and re-seeded. The structures demolished were located in a non-security area and personnel involved with this project were not required to have security clearances. The LANL Cerro Grande Rehabilitation (CGRP) Project Office provided oversight throughout the project.

The objective of the project was to complete decontamination, dismantlement, and facility free release by September 30, 2003. The project was completed ahead of schedule with a safety record of 71,953 work-hours without a lost time incident. This is a significant accomplishment given the nature of the work that was performed.

2.0 PROJECT OBJECTIVES

The OWR D&D Project was directed toward the following goals:

- Removal of radioactive and hazardous materials associated with the Reactor Facility,
- Safely dismantle the OWR utilizing as low as reasonably achievable (ALARA) principles,
- Apply current regulatory criteria for the segregation and release of waste minimizing the radioactive waste,
- Decontamination of the facility to release levels,
- Demolition of the structure and restoration of the site.

These goals were set in order to eliminate the radiological and hazardous safety concerns inherent in the remaining structures, systems and components within the OWR facility to allow, upon completion of the project, unescorted and unmonitored access to the area and to protect the workers during all activities associated with the project.

3.0 FACILITY HISTORY AND DESCRIPTION

TA-2-1 Building 1 was the main reactor building at TA-2. This facility was constructed in 1943 and housed five separate nuclear reactors between 1944 and 1995. The first reactor was a

water boiler type and used enriched uranium (U-235) as a fuel source. This first reactor was housed in what was Room 123. Two additional water boiler nuclear reactors were constructed in Room 122. The final version of these water reactors was completely shutdown in 1974 and dismantled in 1989. The fourth reactor, "Clementine," preceded the OWR. The fifth and final reactor used at this facility was the OWR and was still present in Room 101. A description of the reactor and Room 101 is detailed below. Building 1 was approximately 21,300 ft^2 and in most areas was two stories tall, with some three story areas as well. In addition to the OWR, the building itself contained offices, experimental areas where the other reactors were located, and a variety of laboratories. The building was constructed of wood, cinder block, glass, and concrete with asbestos roofing material and siding. A brick stack, used in association with the boiler room, and a small sub-basement completed the general make-up of this building.

The OWR was housed at TA-2-1, Room 101. It was the fifth and final reactor used at this facility, which began operations in 1943 and was shutdown in 1995. The OWR was built upon the foundation of a previous reactor known as "Clementine." Clementine was a 25-kilowatt, fast-neutron research reactor that used a plutonium fuel source surrounded by mercury coolant. Clementine was first brought to full power in 1949 and was dismantled in 1954. The OWR was a tank-type research reactor that had a full power rating of 8 MW thermal. The reactor was light-water moderated and cooled and used aluminum clad, Material Testing Reactor (MTR)-type fuel elements. The OWR initially went critical in 1956. In 1992, an OWR safety mechanism triggered a reactor scram due to high power. An investigation showed that the scram was due to a leak in the cooling system. The OWR was shutdown and never again operated.

In 1994, the fuel and all control blades were removed from the OWR. Since then, the reactor has been placed in a safe shutdown mode. The reactor vessel has been drained of all coolant. During de-fueling operations, the fuel elements were inspected and it was determined that no damage had occurred.

The room itself was approximately 2,900 ft^2 of concrete, concrete block, steel, and glass (windows).

3.1 Historical Information

3.1.1 Physical Location

The Omega West Reactor was located in the bottom of the Los Alamos Canyon at Technical Area 2. The stack for Omega West was located at the top of the south wall of the Los Alamos Canyon at Technical Area 61.

3.2 Architectural/Engineering Information

3.2.1 General Statement

The OWR was a thermal, heterogeneous, closed tank-type test and research reactor that was light-water moderated and cooled. The OWR used an assembly of MTR-type fuel elements supported inside a stainless steel tank. The core assembly consisted of an aluminum pedestal and grid assembly.

3.2.2 Description of the Reactor and Supporting Features

3.2.2.1 Reactor

The core comprised a rectangular array of four rows by nine columns supported vertically in an aluminum grid plate. The reactor was controlled by eight borated stainless steel control blades, which moved in the slots between the fuel elements. Row 1 comprised a lead gamma-ray shield on the east side of the reactor. Row 6 comprised a beryllium reflector on the west side of the reactor. The north and south faces of the reactor were water reflected.

- Normal operations were at a steady state power of 8 MW utilizing either 31 or 33 fuel elements, allowing for up to five in-core sample positions.
- The beryllium reflector was comprised of 21 beryllium blocks.
- A 5.7-cm thick lead plate and a 12.7-cm thick bismuth shield were located on the opposite side of the core and allowed for experiments with a minimum of gamma-ray or fast-neutron interference to be conducted in a "thermal column" that was made up of stacked graphite within a shield.

3.2.2.2 Architectural Features that Support Reactor Operations

The reactor vessel was a cylindrical tank 8-feet in diameter by approximately 24-feet high, with 1/4-inch walls and a 3/8-inch bottom plate. The material for the tank was stainless steel. The cooling water outlet line penetrated the tank bottom, with the core base casting resting over the outlet. A circumferential rack around the inside of the tank wall provided storage space for up to 53 fuel elements, experiment holders, and sample holders. A 14 by 17 by 96-inch deep storage well welded to and extending below the bottom of the tank provided storage for 32 elements loaded in two boron-stainless baskets.

The biological shield was made of high-density concrete in an irregular octagonal shape surrounding the tank and thermal column. This shape was chosen to maximize the number of experiment ports available for research. Irradiation facilities at OWR comprised a total of:

- Nine 6-inch beam ports,

- Five in-core sample positions,
- Sixteen pneumatic or hydraulic rabbit ports,
- Fifteen thermal column ports.

Instrumentation ports extended that underneath the core form a recess at the bottom of the south face.

From the floor level to a height of 11 feet, the bioshield had a minimum thickness of 5 feet and a specific gravity of about 4.5. Above the 11-foot mark, the shield had a minimum thickness of 3 feet and a specific gravity of about 3.5.

4.0 OVERVIEW OF THE OWR D&D PROJECT

4.1 General

Washington-Framatome ANP Decommissioning and Decontamination (WD3), LLC managed the scope of the OWR D&D Project, which began in June 2003 with the award of subcontract No. 4198-000-02-CJ. The contract stipulated that the scope of work was to be completed by September 30, 2003.

4.2 Major Tasks

The major tasks performed during the D&D of the OWR Reactor facility were conducted in phases. The various activities are described in the following sections.

4.2.1 Pre-Mobilization Activities

Developing the required infrastructure to perform a project of this scope required a great deal of planning and coordination efforts prior to personnel deployment.

4.2.2 Program and Procedure Development

Prior to mobilization, plans and procedures were developed including the following: Project Execution Plan, Quality Assurance Plan, Asbestos Abatement Plan, Health & Safety Plan, and the Final Status Survey Plan. Specific procedures to implement the plans were also developed and implemented.

4.2.3 Procurement

After identifying the equipment, materials, and subcontracts required to execute the scope of work, the procurement of the hardware and services was performed to ensure a timely project start.

4.2.4 Compliance Activities

All permits and plans such as, Storm Water Pollution Prevention Plan, Site Specific Health and Safety Plan (SSHASP), excavation, spark and flame, waste management, and quality assurance, were completed and submitted to LANL and approved prior to work activities beginning onsite.

4.2.5 Mobilization Activities

Site lay down areas and waste storage areas were identified and established. Site utilities such as, water, sewage, electric, and communications were installed prior to personnel and equipment mobilization.

4.2.6 Characterization Activities

Characterization of both radiological and non-radiological hazards was an ongoing process throughout the project. Ensuring the safety of the workers, public and the environment was the priority of the contractor as well as the LANL staff. Samples of waste streams were collected and analyzed on a routine basis to assure proper waste profiling and to ensure proper worker protection from potential hazards.

4.2.7 Hazardous Material Abatement

Southwest Abatement Inc. provided the qualified personnel to perform abatement of lead, asbestos, and polychlorinated biphenyl (PCB) materials in support of the D&D efforts at Omega West.

4.2.8 Decontamination and Dismantlement

The activities covered by this section are summarized in Section 6.4 "Decommissioning Activities."

4.2.9 Final Status Survey

Prior to demolition of a structure, a final status radiological survey was performed to ensure the material was suitable for release. The survey was performed in accordance with guidance provided in NUREG-1575 "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM), U.S. Department of Energy (DOE) Order 5400.5, and the Final Status Survey Plan.

4.2.10 Environmental Remediation/Site Restoration

The site at TA-2 and TA-61 was evaluated for environmental radiological hazards. As a result, a plan was developed by Risk Reduction and Environmental Stewardship - Remediation Services (RRES-RS), to remediate these areas based on a scenario constructed by their group. A Field Implementation Plan was issued for each site and work was performed to remediate radiological

contaminants to levels specified in those plans. The purpose of this statement of work (SOW) was to collect confirmation and characterization samples at the Potential Release Site (PRS) during Cerro Grande Rehabilitation Project (CGRP) D&D activities at TA-2 and TA-61. Activities included soil excavation, radiological walk over surveys, radiological screening, soil sampling, sample analyses, and surveying sample locations. A field operations report will be completed at the end of the project. Additional activities may include excavation and disposal of radioactive contaminated soil encountered not covered by firm, fixed price D&D scope, and the removal of approximately 700 linear feet of acid waste line at TA-2. The acid waste line is not identified as a PRS site, and therefore only the removal and disposal of the pipe is covered under this SOW. No soil sampling or sample analysis will be performed on the acid waste line excavation. The limit of the acid waste line excavation is bounded by the TA-2 site fence.

4.2.11 Demolition

Coronado provided skilled operators and the heavy equipment necessary to execute this activity. Demolition of the above ground structures after abatement and decontamination, when required was accomplished using a CAT 245 track hoe. Bobcats and front-end loaders were employed to transfer the building rubble to waste containers or dump trucks as appropriate for disposal or transport.

4.2.12 Concluding Activities

Preparation of this report, as well as the Final Status Survey Report, comprised the activities included in this segment.

4.2.13 Level of Effort Activities

Project management, Radiation Protection, Health and Safety, and scheduling activities comprised the bulk of the level of effort required to execute this project. Staffing levels were adjusted as needed to ensure adequate management and support resources were on hand.

5.0 OWR D&D PROJECT PLANNING AND ENGINEERING

5.1 Project Organization

WD3 was the prime contractor and responsible for the management and safe execution of the OWR Facility Decommissioning. The management positions that comprise the key functional areas within the project organization are described in the following subsections.

5.1.1 Program Director

The Program Director had programmatic responsibilities for ensuring that home office support was available to the Project Manager. The Program Director coordinated home office support in

the areas of quality assurance, radiological engineering, civil/structural and mechanical engineering, occupational health and safety, and licensing. The Program Director provided the interface between WD3 management, and the site Project Manager facilitated staffing of the technical personnel for decommissioning work activities and Final Status Survey.

5.1.2 Project Manager

The Project Manager reported to the Program Director. He had overall accountability and responsibility for project execution including: quality assurance, managing and directing project resources during each phase of work, and ensuring that cost, schedule, and technical project requirements were met.

5.1.3 Radiation Protection Manager

This position reported to the Project Manager and had responsibility for health physics, decontamination support, radioactive and non-radioactive waste segregation and characterization, and ALARA program implementation during all project phases. This individual, or his qualified designee, was required to be on-site during all phases of work and was responsible for the final closeout survey.

5.1.4 Project Superintendent

The Project Superintendent was responsible for managing the craft performing the decommissioning tasks and activities. He ensured all work was performed in accordance with project plans and procedures and ensured personnel under his direction record facility, environmental, safety and health data as required by project procedures. He managed field operations and executed the work plans, enforced site control, conducted daily briefings with the crew at the start of the shift, and supervised craft and other personnel assigned to work at the site.

5.1.5 Final Survey/Characterization Manager

This position reported to the Project Manager and had responsibility for characterization and Final Status Surveys during all project phases. This individual, or his qualified designee, was required to be on-site during all phases of work and was responsible for the final closeout survey.

5.1.6 Health and Safety Manager

The Project Health and Safety Manager reported to the Project Manager and was responsible for implementing the WD3 and LANL SSHASP requirements for the project to ensure compliance with existing directives on environment, safety, and health issues.

5.1.7 Project Personnel and Subcontractors

WD3 was responsible for overall project management and execution and provided qualified personnel resources experienced in the decommissioning activities. Personnel were assigned to: manage the project, radiation protection program and execution, development of D&D plans and procedures, and the Final Site Survey Plan, Procedures, and Report. Key dismantlement personnel were assigned from MOTA, Coronado, and Southwest Abatement. Duratek provided waste management support. SEC provided personnel to support the WD3 Health Physics organization.

5.2 Training

All project personnel involved with the OWR D&D Project were required by LANL policy to meet minimum training requirements, as identified below:

- For all personnel requiring unescorted access to the OWR D&D Project:
  - General Employee Training,
  - Radiological Worker II,
  - Occupational Safety and Health Administration (OSHA) 40-hour Hazardous Waste Site Operations (HAZWOPER).

All workers at OWR received additional augmented training in the following areas:

- Safe Work Practices,
- Job Safety Analysis,
- Hazardous Communications,
- Radiation Safety,
- Lockout/Tagout,
- Lead Awareness,
- Health and Safety Plan,
- Lifting & Rigging,
- Confined Space,
- Job/Task Analysis,
- NGET,
- Site Specific safety orientation,
- Pre-Job Briefs,
- Stop Work Authority.

5.3 Health and Safety

The Project Health and Safety Manager was responsible for implementing the WD3 and LANL SSHASP requirements for the project to ensure compliance with existing directives on environment, safety, and health issues. The actions implemented are discussed below.

5.4 Environment, Safety, and Health Policy

All project activities were performed in a manner that ensured protection of the environment and the health and safety of the general public and workers. All project personnel had the authority and responsibility to stop work if an unsafe condition or activity was observed. The Project Manager was the only individual at the project level with the authority to restart work after an unsafe condition or activity had been identified and corrected. All work was performed in accordance with the SSHASP.

5.5 Industrial Hygiene

WD3 personnel were responsible for the sampling and management of hazardous substances at the project site in accordance with OSHA and LANL regulations.

5.6 Industrial Safety

WD3 personnel were responsible for all industrial safety aspects of the project and were required to comply with rules and regulations as stated by OSHA, the LANL, and the SSHASP. LANL staff continuously observed subcontractor operations. Daily project meetings, weekly status meetings, and monthly safety meetings were used to keep project personnel aware of potential or existing personnel hazards and accident prevention techniques. A safety incentive program was developed and implemented to recognize safe work practices and proactive approaches to safety.

5.7 Frequent Safety Inspections

Throughout the project, the Project Health and Safety Manager conducted formal safety inspections. These inspections were conducted to ensure that project personnel were aware of, and complied with, all health and safety requirements. This practice instituted a "safety first" mind set with the project staff, which resulted in the project completion with zero lost time injuries.

5.8 General Problems Encountered

There were several minor injuries, typical of construction projects: strained back, twisted ankle, minor cuts. These incidents were addressed and appropriate corrective measures implemented. The most significant safety issue encountered during the project was an incident that involved elevated levels of carbon monoxide (CO) in the containment tent. Two workers inside the tent experienced symptoms associated with exposure to CO (specifically, light headedness/

headaches). Those individuals were taken to the clinic for evaluation. Work inside the tent was suspended and a subsequent evaluation determined that CO emissions of propane-powered equipment used within the tent had degraded to levels much higher than the CO levels at initial testing. In addition, it was discovered that the filters on the ventilation system had become loaded. These factors, coupled with the low airflow area in which the individuals were working, resulted in elevated CO levels. A critique of the incident was performed and corrective actions taken to prevent recurrence.

5.9 Noteworthy Practices

The OWR project personnel maintained a proactive approach to safety throughout the project and completed the project without a lost time accident. The "team" approach to identifying and mitigating hazards resulted in a safe work environment.

6.0 DECONTAMINATION AND DISMANTLING OPERATIONS

6.1 General

The intent of the OWR D&D project was to completely remove all of the hazardous and radioactive materials from the facility. The material was packaged for disposal as radioactive waste, clean waste, or used as backfill in the case of the clean concrete rubble.

The original plan for the reactor D&D required overcoming two distinct challenges, the first being the funding expiration date of September 30, 2003. This required evaluating options to speed the removal of the massive high-density bio-shield. Normal methods in such a confined room (50 feet by 40 feet) would be to use a small, remote operated machine with a 1000 foot-lb hammer in conjunction with diamond wire sawing and conventional torches required to remove rebar and steel core barrel. Previous experience and physical calculations indicated the need for 76 total workdays with this method (including external steel mezzanines) or approximately 3 ½ months of critical path. Removal of one wall and extension of the work area to allow larger machinery to remove the bio-shield was considered but rejected due to restricted overhead clearance and a remaining lack of floor mobility.

The actual method selected was to seal the dry reactor, dismantle the reactor building on three sides and build an 80-foot by 50-foot sprung structure with the fourth side remaining as a shield wall to attach the tent structure. HEPA ventilation was installed to allow five air changes per hour and an excavator (CAT 245) with a 10,000 foot-lb MPK hammer used to dismantle the bio-shield. The use of this large hammer, with chisel point, enabled the entire bio-shield, core barrel, rebar, steel decks, et al to be removed, size reduced and packaged as waste in 21 days, which included four days of unexpected down time during hammer repairs. The net effect was a reduction of schedule by approximately 2 ½ months. In actuality, the core could have been removed even faster had the method of moving, packaging and surveying the waste boxes been faster, since the excavator averaged less than 4 hours per day, waiting on waste removal.

The second challenge related to the method of core component removal. The reactor was shutdown because of a coolant leak in the supply or return lines, below the concrete reactor foundation, which precluded filling the core with water to safely remove components for shielding from the top. This led to a unique design for personnel protection while size reducing and component removal. A moveable shield was built in two pieces to replace the core lid. This shield allowed additional steel plates to be added for personnel protection and was closed when work for the day ceased. Additionally, a 4-foot vertical plate was attached to one side to allow worker protection from scatter.

HEPA ventilation was designed and installed to support all evolutions in the tent and specifically the core itself. One of the 15,000 cfm, (cubic foot per minute) units was attached to the 30-inch cooling water return line and provided a significant downdraft through the core, protecting workers, especially through plasma cutting operations.

During core component removal (after all test devices and Be shield were removed from the test ports), a unique phenomenon occurred. Each time a highly irradiated component was removed, reducing the total curie content of the core, the general core area radiation levels increased There was a 6-foot diameter stainless steel ring, 5 inches deep and 6 inches thick, encasing a 5-inch deep bismuth shield. This stainless steel ring read 200 R/hr on contact and the bismuth surface was only 50 R/hr. However, when it finally became available in the removal sequence, the bismuth shield was pulled free and it was discovered to have a 1-inch steel ring that had been shielded by the stainless ring. The 1-inch steel ring read over 500 R/hr, causing the general area dose rates to increase. Extended ALARA planning and segmentation of the ring was required in the successful removal finally reducing the remaining bioshield.

By selecting pre-qualified subcontractors with reactor dismantlement experience and prior LANL abatement and demolition experience, WD3 was able to mobilize, develop, and have procedures approved in short order. By having LANL, DOE, and WD3 as "team members," specific detailed procedures and ALARA reviews were done at team meetings, corrections and additions were usually made on the spot, approval signatures obtained, and in some cases, work crew pre-job briefings on the procedure conducted in the same day. Administrative delays were virtually non-existent as each group was well aware of expectations and aggressive schedule.

Photographs illustrating various phases of the project can be found in Attachment 1 of this document.

6.2 Project Planning

Following the June 2002 contract signing, work in anticipation of pre-mobilization was continued in earnest. Additionally, training classes were scheduled, and the procurement of equipment and supplies was initiated. Also, additional plans and procedures for the performance of work were developed and submitted to LANL for approval.

6.3 Mobilization

Personnel mobilized to the site on August 1, 2002. All personnel received training that allowed them unescorted access to the OWR facility. The training included:

- LANL Site Safety,
- Radiation Worker II,
- NGET,
- 40 hour Hazardous Waste Operator (HAZWOPER),
- OWR Health and Safety Plan,
- Radiation Protection Plan,
- Respirator Fit Testing.

6.4 Major Work Activities

The site work at the Omega West Reactor site began with the characterization of hazardous and radioactive materials on site. This process continued throughout the duration of the project as areas became available due to continued demolition activities. Following the characterization of an area, abatement of hazardous materials or removal of contaminated systems or structures took place prior to the demolition of that area.

Demolition of the control room (Room 102) and all accessible systems was the first major activity after the initial characterization and abatement.

Work activities in Room 101, the reactor building, included removal of neutron spectrometers and the reactor beam ports. The work instructions for removal of these items are detailed in Section 6.5.

Once the neutron spectrometers and beam ports were removed, Room 101 was demolished and a tent approximately 60 feet wide by 80 feet long by 53 feet high was constructed to house the reactor during demolition of its internal components and the bioshield. The reactor demolition is detailed in Section 5.5. Once all reactor work was completed, the tent was taken down and disposed of as scrap.

Other activities included the demolition of all other site structures and the foundation of Building 1, as well as site restoration and reseeding.

6.5 Decommissioning Activities

The major work activities on the TA-2 Omega West D&D Project are largely represented by the work instructions developed for the project. These work instructions provided operations personnel the information and procedures necessary to perform the D&D of TA-2. These work

instructions are listed in the following table. The table presents the work instruction number and title. In addition, the scope of each of these work instructions is presented in the following paragraphs.

Work Instruction Number	Title
OWR-WI-1.1 (Rev. 1)	Work Instruction for Removing Spectrometers and Fume Hood(s)
OWR-WI-2.0 (Rev. 0)	Work Instruction to Remove Piping, Ventilation and Misc. Contaminated/Non- Contaminated Equipment from TA-2, Room 101,89, and 90
OWR-WI-3.0 (Rev. 0)	Removal of shielding plugs, identification of experimental or waste material, waste removal, removal of the graphite plug and liner, and replacement of the shielding plugs and faceplate
OWR-WI-4.0 (Rev. 0)	Examine and Remove the Contents of Stainless Steel, South Side, Ground Level Instrument Thimbles
OWR-WI-5.0 (Rev. 0)	Thermal Column Graphite Stringer Ports and Instrument Removal
OWR-WI-6.0 (Rev. 0)	Removal of the Contents of the NW and SW Spectrometer Beam Ports
OWR-WI-7.0 (Rev.0)	Control Rod Drive Mechanism Removal
OWR-WI-8.0 (Rev. 0)	Remove Reactor Tank Lid
OWR-WI-9.0 (Rev. 0)	Installation of 24 inch Diameter Ventilation Pipe
OWR-WI-9.0 RAD (Rev. 0)	Remove Internal Vertical Equipment, Bridges and Fuel Racks
OWR-WI-10.0 (Rev.0)	Install Shielded Work Platform
OWR-WI-11.0 RAD (Rev. 0)	Remove Thermal Column Lead Gamma Shield & Beryllium Assembly
OWR-WI-12.0 RAD (Rev. 0)	Remove Beam Port Liners
OWR-WI-13.5 (Rev. 5)	Remove / Transfer Thermal Column Head
OWR-WI-14.0 (Rev. 0)	Remove Grid Plate and Base Assembly
OWR-WI-15.0 (Rev. 0)	Removal of Lead Brick and Graphite from Thermal Column and Shield Door
OWR-WI-16.0 RAD (Rev.0)	Segmentation and Packaging of TA-61 Stack Liner and In Ground Contaminated Piping
OWR-WI-17.1 (Rev. 1)	Breakup Concrete Bioshield and Package Material for Disposal
OWR-WI-18.0 RAD (Rev. 0)	Transfer and Loading of Beryllium Reflector and Gamma Shield
OWR-WI-19.0	TA-61 ER
OWR-WI-20.0 RAD (Rev. 0)	Vent Stack Piping Removal
OWR-WI-21.0 (Rev. 0)	Containment Tent Removal

OWR-WI-1.1 (Rev. 1)

The scope of work associated with OWR-WI-1.0 included removal, size reduction and packaging of Removing Spectrometers and Fume Hood(s) from Rooms 89, 90, and 101.

OWR-WI-2.0 (Rev. 0)

The scope of work associated with OWR-WI-2.0 included removal, size reduction and packaging of piping, ventilation system components and ductwork and miscellaneous radiologically contaminated and non-contaminated equipment from Rooms 89, 90, and 101.

OWR-WI-3.0 (Rev. 0)

The scope of work associated with OWR-WI-3.0 included the removal of shielding plugs, identification of experimental or waste material, waste removal, removal of the graphite plug and liner, and replacement of the shielding plugs and faceplate. The activities associated with this work instruction were to determine as-left conditions of the port and liner components to facilitate removal plans for remaining experimental ports and facilities.

OWR-WI-4.0 (Rev. 0)

The scope of work associated with OWR-WI-4.0 included incremental removal of steel shielding from the front of five instrument ports, examining and removing the contents of each port and installation of temporary shielding in front of the thimble.

OWR-WI-5.0 (Rev. 0)

The scope of work associated with OWR-WI-5.0 included the individual opening of each tube and removal and inventory of the contents of each tube including the shield plug. The contents and shield plugs were also packaged for disposal.

The work was completed in two phases: the first phase consisted of opening each tube and inspection, inventory and characterization of the tube contents. The second phase included the actual removal and packaging of the contents and shield plugs.

OWR-WI-6.0 (Rev. 0)

The scope of work associated with OWR-WI-6.0 included the removal of steel shutter mechanisms associated with the spectrometer ports.

OWR-WI-7.0 (Rev.0)

The scope of work associated with OWR-WI-7.0 included removal of the Control Rod Drive Mechanism. Activities included disconnecting the extension rods from the drive mechanisms, cutting all wires, disassembly of the frame from the reactor tank lid, and packaging materials into supplied containers.

OWR-WI-8.0 (Rev. 0)

The scope of work associated with OWR-WI-8.0 included removal of the reactor lid and associated hardware including removal of the sample change / hydraulic rabbit, equipment connected to the access ports, and vertical ports. The reactor tank lid was removed to allow for installation of the shielded platform and facilitate removal of the reactor internals.

OWR-WI-9.0 (Rev. 0)

The scope of work associated with OWR-WI-9.0 included installation of the in-ground portion of the reactor ventilation piping for use during the reactor internals removal and reactor bioshield demolition.

OWR-WI-9.0 RAD (Rev. 0)

The scope of work associated with OWR-WI-9.0 RAD included removal of the internal vertical equipment, bridges and fuel racks. Size reduction of certain components was required including the two vertical port tubes, eight extension rods, upper and lower bridges, and the fuel racks.

OWR-WI-10.0 (Rev.0)

The scope of work associated with OWR-WI-10.0 included the installation of three rolling shield structures, which comprise the reactor internals work platform. The reactor internals work platform was used for shielding during removal of the remaining reactor internals.

OWR-WI-11.0 RAD (Rev. 0)

The scope of work associated with OWR-WI-11.0 RAD included removal of the thermal column lead gamma shield and beryllium assembly. Removal activities included the removal of the lead gamma shield and beryllium reflector from the upper reactor grid.

OWR-WI-12.0 RAD (Rev. 0)

The scope of work associated with OWR-WI-12.0 addressed the removal and packaging of all port liners in the reactor bioshield, with the exception of the 30 degree inclined port.

OWR-WI-13.5 (Rev. 5)

The scope of work associated with OWR-WI-13.5 included removal of the thermal column head, as well as sectioning of the thermal column head into two pieces and subsequent packaging after removal of the two thermal column head pieces from the reactor tank.

OWR-WI-14.0 (Rev. 0)

The scope of work associated with OWR-WI-14.0 included removal of the grid plate and base assembly. Support activities associated with this work instruction included size reduction and packaging of the upper reactor grid box and the lower reactor base (casting) assembly.

OWR-WI-15.0 (Rev. 0)

The scope of work associated with OWR-WI-15.0 included rolling back shield door, removing lead brick shielding, removal of graphite from thermal column, closing and securing the shield door.

OWR-WI-16.0 RAD (Rev.0)

The scope of work associated with OWR-WI-16.0 addressed the segmentation of the TA-61 stack liner and in-ground piping, size reduction, and packaging the segmented pieces for disposal as radiologically contaminated waste.

OWR-WI-17.1 (Rev. 1)

The scope of work associated with OWR-WI-17.1 included removal of structural steel, demolition of the concrete bioshield and associated lead shielding, and removal of the reactor tank. The scope also included segregating, sorting, size reduction and packaging of all demolition debris for disposal. The concrete associated with the bioshield was removed to 2 feet below the existing floor level. All below grade piping was removed as well.

OWR-WI-18.0 RAD (Rev. 0)

The scope of work associated with OWR-WI-18.0 addressed the transfer and loading of the beryllium reflector and gamma shield from an original liner located in the liner storage cave into the new stainless steel inner vessel and sealing of the inner and outer vessels.

OWR-WI-19.0

The activities at TA-61 included the removal of Cs-137 contaminated soil, the collection of samples defined by the Sample and Analysis Plan, and the activities required to return the TA-61 site back to its natural state. Additional activities included performing soil sampling during Cerro Grande Rehabilitation Program (CGRP) excavation activities associated with Potential Release Site (PRS) 02-006(a), a French drain system located at the former Omega West Reactor Stack.

OWR-WI-20.0 RAD (Rev. 0)

The scope of work associated with OWR-WI-20.0 addressed the removal, size reduction and packaging of the 2-inch diameter stainless steel vent pipe and 1-inch stainless steel acid waste line running from the east end of TA-2 to TA-61.

A portion of the 2-inch and 1-inch stainless steel piping runs was located on relatively flat ground and a portion of the pipe was located on a steep slope (canyon wall). The portion of the pipe located on flat ground was approximately 6 to 8 feet below ground surface (bgs) and the portion located on the steep slope was approximately 3 feet bgs. Excavation of the piping was accomplished using a combination of hand digging, backhoes of various sizes, or an equivalent track hoe.

OWR-WI-21.0 (Rev. 0)

The scope of work associated with OWR-WI-21.0 addressed the removal, size reduction, and loading of the containment tent as industrial waste.

6.5.1 Remove and Package Miscellaneous Debris

The removal, sorting, and packaging of miscellaneous debris was initiated and completed in May 1999.

6.5.2 Perform Surveillance and Maintenance

Throughout the project, WD3 was responsible for performing routine surveillance and maintenance activities at the OWR facility. These activities included the following:

- Daily – forklift inspection, crane inspection/operational check, building alarm system operational check, ventilation system operational check, and hoisting and rigging equipment inspection prior to use.
- Monthly – flammable storage cabinet inspection, ladder inspection, and eyewash station inspections.

6.5.3 Perform Pre-Demolition Survey (Final Survey)

Prior to demolition of a structure, a final status radiological survey was performed to ensure the material was suitable for release. Contaminated materials were segregated and disposed as radioactive waste. The survey was performed in accordance with guidance provided in NUREG-1575 MARSSIM, DOE Order 5400.5, and the Final Status Survey Plan. Details of the final status survey are provided in Section 7.0.

6.5.4 Demobilization of the Site

Final demobilization will be performed upon completion of the Environmental Restoration (ER) Phase. Upon completion of the D&D activities, the project entered the ER Phase on July 17, 2003. Demobilization of project personnel was performed gradually during the course of the project. This phased approach helped ensure adequate staffing at all times. The completion of the ER Phase was completed on August 27, 2003.

6.5.5 Preparation of Final Reports

There are two Final Reports associated with the Omega West D&D project.

- The Final Project Report documents the work performed during the decontamination and dismantlement of the OWR Facility.
- The Final Status Survey Report documents the radiological survey data collected during the decontamination and dismantlement of the OWR Facility. In addition, summary data and conclusions are presented. The Final Status Survey Report was submitted to LANL in July 2003.

7.0 PRE-DEMOLITION RADIOLOGICAL SURVEY (Final Status Survey)

7.1 Survey Objectives

7.1.1 Radiological Release Criteria

Statistically based radiological surveying and sampling was conducted per the guidance in Section 5.5 of MARSSIM and the Pre-Demolition Survey Plan (PDSP) developed by WD3. The location of radiological survey/sampling points was delineated per the guidance provided in Section 5.5 of MARSSIM and the PDSP. Radiological field measurement methods and instrumentation were delineated per the guidance in Section 6 of MARSSIM and the PDSP. Radiological sampling and preparation for laboratory measurements were delineated per Section 7 of MARSSIM and the PDSP.

7.1.2 Demonstrating Compliance with Release Criteria

WD3 employed an alternate method described in MARSSIM Section 2.6.1, which was to perform a direct comparison of each measurement result to the Average Derived Concentration Guideline Level ($DCGL_W$). Specifically, MARSSIM Section 2.6 states "At some sites a simple comparison of each measurement result to the $DCGL_w$, to demonstrate that all the measurement results are below the release criterion, may be more effective than statistical tests for the overall demonstration of compliance with the regulation provided an adequate number of measurements are performed". A degree of conservatism is built into this method. WD3 believes that this type of conservatism is warranted, especially at a facility where a low potential for residual contamination exists.

7.2 Release Criteria

7.2.1 Surface Contamination Release Limits

- 5,000 dpm/100 cm^2, fixed and removable, averaged over 1 m^2,

- 15,000 dpm/100 cm^2, maximum fixed and removable, over 100 cm^2,
- 1,000 dpm/100 cm^2, removable contamination.

Surface contamination guidelines for transuranic alpha contamination are:

- 100 dpm/100 cm^2, fixed and removable, averaged over 1 m^2,
- 300 dpm/100 cm^2, maximum fixed and removable, over 100 cm^2,
- 20 dpm/100 cm^2, removable contamination.

7.3 Final Survey Results

The Final Status Survey was performed in accordance with approved plans and procedures. The Final Status Survey was conducted in segments throughout the course of the project. The survey data was included in the *"TA-2 Omega West Reactor Final Status Survey Report"* submitted in July 2003. All final survey objectives were met. In addition, no single measurement exceeded the $DCGL_{EMC}$ or the $DCGL_w$, and therefore no averaging was performed. Lastly, scanning surveys and random and biased measurements did not indicate residual activity requiring further investigation or evaluation. Radioactive material that remains within the facility has been characterized, secured to prevent access, and posted where appropriate. Consequently, the OWR facility may be released for unrestricted use.

8.0 RADIOGICAL SAFETY

8.1 Radiation Protection

8.1.1 Radiation Protection Staffing

The initial RP staff consisted of one Radiation Protection (RP) Manager and six RP technicians. Over the course of the project, Radiological Engineering support was provided by home office personnel. A Final Status Survey (FSS) Manager and two additional technicians supplemented the staff. The RP Manager and FSS Manager performed radiological assessments of on-going work in the radiological controlled areas. The RP Manager developed Radiation Work Permits (RWPs) and Pre- and Post-Job ALARA Reviews. The RP Manager ensured all radiological procedures and Federal Codes were adhered to. The FSS Manager directed the Final Status Survey and Characterization efforts.

The remainder of the technicians performed job coverage in Radiologically Controlled work areas. The technicians performed radiation, contamination, and airborne surveys, and performed daily routine surveys in the facility.

All of the WD3 RP personnel were qualified to American National Standards Institute (ANSI) 3.1 Senior Technician (>3 years of HP service) and DOE Radiation Control Technician (RCT).

8.1.2 Instrumentation and Equipment

The following instrumentation was utilized during the D&D of OWR.

Measurement Type	Detector Type	Detector Area-Density	Typical Manufacturer & Model #	Units
Surface Alpha/Beta-Gamma	Proportional	100 cm^2 1 mg/cm^2	Eberline HP-100CGS	cpm
Surface Beta-Gamma	Gas Flow Proportional	425 cm^2 0.8 mg/cm^2	Ludlum 43-37	cpm
Surface Beta-Gamma	Geiger-Mueller	15.5 cm^2 2 mg/cm^2	LND/TGM	cpm
Removable Surface Alpha/Beta-Gamma	Gas Flow Proportional	24.2 cm^2 80 $\mu g/cm^2$	Protean WPC 9550	cpm
Gamma Exposure Rate	Geiger-Mueller	2 in x 1 in	Eberline Teletector	mR/hr-R/hr
Gamma Exposure Rate	Ion Chamber	1.5" dia. x 8.2"	Eberline RO-7 Low range detector	0 to 1,999 mR/h gamma mR/hr-R/hr
Gamma Exposure Rate	Ion Chamber	1.5"dia. x 4.6"	Eberline RO-7 High range detector	0 - 19.99 kR/h gamma, 0-19.99 kRad/h
Gamma Exposure Rate	Ion Chamber	Detector Vol. 13.4 in3	Eberline RO-20	mR/hr-R/hr
Gross Gamma Scan	NaI (Tl)	2 in x 2 in	Ludlum Model 2221	cpm
Gamma Spectroscopy	NaI (Tl)	2 in x 2 in	EG&G Ortec	Geometry Dependent
Background and Special Measurements	High-Purity Germanium	2 in x 2 in	EG&G Ortec/Canberra	Geometry Dependent

Portable field instruments consisted of Ludlum Ion Chambers, Ludlum GM tube detectors, and sodium iodide (NaI) scintallators (micro-Rem) detectors. The Count Room equipment consisted of one gas proportional analyzer (Protean IPC 9025) and one multi channel analyzer with an NaI detector. All instrumentation was calibrated and major repairs were performed by the vendor. WD3 qualified technicians performed minor repairs.

Air sampling for the project was performed using continuous duty rotary Vane air sampling systems (low volume air samples). Personal Breathing Zone air sample pumps were also utilized. The vendor calibrated this equipment, with minor repairs performed by WD3 qualified technicians.

Dose of legal record was measured using thermoluminescent dosimeter badges provided by LANL-HP. Supplemental dosimetry, used to monitor incremental exposure, was performed

using Siemens MK2 Electronic Personnel Dosimeters. This system was used to track incremental personnel exposure.

8.1.3 Radiological Conditions

Dose Rates

The highest dose rates encountered occurred during the removal and transfer of the Beryllium Shield. The maximum contact reading on this component was 5,000 R/hr.

Other high dose rate areas included the Reactor Beam Gates and Thermal Column. High dose rates were also encountered on legacy material found within the beam ports. This material ranged from 100 mR/r to 900 R/hr.

Contamination Levels

Smearable contamination in the D&D work areas ranged from less than (<) 1000 dpm/100 cm^2 to approximately 300,000 dpm/100 cm^2 Beta-Gamma. Generally the Alpha contamination was <20 dpm/100 cm^2. The higher levels of contamination were encountered during the removal of the Beam Gates, bio-shield wall and internal piping located inside the bio-shield wall. General work area contamination levels ranged from <1,000 dpm/100 cm^2 up to 10,000 dpm/100 cm^2 Beta-Gamma.

Airborne Radioactivity

All areas of the OWR D&D project were continuously monitored for radiological airborne contaminants. No elevated radiological air activity was encountered during the D&D work activities.

8.1.4 Radiological Incidents

Personnel Contamination

There were two personnel contamination incidents that involved a total of four individuals, which occurred during the D&D efforts. Both of these events were minor and did not involve an uptake or dose assessment. The events were evaluated and corrective measures were implemented to prevent recurrence.

Exposure Control

The performance of work activities in accordance with ALARA principles was a management priority. The removal of the graphite blocks from the thermal column was an evolution that involved high dose rates. An ALARA estimate of 4.3 person rem was calculated for this task. However, it was determined in the execution of the task that an additional dose of ~4.3 person rem would be required to complete the work. Work was halted to evaluate the options on the best

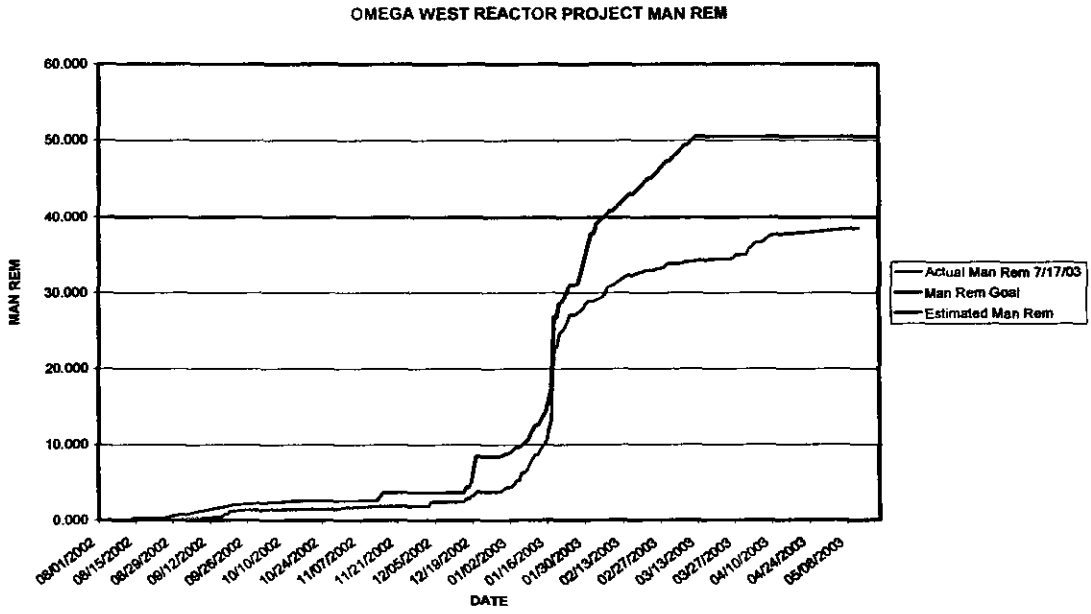
approach. It was decided to complete the task and notify LANL of the decision later. Although the dose received was within the allowable exposure limits, it did exceed the original dose estimate and LANL should have been notified prior to proceeding. As a result of this occurrence, a management review was performed by WD3. A deficiency was identified in the ALARA review process that resulted in doses that were greater than expected, but still within the limits. Management changes were made to ensure the proper level of attention was given to future ALARA-related decisions.

Radiation Work Permits

Commencing July 2002 through July 2003, 12 RWPs were issued. RWPs describe the nature and location of a specific work evolution and contain specific instructions for engineering controls, protective clothing requirements, and radiological conditions for the areas. RWPs also provide a person-hour estimate and a person-rem estimate for a particular job or evolution. RWPs are generally written for a specific period of time.

8.1.5 ALARA

A project dose estimate developed prior to the start of on-site activities was used to determine project staffing and tracking of actual-to-planned project exposure. The LANL administrative limit of 1.0 rem (10 mSv) per individual per year was adopted as the project administrative limit. It was necessary to request dose extensions for several individuals in order to accomplish the planned activities. The original ALARA project dose estimate was 50 person-rem. A project goal of 40 person-rem was established. The final project dose was 39.95 person-rem or 80% of the estimate and 99% of the project ALARA goal. The following graph provides a comparison of actual exposure data verses goal and estimate over the life of the project.



9.0 WASTE MANAGEMENT

9.1 Waste Types

Material removed from the OWR Reactor facility was separated into five categories: low-level radioactive waste, mixed waste, hazardous waste, recoverable material, and clean scrap.

- Low-level radioactive waste was packaged and shipped to Envirocare and TA-54 for disposal.
- Mixed waste (material that contained both hazardous material, lead, combined with radioactive material) was packaged and transferred to TA-54 for further processing and/or storage at LANL. Contaminated lead from the reactor bioshield was shipped to Envirocare for disposal.
- Hazardous waste (small quantities of oil and grease) was packaged and disposed of at a licensed facility or processed at LANL. All asbestos containing materials were shipped to the Painted Desert licensed facility.
- Clean Concrete was transported to an off-site facility, rubblized and returned to site for use as backfill.
- Clean scrap (equipment and materials removed from the OWR facility) was transferred to Rio Rancho landfill for disposal.

WD3 and Duratek were responsible for packaging waste in accordance with LANL and Department of Transportation regulations. Disposition of all materials was the responsibility of Duratek and LANL.

9.2 Waste Volumes

A summary of waste and recoverable materials removed during the OWR D&D Project is shown in Table 9.1. Over 15,000 ft^3 of waste was loaded and shipped to Envirocare for disposal. In addition, 22,204 ft^3 of waste was transferred to Area G for final disposition.

Table 9.1.

Waste Removed From the OWR Facility

Waste Stream	volume (ft^3)	Curies
Reactor Components (liner shipments)	1,718	1.31E+04
TA61 soil	2,160	1.26E-01
Bioshield	17,972	1.07E+01
Contaminated Equipment	336	1.34E+00

Waste Stream	volume (ft^3)	Curies
Activated Steel	2,064	1.17E-01
Laboratory Slab	2,700	1.24E-03
Lead Waste (D008) to Envirocare	432	1.29E+00
D008 to Area G	7.5	
Mercury Waste (D009) to Area G	192	
Tetrachloroethylene (D0039) / Trichloroethylene (D0040) to Area G	7.5	
Reactor vent pipe	192	1.17E-03
Rx Bldg. Slab	11,500	4.12E-02
TA-2 ER Waste (Envirocare)	9800	
Volume to Envirocare (ft^3)	**24,880**	
Volume to Area G (ft^3)	**22,204**	
Totals	**47,084**	**1.31E+04**
Non-Rad Material (offsite disposal)*	**171,720**	N/A

*This includes all materials shipped off site as clean waste, either to a clean landfill or to recycle.

9.3 Waste Packaging

Waste packaging operations complied with LANL Waste Handling Procedures Manual, U.S. Department of Transportation (49CFR) regulations, and requirements of the designated disposal site.

- Low-level and mixed waste - Duratek-supplied B-25 and B-12 metal boxes, IP1 Intermodal 25ft^3 containers, 17H 55-gal (208.18 l) drums, and steel liners were loaded, sealed, and transferred to TA-54 WMO for final disposition.
- Clean scrap - Was transferred to Rio Ranch landfill for disposition
- Hazardous Waste - small quantities of liquid hazardous waste (oil and grease) were packaged into appropriate containers and transferred to TA-54 WMO for disposition.
- A specially designed pressure vessel was fabricated for the storage of the Be Shield.

9.4 Waste Transport

Transportation of project waste was the responsibility of Duratek. Waste packages were prepared for shipment by Duratek and delivered to LANL or Envirocare for final disposition.

10.0 COST AND SCHEDULE

10.1 OWR D&D Project Cost

The OWR Reactor D&D Project was a fixed price contract originally valued at $14.2M. The contract value was increased to a value of approximately $16.2M following scope additions and deletions.

Change Order	Description
001	Replaced by CO OWR-005
002	LANL-Required training for RC Technicians
003	Beam port inspection and cleanout of uncharacterized waste dictates alternate method for removal and disposal
004	Insufficient characterization of neutron spectrometers dictate alternate method for removal and disposal - Northwest Spectrometer labor estimate
005	Credit to Contractor for providing power and water to the site
006	WD3 shutdown cost estimate
007	WD3 estimate for design and construct pressure vessel for Beryllium Reflector
008	WD3 estimate for implementing recovery schedule
009	ER Work at TA-61
009 Rev.1	ER Work at TA-61
010	Decontamination of Room 115, previously uncharacterized and containing alpha contamination
CONTRACT MOD #8	ER Work at TA-2
011	Additional Scope Waste to Envirocare
012	Additional Scope Waste Containers - Area G
013	Additional Scope Intermodal Containers - Area G
014	Cask Offload Support at TA-54 Area G
015	WD3 Mercury sampling
016	LANL requires disposal of metallic debris v. recycle
017	Credit to Contractor for reduced scope of demolition

10.2 OWR D&D Project Schedule

The OWR Reactor D&D Project, aggressively scheduled, began in July 2002 and finished in July 2003, a duration of 12 months. Actual on-site work started in July 2002 and the D&D phase was completed in July 2003. On November 15, 2002, a Stop Work Order was issued for Decommissioning operations at OWR. The OWR facility was downgraded to Radiological status in 1995; however, upon review of current characterization data, FWO-CGRP personnel decided that the Material at Risk (MAR) for the facility likely exceeded the Category 3 threshold. As a result of the reclassification, a delay of 21 days occurred. In spite of the delay, the project was completed about 90 days earlier than the contract date.

The following table presents the planned work activity along with the associated start and finish dates.

Activity	Start	Finish
Contract Award	06-Jun-02	
Sampling Plan	17-Jun-02	28-Jun-02
Baseline Project Schedule	17-Jun-02	05-Jul-02
Quality Assurance Plan	17-Jun-02	17-Jul-02
Traffic Control Plan	17-Jun-02	17-Jul-02
Asbestos Abatement Plan	17-Jun-02	17-Jul-02
Storm Water Prevention Plan	17-Jun-02	17-Jul-02
Waste Management Plan	17-Jun-02	17-Jul-02
Health & Safety Plan	17-Jun-02	17-Jul-02
D & D Work Plan	17-Jun-02	17-Jul-02
Demolition Plan	17-Jun-02	17-Jul-02
Video Camera/Radios	17-Jun-02	19-Jul-02
Plumbing Contract	17-Jun-02	19-Jul-02
Electrical Contract	17-Jun-02	25-Jul-02
Procure M & T	17-Jun-02	26-Jul-02
Safety	17-Jun-02	26-Jul-02
Project Execution Plan	17-Jun-02	16-Sep-02
Sampling Procedures	17-Jun-02	16-Sep-02
Garbage Contract	17-Jun-02	25-Sep-02
Sanitary System Contract	19-Jun-02	23-Jul-02
MOTA Subcontract	24-Jun-02	19-Jul-02
Site Processing	24-Jun-02	16-Aug-02
Security Plan	27-Jun-02	17-Jul-02
LANL Security Plan Approval	27-Jun-02	17-Jul-02
LANL HASP Approval	27-Jun-02	19-Jul-02
Rebaseline Project	27-Jun-02	02-Aug-02
Trailer Contract	01-Jul-02	03-Jul-02
Underground Utility Location	08-Jul-02	12-Jul-02
Design Vent & Effluent Monitoring	08-Jul-02	12-Jul-02
NMED Notification	08-Jul-02	17-Jul-02

Activity	Start	Finish
NESHAP Notification	08-Jul-02	17-Jul-02
Notify Utility Outage	08-Jul-02	17-Jul-02
ESH-17 Notification	08-Jul-02	17-Jul-02
Provide Listing of Generators	08-Jul-02	17-Jul-02
Temp Structure Procurement	08-Jul-02	26-Jul-02
RPT Contract	08-Jul-02	26-Jul-02
Professional Services Contract	08-Jul-02	02-Aug-02
Duratek Subcontract	08-Jul-02	13-Aug-02
Coronado Subcontract	08-Jul-02	22-Aug-02
SW Abatement Subcontract	08-Jul-02	22-Aug-02
Readiness Review		17-Jul-02
Laundry Contract	17-Jul-02	16-Aug-02
LANL Cut Cables out of Substation	18-Jul-02	23-Jul-02
Final Status Survey Plan	18-Jul-02	13-Sep-02
Excavation Permits	19-Jul-02	25-Jul-02
Safety Supplies	19-Jul-02	22-Aug-02
Dirt Moving Contract	22-Jul-02	22-Jul-02
LANL Install 13KV Transformer	24-Jul-02	25-Jul-02
Safety Training for Mob	24-Jul-02	23-Aug-02
Permit to Install Sanitary System	25-Jul-02	25-Jul-02
Purchase Computers	25-Jul-02	25-Jul-02
Crane Services	25-Jul-02	26-Jul-02
Site-Specific HASP Training	25-Jul-02	31-Jul-02
Site -Specific RWP Training	25-Jul-02	31-Jul-02
Bond/Insurance	25-Jul-02	02-Aug-02
Spark and Flame Permits	25-Jul-02	15-Aug-02
Warehouse,Supplies	25-Jul-02	16-Aug-02
Medical/Respiratory Fit	25-Jul-02	23-Aug-02
LANL Supplied Training	25-Jul-02	23-Aug-02
Temp Containment Structure Contract - Labor	25-Jul-02	04-Oct-02
LANL Remove Loose Eqmt Prior to Contract Work	25-Jul-02	31-Oct-02
Install Sanitary System	26-Jul-02	16-Aug-02
Install Computers in Trlrs	26-Jul-02	16-Aug-02
HAZWOPER 8 Hr Training	29-Jul-02	31-Jul-02
General Contract Requirements Complete		30-Jul-02
Notice to Proceed	31-Jul-02	
Office Utility Installation	31-Jul-02	09-Aug-02
Begin Mobilization	01-Aug-02	
Mobilize MOTA	01-Aug-02	01-Aug-02
Erosion Control	01-Aug-02	02-Aug-02
Repair Fencing	01-Aug-02	02-Aug-02
Fence Installation	01-Aug-02	02-Aug-02
Biological Hazard Control	01-Aug-02	02-Aug-02
Move Dirt / Spread Rock	01-Aug-02	02-Aug-02
Install Temp Electrical	01-Aug-02	06-Aug-02
Traffic Control	01-Aug-02	08-Aug-02

Activity	Start	Finish
Road Improvements	01-Aug-02	09-Aug-02
Establish Postings,Controls	01-Aug-02	15-Aug-02
Setup Trailers	05-Aug-02	16-Aug-02
Implement Support Services	06-Aug-02	09-Aug-02
Install Water Supply to Trlrs	07-Aug-02	13-Aug-02
Install Network	09-Aug-02	12-Aug-02
Install Pole for Sat Dish	09-Aug-02	12-Aug-02
Move Staff into Trlrs	09-Aug-02	12-Aug-02
LANL Provide Water Connection (ref. OWR-005)	09-Aug-02	13-Aug-02
Install Sat Dish	12-Aug-02	13-Aug-02
Prepare Rx for Video	12-Aug-02	14-Aug-02
Remove Oil from Neutron Spectr. (ref. OWR-004)	13-Aug-02	23-Aug-02
Packaging/Shipping Haz/Rad Waste	13-Aug-02	03-Apr-03
Video Inspection Rx Cavity	14-Aug-02	15-Aug-02
LANL Power-up Substation	16-Aug-02	16-Aug-02
HAZ-Characterize Room 101	19-Aug-02	22-Aug-02
RCT Core Training (ref. OWR-002)	19-Aug-02	23-Aug-02
Mob Demo Contractor	22-Aug-02	22-Aug-02
Reactor Room Asbestos Abatement	22-Aug-02	23-Aug-02
Reactor Room Asbestos Conf. Survey	22-Aug-02	23-Aug-02
Mob Abatement Contractor	23-Aug-02	23-Aug-02
Reactor Room Asbestos Abatement Complete		23-Aug-02
Empty All Beam Ports (ref.OWR-003)	26-Aug-02	21-Sep-02
RPT Instruments	28-Aug-02	28-Aug-02
Inspect/Train on Forklifts/Manlifts	28-Aug-02	28-Aug-02
LANL Calibrate Instruments	28-Aug-02	28-Aug-02
Start-Up Activities Complete		28-Aug-02
Characterize Wooden Bldg for Abatement	28-Aug-02	30-Aug-02
RAD-Characterize Wooden Bldg	28-Aug-02	30-Aug-02
Characterize Rooms 102-113 for Abatement	29-Aug-02	30-Aug-02
Characterize Roof	29-Aug-02	30-Aug-02
RAD-Characterize Room 101	29-Aug-02	30-Aug-02
LANL Install Phone Lines	29-Aug-02	30-Aug-02
Mobilization Complete		30-Aug-02
Prepare Fermi Room for Neutron Spectr.	06-Sep-02	06-Sep-02
Remove/Demo Labyrinth Shield	06-Sep-02	06-Sep-02
Plan HEPA Tie to RX Return Line	06-Sep-02	19-Sep-02
Move Neutron Spectrometers	07-Sep-02	07-Sep-02
Remove 101 Fume Hood	07-Sep-02	07-Sep-02
Remove Excess Material 101	07-Sep-02	07-Sep-02
Complete WI's for Beam Ports	07-Sep-02	09-Sep-02
Demolish TA-89	09-Sep-02	09-Sep-02
TA-2 Room 200 Abatement	09-Sep-02	18-Sep-02
TA-2 Room 201 Abatement	09-Sep-02	18-Sep-02
TA-2 Room 202 Abatement	09-Sep-02	18-Sep-02
TA-2 Room 203 Abatement	09-Sep-02	18-Sep-02

Activity	Start	Finish
TA-2 Room 204 Abatement	09-Sep-02	18-Sep-02
TA-2 Room 205 Abatement	09-Sep-02	18-Sep-02
TA-2 Room 206 Abatement	09-Sep-02	18-Sep-02
TA-2 Room 207 Abatement	09-Sep-02	18-Sep-02
TA-2 Room 208 Abatement	09-Sep-02	18-Sep-02
RadTech Support for Abatement	09-Sep-02	13-Dec-02
ALARA Review - All Ports	10-Sep-02	10-Sep-02
Inspect Thermal Ports	10-Sep-02	21-Sep-02
Inspect Instrument Ports	12-Sep-02	13-Sep-02
Locate Rx Return Line	17-Sep-02	17-Sep-02
TA-2 Room 103 Abatement	18-Sep-02	11-Oct-02
TA-2 Room 104 Abatement	18-Sep-02	11-Oct-02
TA-2 Room 108 Abatement	18-Sep-02	11-Oct-02
TA-2 Room 109 & 110 Abatement	18-Sep-02	11-Oct-02
TA-2 Room 111 & 112 Abatement	18-Sep-02	11-Oct-02
TA-2 Room 113 Abatement	18-Sep-02	11-Oct-02
Demo 103 to 113 Internals	18-Sep-02	23-Oct-02
TA-2 Room 116 & 117 Abatement	18-Sep-02	13-Nov-02
TA-2 Room 118 Abatement	18-Sep-02	13-Nov-02
TA-2 Room 119 & 120 Abatement	18-Sep-02	13-Nov-02
TA-2 Room 100E Abatement	19-Sep-02	21-Sep-02
TA-2 Room 121 Abatement	19-Sep-02	21-Sep-02
Inspect Neutron Spectr. Ports	21-Sep-02	21-Sep-02
Remove Excess Piping, Misc.	23-Sep-02	24-Sep-02
2-63 Asbestos Abatement	23-Sep-02	24-Sep-02
Utility Locations, i.e., Vent Line, RW Line	23-Sep-02	24-Sep-02
Demo Room 101 Internals & Fume Hood	23-Sep-02	27-Sep-02
Remove Concrete & Monorail	23-Sep-02	30-Sep-02
Gut Room 101	25-Sep-02	27-Sep-02
Dig Spots on Vent Line/Prep.	30-Sep-02	01-Oct-02
Final Survey Room 101	30-Sep-02	04-Oct-02
Demolish Wooden Bldg Interior	01-Oct-02	12-Mar-03
Procurement Complete		04-Oct-02
Tie HEPA Line to RX Return	04-Oct-02	09-Oct-02
Protect Fuel Pool	07-Oct-02	09-Oct-02
Protect Rx Vessel	07-Oct-02	09-Oct-02
Demo Room 101 to Grade	08-Oct-02	15-Oct-02
Rad Survey Vent Stack	10-Oct-02	11-Oct-02
Survey/Release Rooms 103-113	15-Oct-02	31-Oct-02
Prepare/Dirt Work for Temp Structure	16-Oct-02	16-Oct-02
Disassy & Pkg Neutron Spectrometers	21-Oct-02	25-Oct-02
Install Temp Structure	23-Oct-02	11-Nov-02
TA-2 Room 115 Abatement	24-Oct-02	31-Oct-02
Final Release Survey TA-63	31-Oct-02	11-Nov-02
Decon Wooden Bldg	01-Nov-02	05-Nov-02
61-24 Asbestos Abatement	04-Nov-02	13-Nov-02

Activity	Start	Finish
Remove Vent Stack	04-Nov-02	15-Nov-02
TA-2 Room 126 Abatement	06-Nov-02	14-Nov-02
TA-2 Room 122 Abatement (FO OWR-012)	06-Nov-02	15-Nov-02
TA-2 Room 123 Abatement (FO OWR-012)	06-Nov-02	15-Nov-02
TA-2 Room 124 Abatement (FO OWR-012)	06-Nov-02	15-Nov-02
Install HEPA & Test (FO OWR-012)	12-Nov-02	15-Nov-02
Stop Work Order Issued	15-Nov-02	
Stop Work Order Schedule Impact (ref. OWR-006)	15-Nov-02	12-Dec-02
Establish Task Order for ER at TA-61	15-Nov-02	01-Apr-03
LANL Ltd Relief to Stop WO-Non D&D	20-Nov-02	
LANL Ltd Relief to Stop WO-Ltd D&D	20-Nov-02	
Resume Install HEPA & Test (FO OWR-014)	20-Nov-02	11-Dec-02
Assy/Install Containment Airlock (FO OWR-014)	20-Nov-02	12-Dec-02
Resume TA-2 Room 122 Abatement (FO OWR-013)	20-Nov-02	13-Dec-02
Resume TA-2 Room 123 Abatement (FO OWR-013)	20-Nov-02	13-Dec-02
Resume TA-2 Room 124 Abatement (FO OWR-013)	20-Nov-02	13-Dec-02
Install Containment Exh Duct (FO OWR-014)	25-Nov-02	03-Dec-02
Decon Room 115 Overhead	25-Nov-02	11-Dec-02
Construct Interior Containment Tent (FO OWR-014)	03-Dec-02	04-Dec-02
Remove Fence	05-Dec-02	13-Dec-02
LANL Relief to Stop WO-Cont. Tent	06-Dec-02	
Lay Steel Plates/Test Air Pallets (FO OWR-017)	06-Dec-02	11-Dec-02
Sheet Siding Abatement	09-Dec-02	13-Dec-02
Recover from Stop Work Order	13-Dec-02	13-Dec-02
Stage Crane & Forklift	16-Dec-02	16-Dec-02
Remove Argon System	16-Dec-02	16-Dec-02
Remove Tank Lid/Structure	16-Dec-02	17-Dec-02
Final Survey Room 115	16-Dec-02	06-Jan-03
Install Platform/Shielding	17-Dec-02	19-Dec-02
Remove Beam Port Liners	17-Dec-02	31-Dec-02
Waste Container Sys Mod 9 Submitted	19-Dec-02	19-Dec-02
Remove Internal Vert Equipment/Bridges	19-Dec-02	20-Dec-02
Remove Fuel Storage Racks	19-Dec-02	20-Dec-02
Rig/Remove Lead Shield	02-Jan-03	04-Jan-03
Remove Misc Systems	02-Jan-03	06-Jan-03
Rig/Remove Be Reflector	02-Jan-03	06-Jan-03
Remove Emergency Spray Systems	03-Jan-03	04-Jan-03
Final Survey/Release Wooden Bldg	06-Jan-03	13-Jan-03
Pull Back Castered Shield	07-Jan-03	08-Jan-03
Vertical Port Cleanout & Removal	08-Jan-03	09-Jan-03
Remove Graphite	09-Jan-03	18-Jan-03
Remove Grid Plate and Base Assembly	10-Jan-03	16-Jan-03
Data Reduction/Final Survey Report	13-Jan-03	
Paint Rms. 115 & 122 Crane	17-Jan-03	17-Jan-03
Prepare Demobilization Plan	17-Jan-03	28-Mar-03
Remove Thermal Column Head Assembly	21-Jan-03	14-Feb-03

Activity	Start	Finish
Demo TA-63	30-Jan-03	31-Jan-03
Demolish Wooden Bldg	31-Jan-03	18-Feb-03
Cut Core Components/Move Brokk into Tent	06-Feb-03	12-Feb-03
Decon Fuel Pool	10-Feb-03	11-Feb-03
Remove Platform/Shielding	18-Feb-03	18-Feb-03
Survey/Release Crane	19-Feb-03	20-Feb-03
Reactor Internals Complete		20-Feb-03
Move Excavator inside Temp Structure	04-Mar-03	05-Mar-03
Cover Floor	04-Mar-03	05-Mar-03
Demo Bio Shield	05-Mar-03	03-Apr-03
Sample Wooden Bldg Sub-Floor	06-Mar-03	21-Mar-03
Remove Wooden Bldg Sub-Floor	27-Mar-03	20-May-03
Remediate French Drain	02-Apr-03	07-Apr-03
Remove Vent Line Exterior to TA-2	09-Apr-03	29-Apr-03
Characterize/Remediate Soil as Req'd	09-Apr-03	01-Jul-03
Remove Sub-Floor and Piping	22-Apr-03	02-May-03
Decon/Release Equipment	22-Apr-03	17-Jul-03
Remove Temp Structure	28-Apr-03	09-May-03
Survey/Release West Side Floor	12-May-03	28-May-03
Remove All Remaining In-Ground Concrete	13-May-03	03-Jul-03
Final Report	20-May-03	21-Jul-03
Remove West Side Floor Concrete	21-May-03	16-Jun-03
Demob	02-Jun-03	17-Jul-03
Final Survey/Release	03-Jun-03	09-Jul-03
Remove All Remaining Structures	09-Jun-03	03-Jul-03
Remove Vent Line at TA-2	23-Jun-03	25-Jun-03
Demob Abatement Contractor	25-Jun-03	25-Jun-03
Waste Container Sys Mod 9 Approved	30-Jun-03	30-Jun-03
Restore Site Surface	09-Jul-03	17-Jul-03
Demob Demo Contractor	16-Jul-03	17-Jul-03

11.0 FINAL FACILITY CONDITION

WD3 completed all on-site D&D activities in July 2003. All areas have been surveyed and met the release criteria.

All structures, systems and components associated with the OWR have been removed. These included the primary system, water storage systems, ventilation systems, reactor control systems, the biological shield, reactor, and radioactively contaminated auxiliary systems and components. Asbestos materials were also abated.

12.0 CONCLUSIONS, RECOMMENDATIONS, AND LESSONS LEARNED

The objectives for the OWR D&D Project stated in section 2.0 of this report were accomplished. The objectives consisted of the following:

- Removal of radioactive and hazardous materials associated with the Reactor Facility,
- Safely dismantle the OWR utilizing as low as reasonably achievable (ALARA) principles,
- Apply current regulatory criteria for the segregation and release of waste minimizing the radioactive waste,
- Decontamination of the facility to release levels,
- Demolition of the structure and restoration of the site.

In order to improve on future facility decommissioning activities, the following recommendations and lessons learned are provided:

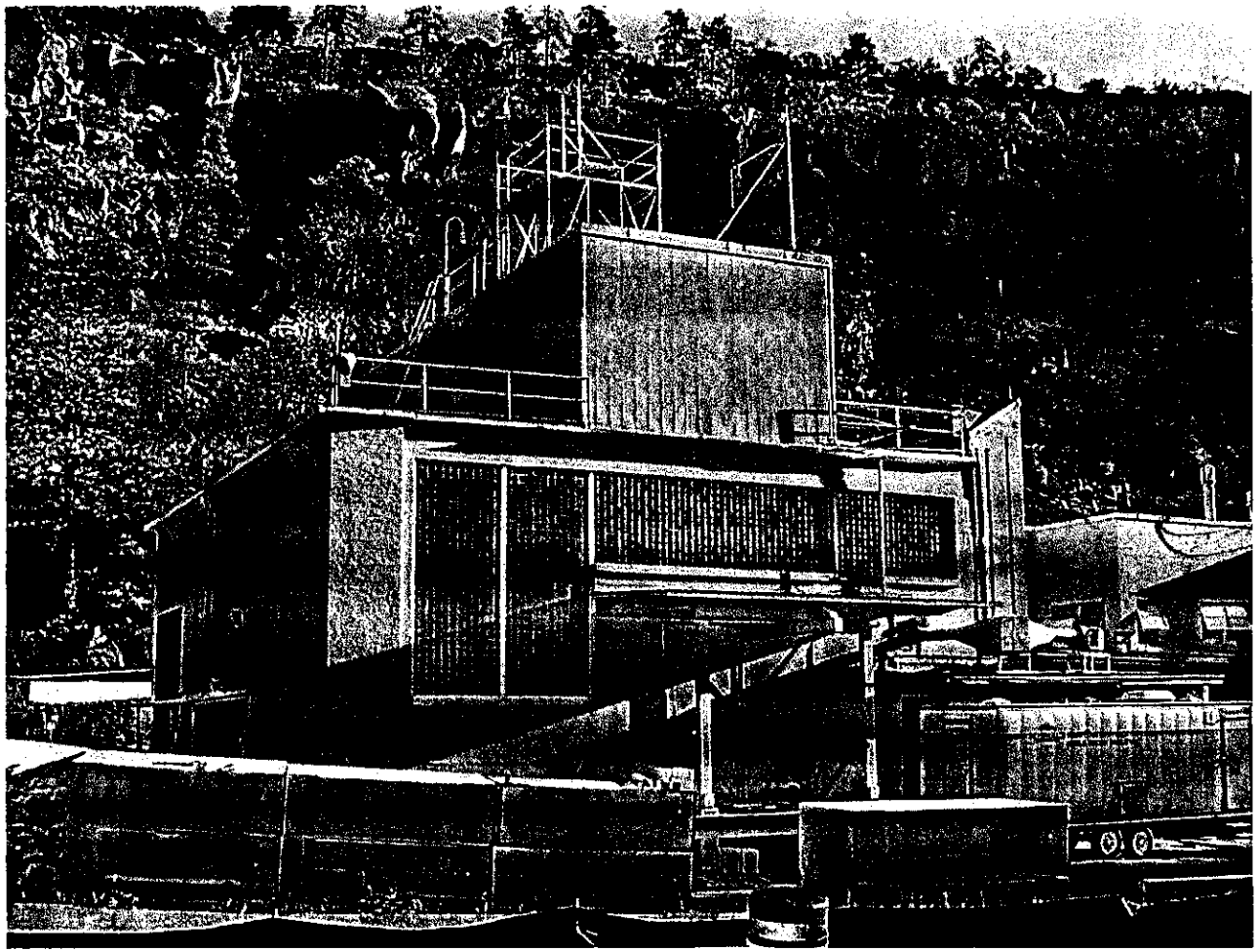
- The OWR D&D project should serve as a model for future decommissioning efforts. The spirit of cooperation between all the stakeholders on this project clearly demonstrated the efficiency and productivity that can be achieved. This was truly a team effort between the contractor, LANL, and DOE. Open and honest communications between the team members resulted in real time problem solving.
- Facility Characterization – The nature and extent of radiological contamination and existence of hazardous materials (such as asbestos and lead) should be determined to a practical level. However, unexpected conditions should be anticipated and project planning must be dynamic to react to these conditions in a safe and timely manner. Greater than expected dose rates were encountered on the Be Shield as well as the legacy material left in beam ports. WD3 personnel in close cooperation with the LANL staff revised the initial plan to ensure safe handling and proper disposition of these materials.
- Project Scope Definition – The scope of the OWR D&D project was well defined and potential scope changes were discussed and resolved in a direct and timely manner by the knowledgeable parties involved.

13.0 REFERENCES

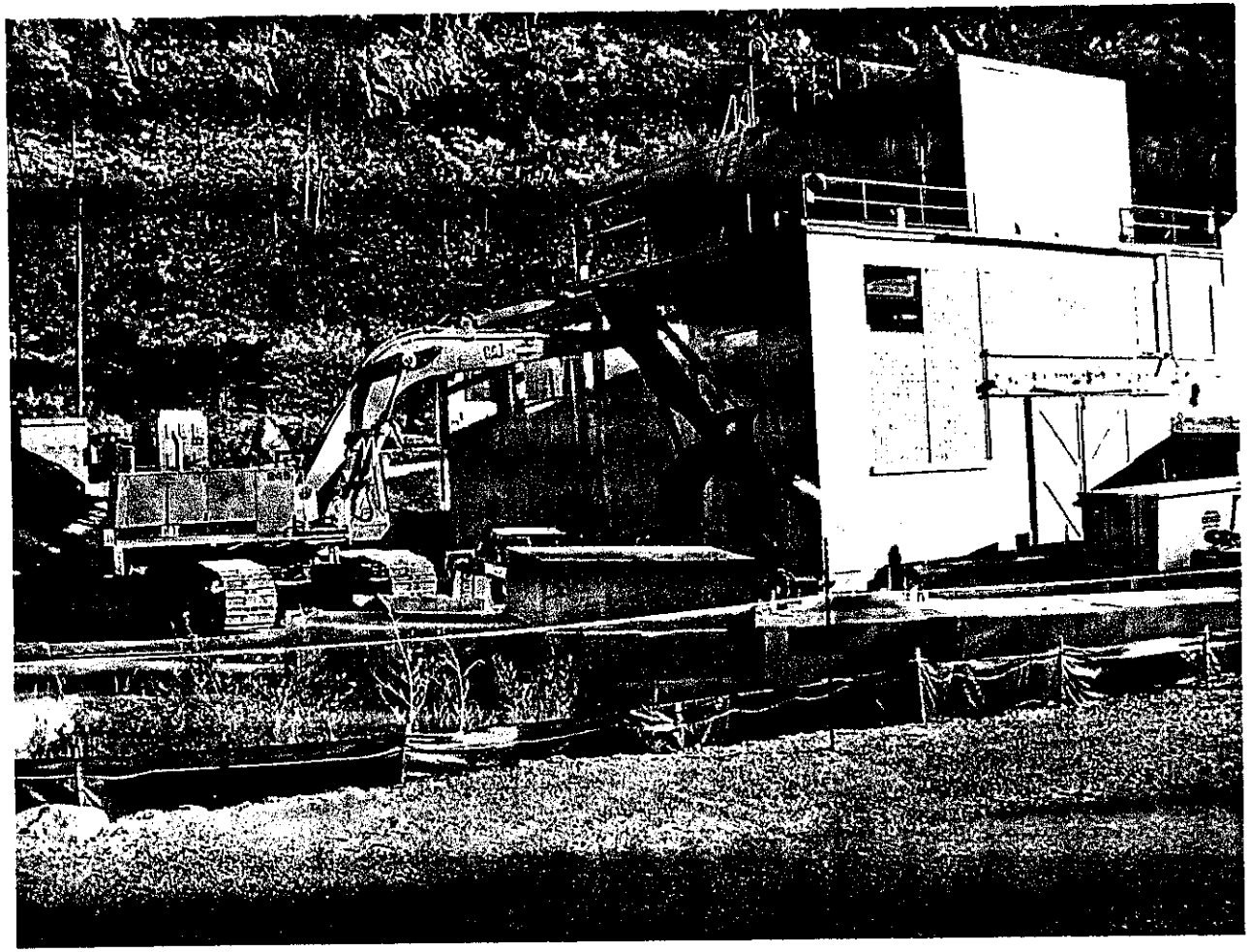
"TA-2 Omega West Reactor Final Status Survey Report"

Attachment 1:

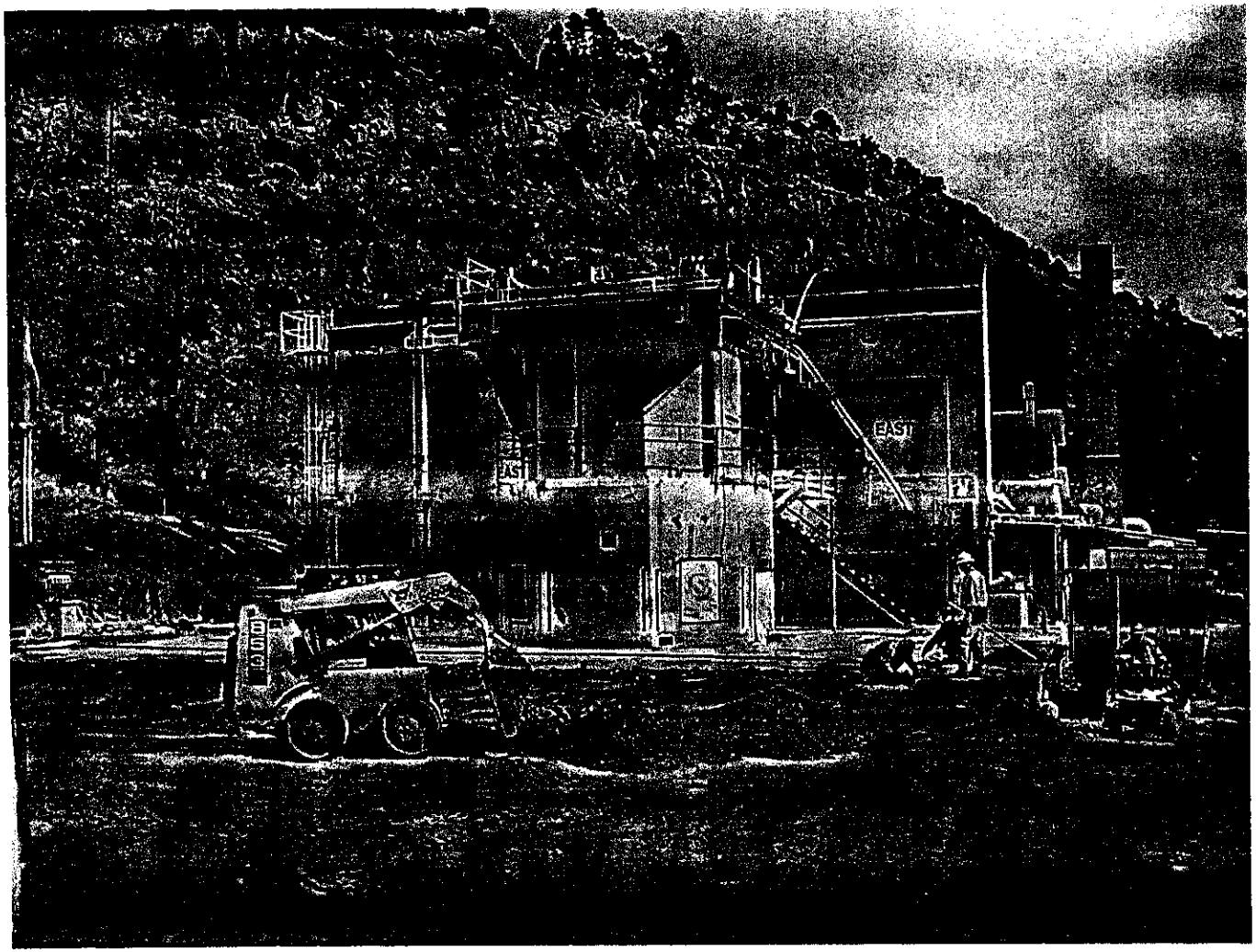
Photographs



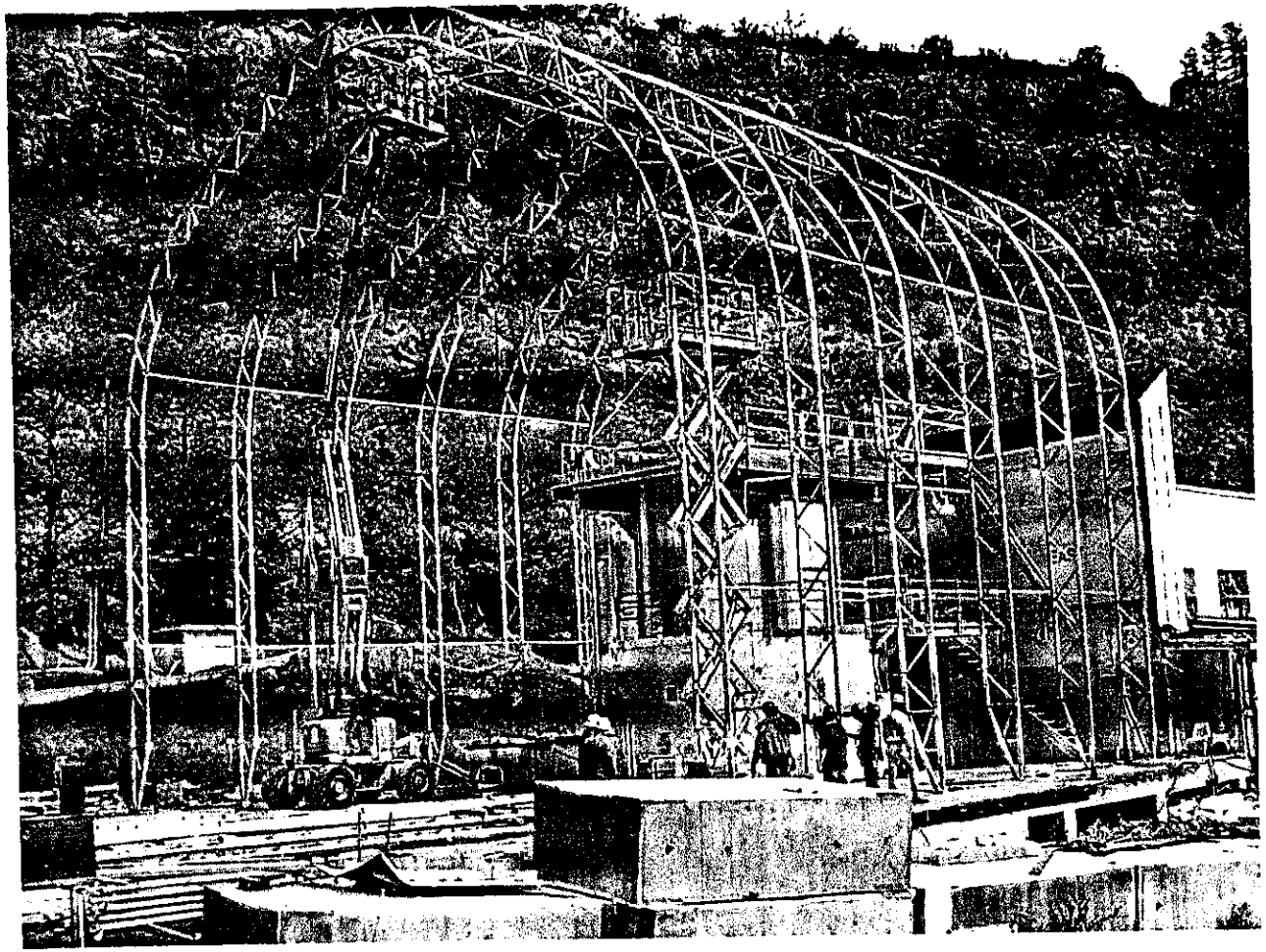
OWR Structure Pre-Demolition



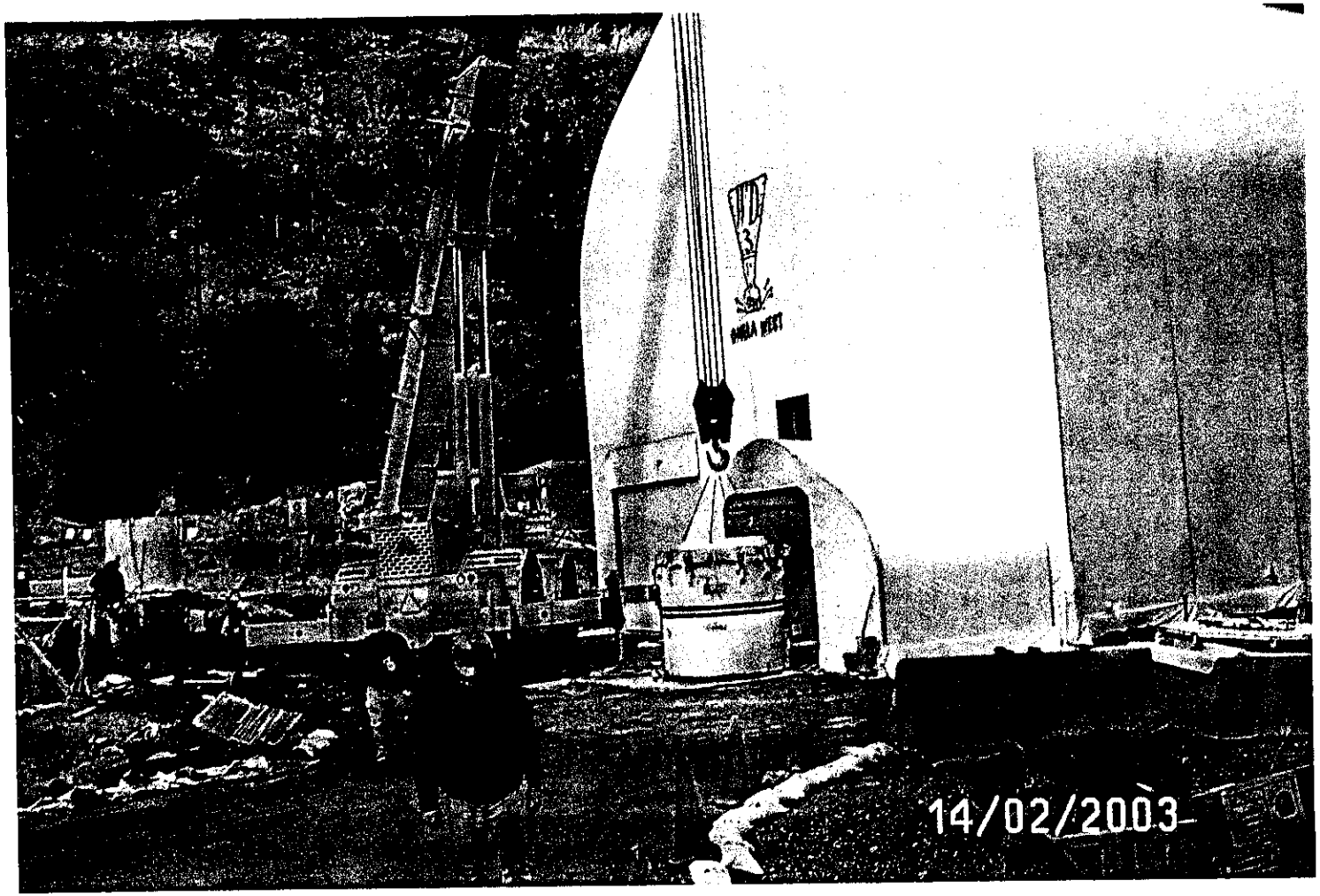
OWR Structure Demolition in Progress



OWR Structure Post-Demolition

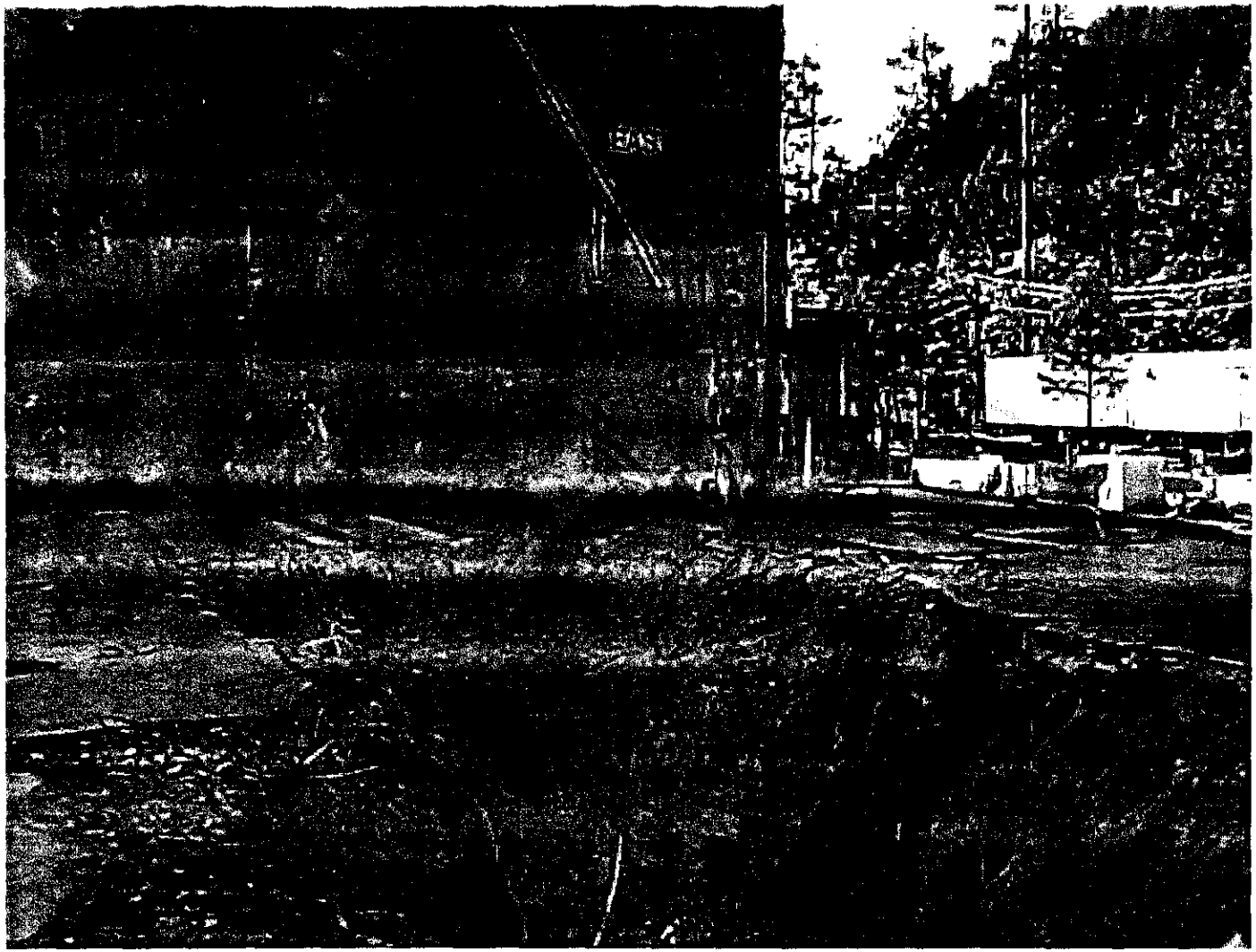


OWR Containment Tent Construction



Radwaste Liner Movement

Bioshield Shield Demolition



Bioshield Shield Post-Demolition

OWR Final Site Grade

OWR Final Site Grade after Hydro Seeding

WD3
Omega West D&D Project

OMEGA WEST DECOMMISSIONING FINAL PROJECT REPORT

Volume 2

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
[illegible] CONTRACT 41968-000-02-CJ

15 18.021 Site Specific Health & Safety Plan
Site Specific Health and Safety Plan Omega West D&D
Project 171

Provided By Document Controls

Basic Type: Proj. Mgt.____ Proj. Tech. ✓ Confidential____ Proposals____

Project Code: 26300 - 10101.01.02

DOCUMENT DATE: 8-7-02 CATEGORY: SE

TO: FILE AUTHOR/ORIGINATOR: M. PRZYBYSKI / R. HAAKER

TITLE/SUBJECT: SITE SPECIFIC HEALTH AND SAFETY PLAN
OMEGA WEST D&D PROJECT

KEY WORD: SSHASP

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By: M. GRANUS
Date: 7/16/02

Submitted for LANL Review:
By: S. MEE
Date: 8/7/02

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Special Requests: Maintain signed copy of SSHASP and mods. at job site.

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Los Alamos National Laboratory
CERRO GRANDE REHIBILITATION PROJECT (CGRP)
SITE - SPECIFIC HEALTH & SAFETY PLAN (SSHASP)

Project Name: Omega West Reactor (OWR) D&D Project

The LANL D&D Health & Safety Plan (DHASP) and contract provisions supplement this SSHASP and shall be complied with as applicable. Copies of the DHASP and this SSHASP are to be readily accessible for review onsite by individuals who may be exposed to hazards resulting from work conducted under the scope of this SSHASP. Personnel performing work under the scope of this SSHASP are required to sign the SSHASP acknowledgement page signifying that they are aware of the hazard information documented herein. This acknowledgement will also signify that they will abide by the requirements of this plan to eliminate or lessen the risk of injury or illness from exposure to the hazards identified.

APPROVALS/CONCURRENCE

Signature	Name	LANL Group	Date
	Stephen Mee	CGRP-D&D	08/07/02

CGRP-D&D Program Manager Approval

Signature	Name	LANL Group	Date
	Keith Rendell	CGRP-D&D	8/6/02

CGRP-D&D Project Leader Approval

Signature	Name	LANL Group	Date
M.A. Powell	FOR Michael Dennis	CGRP-D&D HSR-5	19 July 02

CGRP-D&D HSR-5 Representative Approval

Signature	Name	LANL Group	Date
	Martin Peifer	CGRP-D&D HSR-1	7-31-02

CGRP-D&D HSR-1 Team Leader Approval

Signature	Name	Company	Date
	Mark Granus	W-F D&D, LLC	18 July 02

Washington – Framatome ANP DE&S Project Manager Approval

Signature	Name	Company	Date
	Tim Hogan	Coronado Wrecking & Salvage	8-7-2002

Coronado Wrecking & Salvage Manager or HS Representative Approval

Signature	Name	Company	Date
	Tad West	Southwest Abatement	8/22/02

Southwest Abatement Inc. Manager or HS Representative Approval

APPROVALS/CONCURRENCE (Continued)

Signature	Name	Company	Date
Linwood Ray	Linwood Ray	MOTA	7/17/02

MOTA. Manager or HS Representative Approval

Signature	Name	Company	Date
	Jack Raust	Duratek	7/17/02

Duratek. Manager or HS Representative Approval

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurrence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurrence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurrence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurrence

Plan Preparer	Signature	Company	Date	Mailstop	Phone
Marty L Przybyski		WGII	July 12, 2002	--	505-662-3700
Rick Haaker	R F Haaker	AQ Safety, Inc.	June 28, 2002	M-327	505-250-4076

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3.0 Asbestos Abatement Plan
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LIST OF ACRONYMS AND ABBREVIATIONS

A&E ..... Administrative and Engineering
AL ..... Action Level
ANSI ..... American National Standard Institute
BZ ..... Breathing Zone
APR ..... Air-Purifying Respirator
^{o}C ..... Degrees Centigrade
CFR ..... Code of Federal Regulations
CGRP ..... Cerro Grande Rehabilitation Project
CP ..... Competent Person
CPR ..... Cardiopulmonary Resuscitation
dBA ..... Decibels (A-Weighted Scale)
D&D ..... Decontamination and Decommissioning
DHASP ..... Demolition Health and Safety Plan
DOE ..... U.S. Department of Energy
DOT ..... U.S. Department of Transportation
EM&R ..... Emergency Management and Response
EPA ..... U.S. Environmental Protection Agency
^{o}F ..... Degrees Fahrenheit
GET ..... General Employee Training
GFCI ..... Ground Fault Circuit Interrupter
HAZWOPER ..... Hazardous Waste Operations
HE ..... High Explosive
HS ..... Health and Safety
HSR ..... Health, Safety and Radiation
HSR-1 ..... Health Physics Operations Group
HSR-2 ..... Occupational Medicine Group
HSR -5 ..... Industrial Hygiene and Safety Group
LAMC ..... Los Alamos Medical Center
LANL ..... Los Alamos National Laboratory
lb ..... Pound
LIG ..... Laboratory Implementation Guidance
LIR ..... Laboratory Implementation Requirements
LLC ..... Limited Liability Corporation
LPR ..... Laboratory Performance Requirements
µg/Kg ..... Micrograms Per Kilogram
mg/m^3 ..... Milligrams Per Cubic Meter
mm ..... Millimeters
MSDS ..... Material Safety Data Sheet
NIOSH ..... National Institute for Occupational Safety and Health
NRR ..... Noise Reduction Rating
OSHA ..... Occupational Safety and Health Administration
PEL ..... Permissible Exposure Limit

PM ..... Project Manager
PPE ..... Personal Protective Equipment
SOP ..... Standard Operating Procedure
SSHASP ..... Site-Specific Health and Safety Plan
SSO ..... Site Safety Officer
SWP ..... Special Work Permit
TA ..... Technical Area
THA ..... Task Hazard Analysis
TLV ..... Threshold Limit Value
TWA ..... 8-Hour Time-Weighted Average
WD3 ..... Washington-Framatome ANP DE&S Decontamination and Decommissioning LLC
WGI ..... Washington Group International

1.0 INTRODUCTION

This Site Safety and Health Plan (SSHASP) will be used for the Omega West Reactor (OWR) D&D Project at the Los Alamos National Laboratory. This SSHASP will be implemented and followed by all personnel at the project site.

1.0.1 Objective

The objective of the SSHASP is to provide guidance for maintaining safe working conditions at the site. All activities should be conducted so that the safety and health of the project personnel, LANL personnel, residents, and the environment are completely protected. The protection of workers and residents, and environmental safety and health are key considerations during project design and are essential during implementation of the field activities.

1.0.2 Policy Statement

All work will be performed in accordance with applicable Federal, state and LANL regulations (LIR's); and the references provided in Section 1.03 of this SSHASP. It is WD3's policy to provide a safe and healthful work environment for all its employees. WD3 considers no operation or administration activity to take precedence over the prevention of an injury and illness. Safety takes precedence over expediency or shortcuts. WD3 believes every accident and injury is avoidable, and will take every reasonable step to reduce the possibility of injury, illness, or accident.

1.0.3 References

This SSHASP follows the guidelines established in the following documents:

- Decommissioning H&S Plan (DHASP), Rev. 14, April 2000
- Title 29 of the Code of Federal Regulations (CFR), Part 1910, General Industry Standards, Occupational Safety and Health Administration (OSHA)
- Title 29 of the CFR, Part 1926, Safety and Health Regulations for Construction, OSHA
- WGI *Safety Procedures and Guidelines Manual*
- WGI *Industrial Hygiene Procedures Manual*
- WGI *Safety and Health Program Description for Hazardous Waste Operations*
- WGI *Guidelines for Safety Supervisors and Designated Safety Representatives*
- WGI *Environmental Policy and Guidance Manual*
- 10CFR20, Standards for Radiation Protection
- 10 CFR 830.120; Nuclear Safety Management, Quality Assurance Requirements
- 10 CFR Part 835; Occupational Radiation Protection
- 49 CFR 100-177; DOT Transportation of Hazardous Materials
- 40 CFR 264 and 265; EPA Protection of Environment
- ANSI/ASME B30.2d-1994; Overhead and Gantry Cranes
- DOE Order 232.1; Occurrence Reporting and Processing of Operations Information
- DOE Order 420.1; Facility Safety

- DOE Order 440.1; Worker Protection Management for DOE Federal and Contractor Employees
- DOE Order 5400.1; General Environmental Protection
- DOE Order 5400.5; Radiation Protection of the Public and the Environment.

1.1 PROJECT INFORMATION

1.1.1 Project Scope

The overall scope of this project involves the decontamination, demolition and disposal of the Omega West Reactor Building and associated structures. For health and safety planning purposes, the project has been subdivided into nine general project activities:

(1) Mobilization, Demobilization and Site Restoration

(2) Asbestos Removal

(3) Lead Paint Removal

(4) Building Demolition and Removal

(5) Reactor decommissioning and Removal

(6) Underground Utilities Removal

(7) Maintenance and Refueling

(8) Waste Management

(9) Outdoor ER and D&D Activities

A task hazard analysis (THA) for each of these general project activities, except for asbestos and lead removal have been prepared and are are attached to this SSHASP. Asbestos abatement and lead removal plans have been developed to address these tasks. The Subcontractors are required to provide WD3 with a detailed THA for each specific work task/activity prior to starting work. In addition, a detailed THA is required prior to initiating any new task, when it is determined that a previously prepared THA is deficient.

1.1.2 Key Personnel Having Project H&S Responsibility

MANAGERS

LANL Cerro Grande Rehabilitation Project:

CGRP Program Manager Stephen Mee Phone/Pager 665-8204

CGRP Project Leader Keith Rendell Phone/Pager 665-1054

MANAGERS

Subcontractor Supervisors/Project Managers:

WD3, LLC Project Manager (PM) Mark Granus Phone/Pager (610) 517-7194

WD3, LLC Site Supervisor Jim Staehr Phone/Pager (803)-315-4293

Coronado Wrecking & Salvage Supervisor Tim Hogan Phone/Cell (505) 877-2821/259-6805

Southwest Abatement, Inc. Supervisor Tad West Phone/Cell (505) 873-2967/250-6285

MOTA. Supervisor Lynwood Ray Phone/Cell (505) xxx-xxxx/xxx-xxxx

HS PERSONNEL

WD3, LLC Project Manager SSO Marty Przybyski Phone/Pager 662-3700

Alternate SSO Rick Haaker Phone/Pager (505) 250-4076

Industrial Hygiene Technician Not Required Phone/Pager N/A

COMPETENT PERSONS

Coronado Wrecking & Salvage Excavation Competent Person
Tim Hogan Phone/Pager 662-1359/698-0540

Coronado Wrecking & Salvage Hoist &Rigging Competent Person
Tim Hogan Phone/Pager 662-1359/698-0540

South West Abatement, Inc. Lead Competent Person
Tad West Phone/Pager 873-2967/250-6285

South West Abatement, Inc. Asbestos Competent Person
Tad West Phone/Pager 873-2967/250-6285

South West Abatement, Inc. Scaffolding Competent Person
Tad West, Phone/Pager 873-2967/250-6285

MOTA Inc. Hoist &Rigging Competent Person
Scott Kerr Phone/Pager

Registered Professional Engineer TBD Phone/Fax

Confined Space Entry Supervisor Marty Przybyski Phone/Pager 662-3700

Confined Space Entry Supervisor TBD Phone/Pager TBD

WASTE PERSONNEL

Waste Coordinator Jack Ruest Phone/Pager 661-6621 / (865) 406-4107

HEALTH PHYSICS (HP) PERSONNEL

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CGRP-D&D HSR-1 RCT Darril Stafford Phone/Pager 665-9693

PROJECT SUPPORT PERSONNEL

Subcontractor Representatives:

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Southwest Abatement, Inc. Tad West PM Phone/Cell (505) 873-2967/250-6285

MOTA, Inc. Lynwood Ray Phone/Cell (803) 216-0045

CGRP-D&D HS Representatives:

CGRP-D&D HSR-5 Rep. Michael Dennis Phone/Pager 665-0510

CGRP-D&D HSR-1, Team Leader Martin Peifer Phone/Pager 665-4342/1046649

CGRP-D&D Management Representatives

CGRP-D&D Program Manager Stephen Mee Phone/Pager 665-8024

CGRP-D&D Project Leader Keith Rendell Phone/Pager 665-1054

The HS responsibilities for the Managers, HS Personnel, HP Personnel, Project Support Personnel and FMU Representatives are addressed in Section 3 of the DHASP. The Health and Safety Line-Management Responsibility and Lines of Communication for this project are presented in Section 1.1.11 of this SSHASP. Managers may delegate HS responsibilities as necessary on site, as specified in the DHASP, as long as the CGRP Group Leader approves this delegation.

1.1.3 Relevant Site Information

The Omega West Reactor and associated structures are located in Technical Area (TA) 2 along with the OWR vent stack located at Technical Area (TA) 61on Los Alamos National Laboratory property. This facility was constructed in 1943 and was operated until 1995. The buildings associated with this project include TA-2-1, TA-2-44, TA-2-47, TA-2-49, TA-2-51, TA-2-63, TA-2-89, TA-2-90, and TA-61. A brief description of each building/structure is provided below.

1.1.3.1 Site Description/History:

A brief description of each building follows:

TA-2-1, Main Reactor Building:

TA-2-1 is the main reactor building at TA-2. This facility was constructed in 1943 and housed five separate nuclear reactors between 1944 and 1995. The first reactor was a water boiler type and used enriched uranium (U-235) as a fuel source. This first reactor was housed in what is now Room 123. Two additional water boiler nuclear reactors were constructed in room 122. The final version of these water reactors was completely shutdown in 1974 and dismantled in 1989. The fifth and final reactor used at this facility was the Omega West Reactor (OWR) and is still present in Room 101. Building 1 is approximately 21,300ft^2 and in most areas is two stories tall with some three story areas as well. In addition to the OWR, the building itself contains offices, experimental areas where the other reactors were, and a variety of laboratories. The building is constructed of wood, cinder block, glass, and concrete with asbestos roofing material and siding. A brick stack, used in association with the boiler room, and a small sub-basement complete the general make-up of this building.

The OWR was a tank-type research reactor which had a full power rating of 8 MW thermal. The reactor was light-water moderated and cooled and used aluminum clad, MTR-type fuel elements. The OWR initially went critical in 1956. In 1992, an OWR safety mechanism triggered a reactor scram due to high power. An investigation showed that the scram was due to a leak in the cooling system. The OWR was shutdown and never again operated.

In 1994, the fuel and all control blades were removed from the OWR. Since then, the reactor has been placed in a safe shutdown mode. The reactor vessel has been drained of all coolant. During de-fueling operations, the fuel elements were inspected and no damage had occurred. The room itself is approximately 2900ft^2 concrete, concrete block, steel, and glass (windows).

TA-2-44, Concrete Slab:

This structure was an equipment room that housed various pumps, tanks, etc., however only the concrete slab (45' x 29') remains. The slab and all asphalt surrounding it are to be removed and disposed of, as well as all underground utilities and piping running to other buildings.

TA-2-47 Manhole:

This structure is a manhole located between structure 44 and former surge tank. The structure, along with all internal pumps and piping, the slab associated with the former surge tank, associated asphalt, and the 30" delay line which ran between the surge tank and Building 1 are to be removed and disposed of.

TA-2-49 Concrete Slab:

This structure is a concrete slab 22L' x 35W' x 4D' upon which the cooling tower rested. The concrete, all associated piping, and the asphalt around the structure will be removed and disposed of.

TA-2-51, Concrete Slab:

This structure is a concrete slab measuring approximately 10' x 20'. There are electrical transformers currently resting upon the slab, however, they will be removed prior to work being initiated at this site. The slab and associated asphalt will be removed and disposed of.

TA-2-63, Boiler House:

This structure is known as the Boiler House and measures approximately 26L' x 20W' x 15H'. It is constructed of cement block. The building, all equipment, pipes, pumps, tanks, and the concrete slab will be removed and disposed of.

TA-2-89, Storage Building:

This structure is a small storage building on the north side of Building 1. It is constructed of galvanized steel roofing and fiberglass siding. The structure shall be removed and disposed of.

TA-2-90, Storage Building:

This structure is a small asbestos (Transite) sided storage building located on the north side of Building 1. This structure shall be removed and disposed of.

TA-61, OWR Vent Stack:

This structure is a 150 foot tall metal vent stack located south east of TA-2. The vent stack will be removed and disposed of.

1.1.3.2 Previous/Existing Site Contamination Data:

The following data was extracted from the Omega West Reactor Preliminary Characterization Report, Volumes I, II, and III, dated February 1995.

TA-2-1, Main Reactor Building:

Radioactive Contamination:
Glove box, Room 101 – 10-100dpm/sq. cm.
Reactor Tank – 2600 R/hr (highest reading)
Room 101 – 1500mr/hr (unshielded dose rate)
Roof over reactor – < 2 mr/hr (with existing lead shielding in place)
Rooms 122 and 123 (floor) – Contamination under the concrete cap and below paint are unknown

Asbestos:
Approximately 4321 SF of Floor Tile
Approximately 1190 LF of Pipe Insulation
Approximately 23,594 SF of Siding and Roofing Materials

Lead:
Lead hazards are addressed in the Lead Abatement Plan. The presence of lead paint on structural components has not been evaluated.

Beryllium:
Work tasks involving Beryllium will be evaluated to ensure the requirements of LANL LIR 402-560-01.0 are followed.

TA-2-44, Concrete Slab:

No Known Contamination

TA-2-47 Manhole:

No Known Contamination

TA-2-49 Concrete Slab:

No Known Contamination

TA-2-51, Concrete Slab:

No Known Contamination

TA-2-63, Boiler House:

Asbestos:
Thermal System Insulation

Lead:
Lead painted items

TA-2-89, Storage Building:

Radioactive Contamination:
Suspected radioactive contamination

TA-2-90, Storage Building:

Radioactive Contamination:
Suspected radioactive contamination

Asbestos:
Transite siding

TA-61, OWR Vent Stack:

Radioactive Contamination :
Suspected radioactive contamination

.1.3.3 General Description of the Work

This section provides a general description of the activities to be performed during the project. The actual work evolution may deviate from the following work specification without revision of the SSHASP unless the changes have the potential to impact the envelope of safety defined by hazard assessments and the mitigation actions described in the Task Hazard Analyses.

Site Mobilization

Once the "notice to proceed" (NTP) is given, WD3 will mobilize key project personnel to the site to establish temporary offices, on-site infrastructure, and equipment staging areas. The site mobilization activities will include establishing perimeter boundaries and signage for the work area, installing storm water controls in accordance with the WD3 Storm Water Prevention Plan, installing temporary trailers, establishing temporary power, verifying utility status for the facility (ensuring lockouts/tagouts (LO/TOs) as necessary), and providing portable toilets/handwash stations for project personnel. Waste-packaging locations and material flow paths will also be established.

Hazardous Material Abatement

The anticipated hazardous materials for Building 1 at TA-2 include lead, asbestos, U235, Cs-137, Pu, activation products, mercury, PCBs, and the possibility of uranyl nitrate. The OWR core contains bismuth, cobalt, and beryllium. These constituents will either be removed intact or as stand-alone abatement activities.

Asbestos—An inspection of the TA-2 and TA-61facilities will be conducted to compare existing conditions to the information contained in the characterization data provided with the RFP. If additional ACM is suspected, it will be sampled and disposed of appropriately. The abatement of ACM will be conducted in accordance with the requirements of the asbestos NESHAP standard cited in 40 CFR.61.145, 29 CFR 1926.1101, and the SSHASP. An Asbestos Abatement Plan will be developed to ensure compliant programs are in place for air sampling, medical protection of employees, training, and respiratory protection. Controls will be established based on the specific type of ACM being removed and radiological conditions. All work will be performed in accordance with RWPs generated for this effort.

To facilitate the schedule, asbestos abatement will begin in the Control Room, which will serve as the Radiological Control point after abatement. Asbestos will then be removed from the reactor room prior to any other D&D activities. As the bioshield removal progresses, asbestos and other hazardous materials abatement will be conducted at the opposite end of the building. All asbestos material packaging will be performed in accordance with the Waste Management Plan. Abatement efforts in the other areas of the TA-2 and TA-61 facilities will consist of removing vinyl asbestos tile (VAT), roof mastic, non-friable transite panels, and thermal system insulation (TSI).

Other Hazardous Materials—All remaining hazardous materials will be removed intact to the extent possible. For instance, mercury-containing fluorescent lights and PCB-containing lighting ballasts will be removed and packaged whole. Even though lead-based paint is present, we do not anticipate lead abatement. Hazardous materials will be packaged and disposed of in accordance with the WD3 Waste Management Plan. Hazardous materials associated with the OWR will be managed during the D&D effort.

Decontamination

Rooms 101, 102, 104, 106 and 115— The installed equipment in Rooms 101, 102, and 115 of TA-2 will be removed, disassembled, and packaged for disposal. The mezzanine surrounding the Reactor at the 24-foot level will be removed during demolition. The remaining floor of Room 101 may be scabbled up to ½-inch depth to remove activation and contamination. The walls and ceilings will be manually wiped using non-hazardous solutions.

The walls and ceilings in Rooms 102, 104, 106, and 115 will be manually decontaminated by wiping using non-hazardous solutions. Floors that are contaminated will either be manually wiped or the surface removed up to ½-inch in depth.

Room 122—In Room 122, we will remove all exposed materials above the concrete walls including ceiling panels, wall board, and insulation. The wooden ceiling trusses will be covered with a strippable coating. Concrete wall areas may be scabbled to a maximum depth of ¼-inch. The existing 4-inch thick floor cap will be removed using a hydraulic hammer and the waste packaged in LLRW containers. If the interface between the concrete cap is relatively smooth, the floor may be scabbled to a maximum depth of ¼-inch. If the remaining concrete is less than 6 inches, complete floor removal will be considered. All materials removed from Room 122 will be packaged as LLRW for disposal. The roof trusses will be lowered and segregated during demolition.

Room 123 and TA-61 Structures—The appropriate containments/ventilation will be erected in Room 123 and the TA-61 blower house, the floors may be scabbled to a maximum depth of ¼-inch. The TA-61 stack and associated facilities will be removed after a careful review and survey of equipment contamination levels. The stack will be prepared by attaching rigging to the top section and supporting it with a hydraulic crane. The bottom section of the stack will be severed, sealed with plastic, rigged, and tailed with another crane. The stack will be lowered to the ground in accordance with an approved lift plan. Once on the ground, the stack will be segmented and packaged as waste for disposal.

Hazardous constituents will be removed from the remaining buildings in a manner consistent with the approach discussed for the TA-2 facilities. Ancillary piping will be excavated and packaged as waste. The 3" pipe ascending from TA-2 to the stack will be removed using manual methods after exposing the pipe with portable equipment such as a ditch witch. The pipe will be sleeved during removal, to eliminate release of contamination, segmented, and packaged for disposal.

Final Status Survey

As work in radiologically controlled areas is completed, preliminary surveys will be conducted and the areas placed under the control of the Final Status Survey Manager to ensure that no work activities invalidate the final status survey process. Surveys will be performed in accordance with the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) methodology and employing the release criteria stated in DOE Order 5400.5. Volumetrically contaminated materials will be evaluated, as necessary, using generally accepted methods such as the RESRAD computer code. Areas will be surveyed to ensure release criteria are met and isolation controls will be used until a specific area is released.

Demolition

Once the hazardous materials are removed and decontamination is completed, with the exception of the reactor core components, for TA-2, a pre-demolition survey will be conducted. An industrial hygienist/health physicist will perform a walkthrough of the building to verify that all hazardous materials have been removed from the building. A state-certified inspector will confirm satisfactory asbestos removal. Once all hazards have been mitigated, demolition activities will begin.

WD3 will demolish the structures, segregate waste, and load the waste/rubble into appropriate containers. Large excavators, such as a CAT 235 or equivalent, will be used with various end-effectors including grapples, hydraulic hammers, and bucket attachments. The building will be demolished by removing the roof section. A CAT 980 loader will be used to load rubble into transport vehicles for removal from the site. Once roof sections and walls are removed, a tent will be constructed over the OWR.

After removal of the OWR, as identified below, the building slab and foundation will be demolished using a hydraulic hammer. The concrete from the foundation will be crushed for recycling as fill material. A similar process will be used on a much smaller scale at TA-61.

At the TA-2 site, we will remove and dispose of all asphalt and concrete structures including roads, bridges and debris catchers. The northern stream retention wall and the gabions will be removed. Demolition activities at TA-61, will include removal and disposal of the culvert, the vent pipe access located north of 61-24, guy wires, concrete walkways, anchorage points, and other miscellaneous debris. At both TA-2 and TA-61, all above ground utility poles and wires and below ground utilities identified by CGRP will also be removed.

OWR Components and Associated Systems Removal

OWR component and associated systems removal will take place after the decontamination and demolition of the Building 1. The OWR will be enclosed in a tent prior to the start of the component removal.
To address the anticipated high radiation exposure rates associated with the OWR, our approach will employ methods that incorporate remote handling and manipulation, shielding, and, when necessary, abbreviated stay times. Technologies that may be used include thermal cutting, remote manual unfastening, grouting of highly activated components, and remote demolition (track-mounted excavator, Brokk™, hammer, shear, universal processor). WD3 will remove the OWR and associated systems by sealing off the area, installing adequate ventilation and contamination controls, implementing radiological controls, remotely removing select internal reactor components, shielding high radiation fields within the reactor with grout, demolishing the bioshield with heavy equipment, size reducing the reactor, and packaging the waste in appropriate containers.

Initial preparations will develop the safety envelope (tent) around the bioshield to prepare the area for demolition. A HEPA filtration system will be installed on the north wall of the tent to provide negative ventilation during D&D activities. A main inlet located along the south wall will maintain negative pressure in the building and provide flow away from the excavator used for bioshield demolition and across the reactor.

Two airlocks will be installed on the exterior of the OWR room to provide contamination control. One will be installed around the south entrance to provide staging and access for heavy equipment and the other will be erected around the northwest entrance.

The complex geometry and limited number of as-built drawings make it difficult to determine the specific components that contribute to the high radiation conditions. To aid in this determination, we may perform a video inspection and radiological survey using a gamma camera. Personnel radiation exposure will be tracked using a system of electronic dosimeters that track the exposure for each entry into the radiological controlled area.

Removable contamination will be controlled with temporary contamination envelopes, containment structures, HEPA filtration, decontamination where practical, and the use of fixatives. To control airborne dust from the demolition of the concrete bioshield, reactor support structures, and the building floor, dust collector/separators, portable HEPA filtration, and HEPA vacuums will be employed for source capture.

Reactor Removal—The WD3 Team's strategy for removal of the reactor internals, tank, and thermal column is to act quickly, following a well planned and rehearsed procedure. The time of exposure will be minimized during transfers of materials through the use of remotely operated tools and meticulously planned material handling evolutions.

The control rod drive (CRD) mechanisms supported above the Reactor Tank Lid will be removed and packaged as LLRW for disposal. The tank lid may be removed and replaced with a shielded work platform with a port to assist in the removal of the beryllium reflector and lead shield. The existing lid will be packaged as LLRW for disposal. Rigging will be designed and attached to the beryllium and lead shield components, which will then be lifted through the work-platform port. The platform will be rotated to accommodate the component being removed. The beryllium reflector will be lifted in one motion and be loaded directly into an appropriately engineered disposal container (an 8-120). The lead shield will be removed and packaged as mixed waste for disposal.

The remaining internal components may be grouted using nominal 100 to 120 pound per cubic foot grout to provide shielding during removal operations. Approximately 20 cubic yards of grout will be used in filling the tank to approximately 11 feet.

Parallel to removing the lid and CRD assemblies, the roof structure, support steel, and borated blocks that make up the labyrinth or serpentine shield at the opening of the thermal column will be manually removed and packaged into B-25 boxes. The lead brick will be removed from the shield door, segregated, used for shielding as needed, and then packaged for transfer to LANL for recycling.

Once the reactor tank internals have been removed or grouted, an excavator will begin demolition of the reactor bioshield, grouted internals and thermal column. Dust controls, including water and vacuums, will be used to mitigate dust and the potential spread of contamination from excavator operations.

Our experience with similar reactors at Iowa State and CP-5 tells us that the OWR bioshield concrete is not amenable to diamond wire sawing because of the iron aggregate it contains. Mechanical demolition is the only proven methodology for removing this type of bioshield and the grouted internals inside the reactor tank.

Demolition of the reactor and bioshield will begin by rubblizing the upper reactor using hydraulic hammers, shears and a universal demolition processor. As the upper reactor is removed, rubble, reinforcing steel, and debris will be loaded into lined B-25 boxes or Type A containers. This effort will continue down to the two-foot band of concrete around the eight-foot diameter tank and lead shields.

The inner concrete, reactor tank, reactor internals, and the thermal column closure head/bismuth shield will be segmented into appropriately engineered disposal containers. The thermal column shield door will be size reduced and disposed of with the rest of the thermal column, including its liner and internal graphite stringers.

The steel aggregate added to the concrete produces a very tightly packed arrangement of stainless and carbon steel in the lower half of the bioshield. The shear will cut most of these elements remotely. A long-handled Oxy-Gas torch or hydraulic cutter will be used to trim the steel components of hot spots, to reduce rebar density, and to allow the shear to operate freely.

We will remove up to 3,200 ft^3 of activated and or contaminated concrete in the sub-grade floor under and around the bioshield including the fuel storage pit and coolant discharge loop. The piping in the 11-foot trench running to the west wall foundation has been previously removed and capped at the bioshield. Soils outside the pipe, around the foundations and under the core are assumed to be clean.

Experimental and Reactor Support Systems—The Reactor Support Systems include the thermal column argon vent system, pneumatic rabbit tubes, emergency core spray system, and the fuel pool. The support assemblies will be removed using disassembly and mechanical segmentation. They will be size-reduced as necessary for packaging. The fuel pool will be decontaminated including exposed surface removal of up to ½-inch. The purification system will be removed and packaged. Site structures TA-2-89 and 90 will be disassembled, size-reduced, and packaged as waste.

Waste Removal

Material and demolition debris removed from the reactor and the supporting areas will be directly loaded into appropriate disposal containers and licensed shipping casks for transport and disposal. Shielded container loading stations will be established near the bioshield to provide an open area for cutting steel and loading metal cask liners and boxes with low lever radioactive waste (LLRW) and low level mixed waste (LLMW). A trained crew, led by a qualified rigger, will move the casks and boxes in and out of the building. Once in the airlock, an outside crane will be able to position the shields for transfer into the transportation cask.

Site Restoration

After demolition is complete, we will sample the soil beneath the buildings and the affected area within the demolition work zone. The soils beneath the slabs and surrounding area will be dispositioned based on characterization results. If contamination levels warrant remediation, the soils will be excavated to a maximum depth of 2 feet and laterally to 2 feet from the foundation and packaged for disposal.

After determining the status and disposition of sub-structure RCRA concerns, we will fill any depressions left by the demolition efforts with crushed concrete recycled from the structures. The northern stream channel and surrounding environs will be re-shaped and re-contoured. Topsoil will be used as fill material for the top 12 inches and for any other disturbed areas, and will be graded and compacted to 85% to restore the site to match existing natural contours. During backfilling operations, civil surveys will be conducted to ensure the desired final contours are achieved. After placing topsoil, the disturbed area will be seeded with native grasses.

Demobilization

Equipment used during the D&D effort will be surveyed for radiological contamination. If contamination is detected, the equipment will be decontaminated in a controlled manner at the site. The equipment will be placed on a liner to prevent the spread of contamination. Decontamination will primarily consist of wiping surfaces with decon solutions. Equipment that can not be decontaminated will be packaged and disposed of as radioactive waste.

Remaining demobilization will consist of removing the following from the site: all tools and equipment; LO/TOs; temporary construction fencing; temporary sanitary facilities; and the office trailer. Radiological release surveys will be performed on all materials for unrestricted release.

1.1.4 Project Emergency Action/Response Plan

Emergency action/response shall occur in accordance with Section 9 of the DHASP and the following additional requirements. Accident and injury reporting will be in accordance with Section 9 of the DHASP and the Subcontractor's Health and Safety Programs.

In the event of an incident or emergency, the SSO, PM, Site Superintendent or their designee will function as the site emergency/incident coordinator and will immediately call 911 in the event of an emergency that involves a medical emergency, fire, police, security, or hazardous device. For all other emergencies, LANL Emergency Response (EM&R) shall be notified. In either case, the SSO, PM or designee will take control of the site until emergency services and/or EM&R personnel arrive and assume control. Incident/emergency contacts and telephone numbers, incident reporting flowchart (Figure 2) and maps (Figure 3) indicating the route to the nearest hospital and medical clinic can be found in Sections 1.7 and 1.8 of this SSHASP, respectively. These items shall be posted on-site where they will be readily accessible to field team personnel. It is not anticipated at this time that an emergency/incident occurring at these sites will impact operations or personnel working in the facilities surrounding the site. Emergency escape routes will be discussed with the workers during the daily tailgate safety meetings.

In order to reduce emergency response time the CGRP-D&D HSR-5 Representative shall inform LANL EM&R about the location of the sites and the general activities being conducted. LANL EM&R will also be asked to provide the information about the active projects to HSR-2. Notification shall be made in writing.

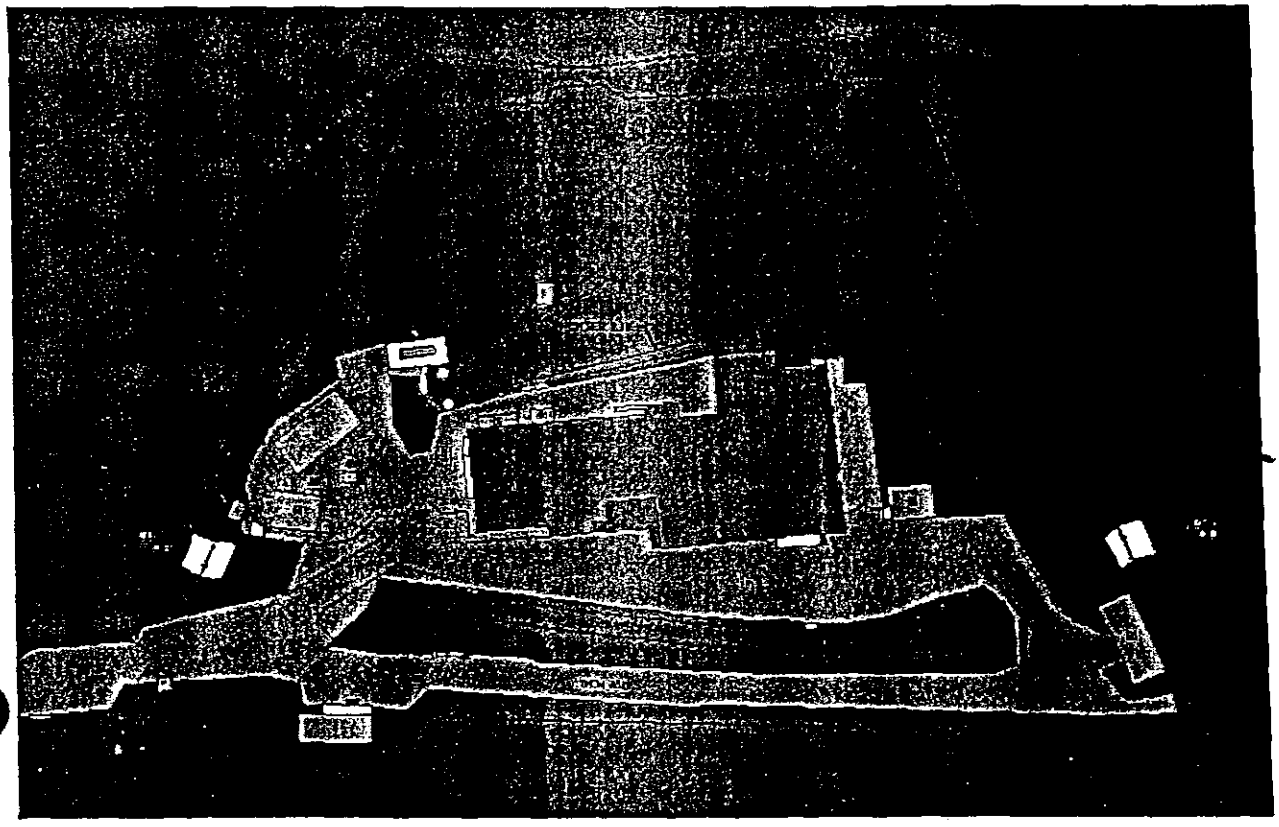
1.1.4.1 Site Access

The Omega West Reactor site is accessible by two roads. The normal access will be from the west access road. A drawing of the site is attached as Figure 1. A Security clearance is not required for work in this area. All worker who are expected to be on site for more then 10 days will be issued a standard DOE badge.

1.1.4.2 First aid/CPR

At a minimum, the SSO and one member of each crew shall be certified in basic first aid and CPR by the American Red Cross or equivalent organization. An updated list of first aid/CPR providers shall be posted in each site trailer, and site personnel will be advised of these providers during initial site training and periodically during daily tailgate training sessions.

Figure 1. Map of the Omega West Reactor showing approximate location of the perimeter fence and the gates.



1.1.4.3 Emergency Response Equipment

First Aid/Bloodborne Pathogens Kits: A minimum of one first aid kit and one bloodborne pathogens kit will be on-site at all times. The first aid and bloodborne pathogens kits shall be kept in a weatherproof container and the contents shall be inspected weekly and re-supplied by the SSO or his/her designee. Contents shall meet the American National Standard Minimum Requirements for Industrial Unit-Type First Aid Kits (ANSI Z308.1-1978).

Communications: At least one working cell phone shall be present on-site during site activities associated with this project. Emergency and non-emergency notification procedures are given in LIR 402-130-01.1 Abnormal Events. A synopsis of these requirements for immediate notification are provided in section 1.7 of this document. A copy of section 1.7 shall be posted at the site entry control point. The incident reporting process shall be discussed at the pre-job briefing to ensure that the field team understand the notification chain in the event of an incident/emergency during normal work hours and during off-normal work hours (See Section 1.7 of this SSHASP).

Fire Extinguishing Equipment: At least one 20 pound (or two 10 lb) ABC fire extinguisher shall be conspicuously located and readily accessible for each spark/flame producing operation (i.e. demolition/excavation operation) and on or near each piece of heavy equipment. At least one fire extinguisher having a rating of not less than 20 lb. B:C units (or 2 10 lb. B:C units) shall be provided on all

trucks or tankers used to transport or dispense flammable or combustible liquids. All extinguishers shall be inspected annually and at least once per month to maintain them in operating condition. In addition, extinguishers shall be inspected, to assure charged state, prior to performing operations that may require its use. The monthly and annual inspections shall be recorded on the extinguisher inspection tag.

Comply with requirements of the WGI Fire Hazard Control Program

Emergency Eyewash: An emergency eyewash, capable of providing at least 15 minutes of continuous flushing, shall be located within 10 seconds travel time and not more than 100 feet of travel distance of any source of chemical splash that may be corrosive or moderately to severely irritating to body tissue. The SSO or his/her designee shall inspect the eyewash at least weekly and the eye wash saline solution shall be replaced as recommended by the manufacturer. Refer to ANSI Z358.1-1990 for further information. During winter months where night-time temperatures drop below freezing, the eyewash station will be kept in a location where it will not freeze as directed by the SSO or designee.

1.1.4.4 Muster Area Location

A site-specific muster area shall be determined by the SSO or designee and all field team members shall be informed of the location prior to the start of field operations. This location shall also be communicated to visitors when they arrive at the site. The muster location will be located to the west of the Omega West reactor, at the site access control point.

1.1.4.5 Emergency Signal and Evacuation Plan

An air horn or a vehicle horn shall be used as the site emergency notification device. One blast of the horn will tell the crew to meet at the muster area. After the crew has assembled at the muster area, a head count will be performed using the daily tailgate form. After the crew has been accounted for, they shall be directed where to report until the emergency is over. Every attempt should be made to shutdown heavy equipment prior to evacuation.

1.1.4.6 Stop-Activity and Stop-Work Orders

Any individual who observes an operation that presents a clear and imminent danger to personnel or the environment has the authority to immediately notify the individuals involved, the WGI PM or the SSO, in accordance with LANL LIR 401-10-01.1. Once it is concluded that the imminent situation exists, immediate actions shall be implemented to eliminate the threat of harm. In the event that a stop activity or stop work is issued for a particular activity, the CGRP Project Lead and Contract Administrator shall be notified immediately and actions taken to rectify the hazardous situation. Work may resume on the affected tasks once the hazard has been mitigated.

1.1.5 Project Spill Containment Plan

Spills and releases are unlikely to occur due to the handling procedures to be used. However, since accidents and uncontrolled releases may happen the following information will be used by project personnel to respond to and mitigate any releases on the site.

1.5.1 Preplanning for Spill Control

Work activities will be reviewed for release potential and the capability of on-site personnel to respond adequately. All aspects of the Project Emergency Response Action/Response Plan as described in Section 1.1.4 will be reviewed by site personnel to ensure adequacy and that resources are available.

WD3 will coordinate emergency preparedness and response with LANL personnel to ensure a coordinated effort in planning for a spill emergency. Spill response plans will be compatible and integrated.

1.1.5.2 Spill and Fire Control Materials and Equipment

When moving or handling of drums containing hazardous materials, ensure that salvage drums meeting U.S. Department of Transportation (DOT) specifications, and suitable quantities of proper absorbent materials and fire suppression equipment are kept available in areas where spills, leaks or ruptures may occur.

Drums and containers used during a clean-up will be appropriate to the hazardous substances they are meant to contain, and will meet the regulations promulgated by DOT, 49 CFR Parts 171-179, OSHA, 29 CFR 1910.120, and USEPA 40 CFR 262.

Drums and containers will be inspected for defects and their integrity assured prior to being filled with any non-solid hazardous substance.

Liquid hazardous material spills can be contained with porous or absorbent barriers. Absorbent materials can take several configurations, e.g., spill pads or pillows, inert non-reactive clay minerals, which may also provide for vapor control.

Stopping the leak or spill at its source may involve turning off pumps or closing valves, returning a container to an upright position, transferring wastes to other containers, or moving containers to less dangerous locations. Patching of an active leak is not advised until a careful evaluation of the operation can be made, and the necessary personal protection and rescue equipment readied.

1.1.5.3 Drum, Container and Tank Handling and Moving Procedures

Drums, containers, and tanks of hazardous or flammable substances will not be moved until preparations described in this SSHASP are completed (i.e., all required equipment and materials are at the work site ready for use, and the employees have been familiarized with their responsibilities, the emergency response procedures, and the potential hazards associated with the contents of the drums and containers).

Work site operations will be organized to minimize the amount of drum or container movement. Each drum or containers will be inspected before it is moved to ensure that it can be picked up without a rupture or puncture, and relocated without a spill or leak.

Drums and containers under pressure, as evidenced by bulging or swelling, will not be moved until the cause for excess pressure is determined and appropriate containment procedures have been implemented to protect employees from explosion.

Equipment used to handle the drums and containers will be selected, positioned, operated, and maintained to minimize rupture, puncture, dent, or drop. Likewise, equipment will be selected, positioned and operated to minimize the potential for equipment ignition sources to ignite vapors released from ruptured drums or containers.

Drums and containers that cannot be moved without rupture, leakage or spillage will be emptied into a sound container using a device specific for the material being transferred.

1.1.5.4 Equipment Leaks

The PM, Site Superintendent, Supervisor, Operator, SSO, or their designee shall inspect all equipment for leaks prior to using it on site. If leaks are found, every attempt shall be made and/or repair the leak prior to use. The use of plastic/tarps underneath likely sources (i.e.: heavy equipment & drill rigs) will also be used to contain any potential leaks. All materials resulting from equipment leaks shall be picked up and disposed of as directed by the PM. Spill containment equipment (empty drums, shovels, and absorption materials) shall be available on-site. If special spill containment is required during specific tasks it will be addressed in the specific THA attached. Where possible, equipment should be parked on asphalt or concrete overnight, for ease of capturing/cleanup of leaking material. Spill response and notification requirements are address in section 1.17 of this document.

1.1.6 Additional Instructions/Procedures

1.1.6.1 Health and Safety Communication

Health and safety issues must be communicated quickly and effectively to protect field team members and nearby personnel. The communication processes implemented for this project include Pre-Field Communication, Field Communication and Post-Field Communication. If additional utilities are found that are not shown on drawings, the WD3 PM or the Site Superintendent will notify the CGRP-D&D Project Leader or designee. Work will stop at that location until it is assured that the utility is isolated from hazardous energy and the CGRP-D&D Project Leader or designee provides instructions on how to proceed.

Verify that all utilities have been isolated from hazardous energy and establish positive control to insure that connection cannot be re-established without the consent of the on-site Lockout/Tagout authorized person per LIR 402-860-01.0 (Lockout/Tagout for Personal Safety).

1.1.6.2 Pre-Field Communication

Pre-Job Start HS Briefing (SSHASP and DHASP Training). All field project team members will attend the pre-job start HS briefing prior commencing fieldwork. This briefing will inform each field worker of the site-specific information and requirements applicable to the scope of work. This training will also cover the contents of the SSHASP, SSHASP modifications and applicable portions of the DHASP. The contents of a special work permit, excavation permit, spark/flame permit, etc. if required, will also be discussed at this time.

1.1.6.3 Field Communication

Daily Tailgate Safety Meetings:

A tailgate safety meeting will be held each day of the field project to inform personnel of the anticipated activities for the day and the hazards, mitigating measures, monitoring requirements and emergency procedures associated with the activities. Any newly identified hazards and associated monitoring and exposure control measures, and problems or concerns that have arisen since the previous tailgate meeting will also be discussed. Meeting topics and attendance will be documented.

All field team members should discuss any health or safety related concerns, and emergency communication (Incident Reporting) during these meetings. All workers have the right to discuss any safety-related concern **without fear of reprisal.**

Post-Field Communication:

Any HS issue that is raised during the execution of this project will be evaluated by the SSO, PM, Site Superintendent and the CGRP-D&D HSR-5 Representative for inclusion into necessary revisions of this SSHASP, future SSHASPs, or the DHASP. If such changes are required, the CGRP-D&D Project Leader will be advised. If required, additional communications to the CGRP-D&D Program Manager, Lesson Learned Coordinator, etc, shall be made as required by the CGRP-D&D Project Leader.

1.1.6.4 Visitor Policy

As specified in Section 3.1 of the DHASP, when a visitor arrives on site the PM, Site Superintendent or designee must meet with the visitor to determine the purpose of the visit and to provide a safety briefing. The visitor shall not enter controlled work zones unless absolutely necessary, and then only after being briefed per Section 10.1.1 of the DHASP, after meeting all SSHASP and DHASP requirements, and being escorted at the discretion of the PM. If a visitor does not comply with these requirements, the PM shall request the visitor to leave or shall stop operations to limit the threat of harm to the visitor.

1.1.6.5 Medical Surveillance

The medical surveillance requirements for project personnel will vary based on the work requirements and job assignments.

HAZWOPER Personnel

All project personnel, who work within the exclusion zone during site characterization, remediation, and confirmation sampling activities, with potential exposure to hazardous substances above their respective OSHA PEL will participate in a medical surveillance program as described in this section.

Project personnel involved site mobilization/site setup, clearing and grubbing/erecting perimeter fencing, and site demobilization activities, are not expected to be enrolled in a medical surveillance program at this time.

The medical surveillance program consists of a baseline or initial examination, an annual medical examination, a termination examination, and episodic medical examinations as necessary. At a minimum, the content of the initial, annual and termination examinations shall consist of the following medical tests and procedures (or as determined by the examining physician based on the anticipated contaminants of exposure):

- Medical and occupation history
- Physical examination
- Pulmonary function test
- Blood count
- Audiometry
- Urinalysis
- SMAC-22 biochemical profile (liver function tests)

Resting electrocardiogram (physician's discretion)
Vision screen (physician's discretion), including intraocular pressure (for personnel over 35 years of age or at the examining physician's discretion)

- Chest X-ray (PA)
- Electrocardiogram (EKG)

An episodic examination will be required if any worker develops signs or symptoms related to the possible overexposure to hazardous substances or other health hazards, or that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation. The scope of any episodic examination will be left to the discretion of the examining physician.

The subcontractor will provide WD3 with a copy of each employee's completed examining physician's written opinion about the employee's ability to perform work on a hazardous waste site and to use respiratory protection. The examining physician's written opinion shall also include a statement that the physician has informed the employee of the results of the exam.

The examining physician will be provided with the following information:

- A copy of DA PAM 40-173
- Information on the employee's anticipated or measured exposure levels
- PPE used or to be used
- A description of the employee's duties as they relate to the employee's exposures
- A copy of 29 CFR 1910.120

Asbestos Abatement Personnel

Asbestos abatement personnel shall receive a medical examination complying with the requirements of 29 CFR 1926.1101(m).

Lead Abatement Personnel

In addition to the medical tests and procedures listed for HAZWOPER Personnel, workers with potential exposure to lead above the OSHA action level of 30 $\mu g/m^3$, e.g., personnel involved with demolition of buildings with lead-based paint, shall also receive the following two tests:

- Blood lead
- Zinc protoporphyrin

Radiological Workers

Radiological workers shall receive pre- and post bioassays as required by the Radiological Control Plan and/or Radiological Work Permit developed for this project.

1.1.6.6 Respirator Protection:

Respiratory protection may be required for this project and shall be used in accordance with the WGI Written Respiratory Protection Program.

The Written Respirator Program was utilized to specify the following:

Selection of respiratory protection based on hazard exposure

The primary contaminants of concern are radiation, asbestos, and metals. Based on the type of work that will be conducted during this project and the physical/chemical characteristics of the contaminants of concern, it is expected that the personnel exposure to the contaminants of concern via the respiratory system will be primarily through inhalation of airborne dust and fibers. It is also expected that dust control and other work procedures and practices will minimize the potential exposure of site personnel below the contaminant-specific PELs and/or TLVs. The selection of respiratory protection will be done in accordance with the WGI Respiratory Protection Program.

Fit Testing

All personnel required to wear supplied air or air purifying respirators during this project will be required to submit a copy of a current, i.e., within the last year, quantitative fit test record. The record shall indicate the make, model, and size of respirator to which the individual was successfully fit tested. The fit test record will be maintained on site throughout the project. In addition, personnel shall be required to perform a positive/negative pressure fit check prior to entering the exclusion zone.

Medical Examination

All personnel required to wear respiratory protection during this project will be required to have been cleared by a physician to wear an air purifying respirator. The medical examination, required in this SSHASP, will include the necessary examination protocols, which permits this certification. As indicated in this SSHASP, the examining physician's written opinion/certification for each site worker will be maintained on site throughout the project.

Approved Respiratory Devices

Only respirators and cartridges meeting NIOSH/MSHA or NIOSH specifications shall be used on this project.

Training

Personnel required to wear respiratory protection shall receive training prior to wearing a respirator. Examples of approved initial respiratory protection training are those provided in the 40-hour HAZWOPER and/or asbestos abatement courses. Site-specific training will also provide refresher training and cover purpose of using respirators; limitations of air purifying respirators; donning and doffing procedures; fit tests and fit checks; care, maintenance, inspection, cleaning, and storage requirements.

Issuance

Respirators shall be issued to individuals and shall not be interchanged.

Cleaning, Disinfection, Storage

Individuals shall be responsible to clean and sanitize their respirators after each use, using the respirator manufacturer's, or equivalent, cleaning/sanitizing materials, e.g., MSA Cleaner-Disinfectant Liquid. After air-drying, respirators will be placed into clean plastic bags and stored in the site trailer or other areas away from contamination.

Air Monitoring

Air monitoring shall be conducted as discussed in THAs. Results shall be compared against specified action levels to assist the SSO/RCT in determining the level of respiratory protection required by site personnel.

In addition, supervisor/safety representative will ensure the following:

Personnel required to wear respirators shall:

- Shave daily so that no facial hair is present that would interfere with the respirator's fit
- Personnel required to wear prescription glasses shall be provided by their employer with special eyeglass kits and prescription lenses that can be worn inside their respirator.

1.1.6.7 Safety and Health Work Practices

Operations shall be conducted in a safe manner consistent with the policies and procedures outlined in this SSHASP. The number of personnel shall be restricted to the minimum necessary to complete the required work as an administrative control to limit personnel exposures to site hazards.

All WD3 and Subcontractor personnel assigned to this project are responsible for following this SSHASP, for using safe practices and for wearing the PPE specified by the SSHASP. Project personnel shall report hazards and unsafe conditions and practices to the FS/EE, Project CSP and/or SSO/RCT. Project personnel shall comply with all Federal, state, and local occupational health and safety. Violations of project procedures may include disciplinary measures up to and including termination.

Operations Safety

- Horseplay is not permitted during any part of the workday and will not be tolerated.
- Have multi-purpose dry chemical fire extinguisher and shovel available at every site.
- Whenever practicable, avoid driving over dry grass that is higher than the ground clearance of the vehicle. Catalytic converters on the undercarriage of vehicles are sufficiently hot to ignite dry prairie grass. Never allow a vehicle with a warm undercarriage to sit in a stationary location over dry grass or other combustible materials.
- At a minimum, wear hard hats, safety glasses and steel-toed boots when inside the boundaries.
- Remain a safe distance from heavy equipment.
- Do not under any circumstances enter or ride in or on any backhoe bucket, materials hoist or any other similar device not specifically designed for carrying human passengers.
- Remain aware of your own and other's positions with regard to rotating equipment and be extremely careful when assembling, lifting and carrying items that may cause pinch-point injuries and collisions.
- Be alert to the symptoms of fatigue and heat stress and their effect on the normal caution and judgment of personnel.
- Use GFCIs with all electrical tools and equipment.
- Be alert to potentially changing exposure conditions as evidenced by perceptible odors, unusual appearance of excavated soils, oily sheen on water, or other evidence of possible contamination.
- Keep tools and equipment off the ground whenever possible to avoid tripping hazards and the spread of contamination.
- Use the buddy system at all times while operating in the site.
- Use the buddy system for all manual lifting.
- Cease all work operations on the site at sunset unless the entire control zone is adequately illuminated with artificial lighting.

- Attend the pre-job safety meeting prior to the start of the work. All team personnel are required to attend.
- Establish pre-arranged hand signals or other means of emergency communication when working around cranes.
- Wear hearing protection if you have to shout to communicate at a distance of three feet in steady-state (continuous) noise or when you expect loud impact noise from certain activities. Hearing protection is available and should be included in your field kit.

Work Site Practices

No worker may engage in any activity for which the health and safety consequences of his/her actions are unclear (e.g., previously unplanned work) without the approval of SSO/RCT or supervisor. If such activities become necessary to complete any phase of the work, a project instruction or procedure shall be developed and followed.

EMERGENCY CONTACTS AND PHONE # /INCIDENT REPORTING PROCESS

(Post on-site in Support Zone)

EMERGENCIES

If the Incident is an emergency that involves:

A Medical Emergency;
Fire (no matter how small);
Police;
Security; or
Hazardous Device

CALL:..... 911

(If you are calling from a cell phone, you must tell the 911 operator that the emergency is in Los Alamos)

If the Incident is an emergency that does not involve the items above:

CALL: (EM&R) 667-6211

NON-EMERGENCIES

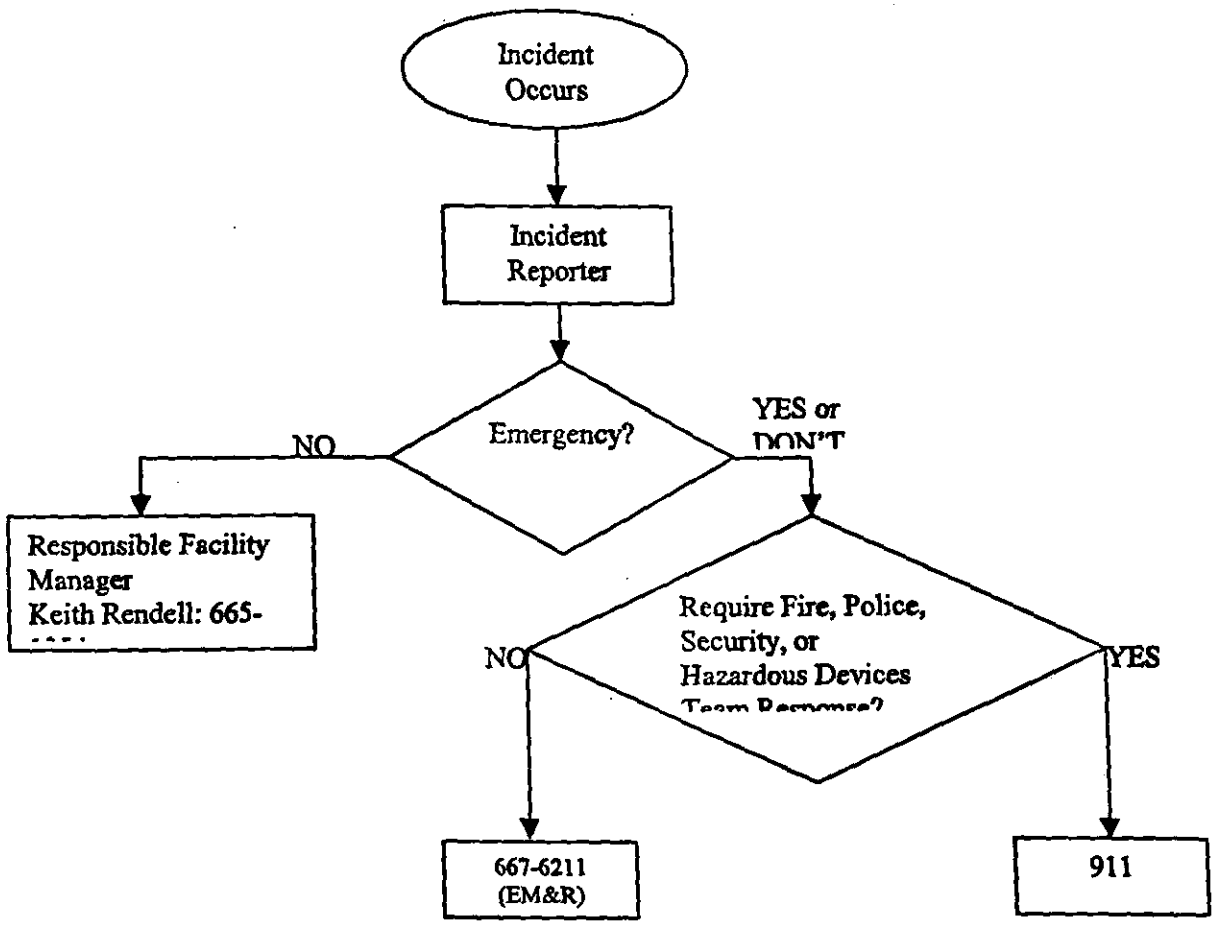
If the Incident is not an emergency, notify the CGRP Project Lead:
Keith Rendell 665-8543, 665-3056

EMERGENCY REPORTING INFORMATION

When calling for emergency services, have the following information available to report:

- Site name/location/phone # Omega West Reactor
- Number of personnel involved
- Caller ID
- Name and condition of affected employees
- Nature of emergency
- Actions taken and assistance required

Figure 2: Incident Reporting Process



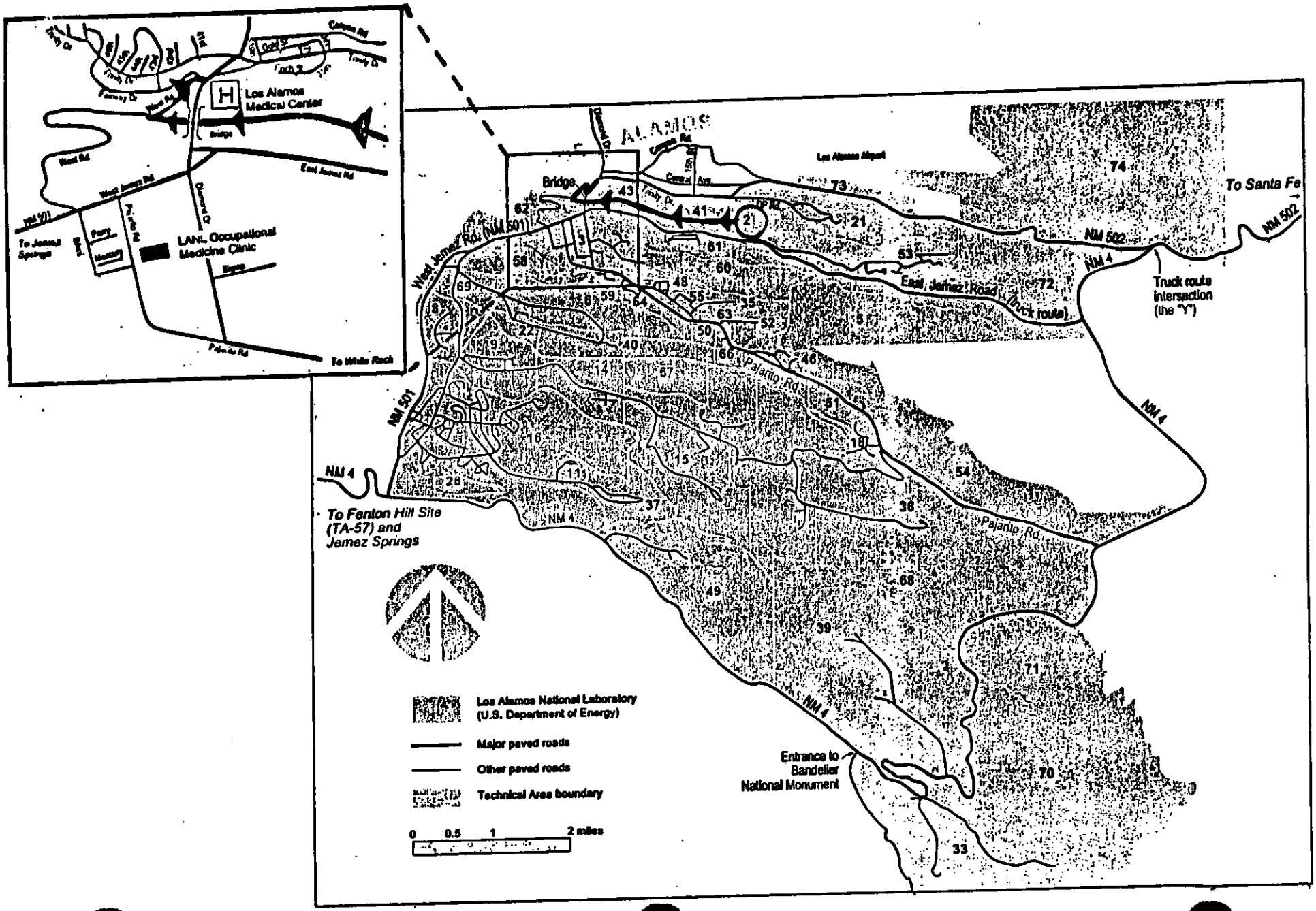
NOTE: For all medical emergencies, call 911.
After the Initial Incident Notifications have been made, the following project contacts shall be notified as soon as possible:

Project Contacts:

CGRP Project Leader: (Keith Rendell) 665-1054
D&D/ESH-5 Rep.: (Michael Dennis) 665-0510
CGRP/HSR-1 TEAM LEADER (MARTY PEIFER) 665-4342
Subcontractor Notifications shall be in accordance with the individual company policies. Management Contacts and phone numbers are listed in section 1.2 of this SSHASP.

1.1.8 Emergency Route Maps from the Omega West Reactor to Hospital/HSR-2

Figure 3. Emergency Route to Hospital / HSR-2.


Los Alamos Medical Center
LANL Occupational Medicine Clinic
To Jemez Springs
To White Rock
Bridge
West Jemez Rd. (NM 501)
East Jemez Road (truck route)
Truck route intersection (the "Y")
To Santa Fe
NM 502
NM 4
NM 501
Pajarito Rd.
Los Alamos Airport
To Fenton Hill Site (TA-57) and Jemez Springs
Entrance to Bandelier National Monument
Los Alamos National Laboratory (U.S. Department of Energy)
Major paved roads
Other paved roads
Technical Area boundary
0 0.5 1 2 miles

1.1.9 Radiation Protection

Radiation Protection (RP) on the OWR Project will be pursuant to the performance requirements of 10 CFR 835 and LANL LIR402-700-01.1, *Occupational Radiation Protection Requirements.*

Radiological workers onsite for more than 10 days will receive GET training. Those requiring unescorted access to radiological controlled areas will receive Radiation Worker II training.

Radiological Control Technicians who have been approved by WD3 are responsible for making radiological measurements, and for field implementation of radiation protection requirements. They also may participate in the development of RWPs and other work control documents.

The RP Supervisor has overall responsibility for the radiation protection program. He works with task leaders to assure that sufficient RP resources are available for on-going tasks and is the formal point of contact with the LANL HSR-1 representative for the project. The WD3 Radiation Protection Supervisor oversees the staff of RCTs, plans radiological work in conjunction with task leaders, and approves Radiation Work Permits and other work control documents. He also maintains day-to-day oversight of the implementation of radiation protection requirements by conducting walkdowns and observing program implementation.

Radiation work permits (RWP) and Hazard Control Plans (HCP) are used on the OWR Project to establish and communicate radiation protection work requirements. The following topics will always be addressed in OWR Project RWPs and HCPs, in addition to the standard requirements contained in Attachment K "Work Planning" of the LIR402-700-01.1:

- Radiation dosimetry requirements for the task including thermoluminescent dosimeter and bioassay requirements,
- Administrative controls, engineering controls and personal protective equipment for radiation protection for the task based on an assessment of the hazards,
- Personnel decontamination and equipment decontamination requirements and procedures, and
- Detail of other task-specific radiological requirements not specifically addressed in the SSHASP and applicable Task Hazard Analyses.

Radiation protection on the OWR Project will be based on ALARA concept. Doses to workers and the public will be kept as low as reasonably achievable given the taking into account economic and social factors taken into account.

TO CONTROL YOUR RADIATION EXPOSURE AND RADIOACTIVE MATERIAL, OBSERVE THE FOLLOWING RULES:

OBEY

- Posted, written, and oral radiological control instructions and procedures, including instructions on radiological work permits.
- "Evacuate" and "stop work" orders from radiological control personnel promptly.

DO NOT

- Loiter in radiation areas.
- Smoke, eat, drink, chew, or apply cosmetics (i.e. lip balm) in contamination areas, high contamination areas, and airborne radioactivity areas.

BE SURE TO

- Wear personnel monitoring devices where required by radiological work permits, signs, procedures, or by radiological control personnel. Report immediately the loss, damage, or unexpected exposure of personnel monitoring devices or off-scale readings of self-reading dosimeters to the radiological control organization.
- Keep track of your radiation exposure status and avoid exceeding radiological administrative control levels.
- Wear personal protective equipment and clothing properly whenever required by radiological work permits or postings.
- Minimize the spread of potential radioactive spills and promptly notify the appropriate personnel of all spills.
- Avoid contact of skin, clothing, and equipment with contaminated surfaces.
- Place contaminated tools, equipment, and solid waste items on disposable surfaces, such as plastic sheets, when not in use.
- Notify radiological control personnel of alarming or faulty radiological control equipment.
- Notify radiological control personnel of off-site occupational radiation exposures so that worker dosimetry records can be updated.

PRIOR TO ENTERING AREA

- Assure that you are mentally alert and in physically sound condition.
- Limit the amount of material taken into contaminated areas to minimize radioactive waste and future decontamination.
- Have necessary materials and equipment on hand to complete your task, thereby minimizing time and exposure.
- Notify radiological control personnel of the presence of open wounds, sores or rashes before entering an area where contamination exists and exit immediately if a wound occurs while in such an area.

UPON LEAVING AREA

- Properly remove personal protective equipment and clothing to minimize the spread of contamination.
- Frisk or be frisked for contamination when entering an uncontaminated area after exiting contamination, high contamination, or airborne radioactivity areas and associated radiological buffer areas and notify radiological control personnel when contamination is found.

As Low As Reasonably Achievable (ALARA)

Good radiological practice requires activities to develop and implement plans and measures to maintain occupational radiation exposures as ALARA. This process is a graded-approach, where the rigor of application is commensurate with the magnitude of the radiological hazard. As applied to occupational radiation exposure, the ALARA process does not require that exposures to radiological hazards be minimized without further consideration, but that such exposures be optimized, taking into account both the benefits arising out of the activity and the detriments arising from the resultant radiation exposures and the controls to be implemented.

An effective ALARA process includes effective consideration, planning, and implementation of both physical design features (including engineering controls) and administrative controls to balance the risks of occupational radiation exposure against the benefits arising out of the authorized activity. Lessons learned are documented, institutionalized, and considered in planning and executing subsequent activities to further the goals of the ALARA process and to provide optimal employee protection.

Well planned and executed work practices support the ALARA process. These work practices implement work controls that are commensurate with the radiological hazards.

ALARA Goals

The accumulated exposure to radiation by all personnel assigned to the OWR project will be managed to levels that are as low as reasonably achievable (ALARA) using standard industry practices.

The control of radioactive material will be such that the internal deposition of radioactive material will be maintained as low as reasonably achievable (ALARA).See Section 1.19 for additional information about radiation protection.

ALARA Goals (for Site Assessment activities)

ALARA goals will be established for each major task of this project.

1.1.10 Pre-Job Start Health and Safety Briefing & DHASP/SSHASP Acknowledgement Form

PRE-JOB START HEALTH & SAFETY BRIEFING & DHASP/SSHASP ACKNOWLEDGMENT FORM

Project Title: Omega West Reactor E&D Project

SSHASP No.: _____ Date:_____ TA(s): 2

Conducted by:

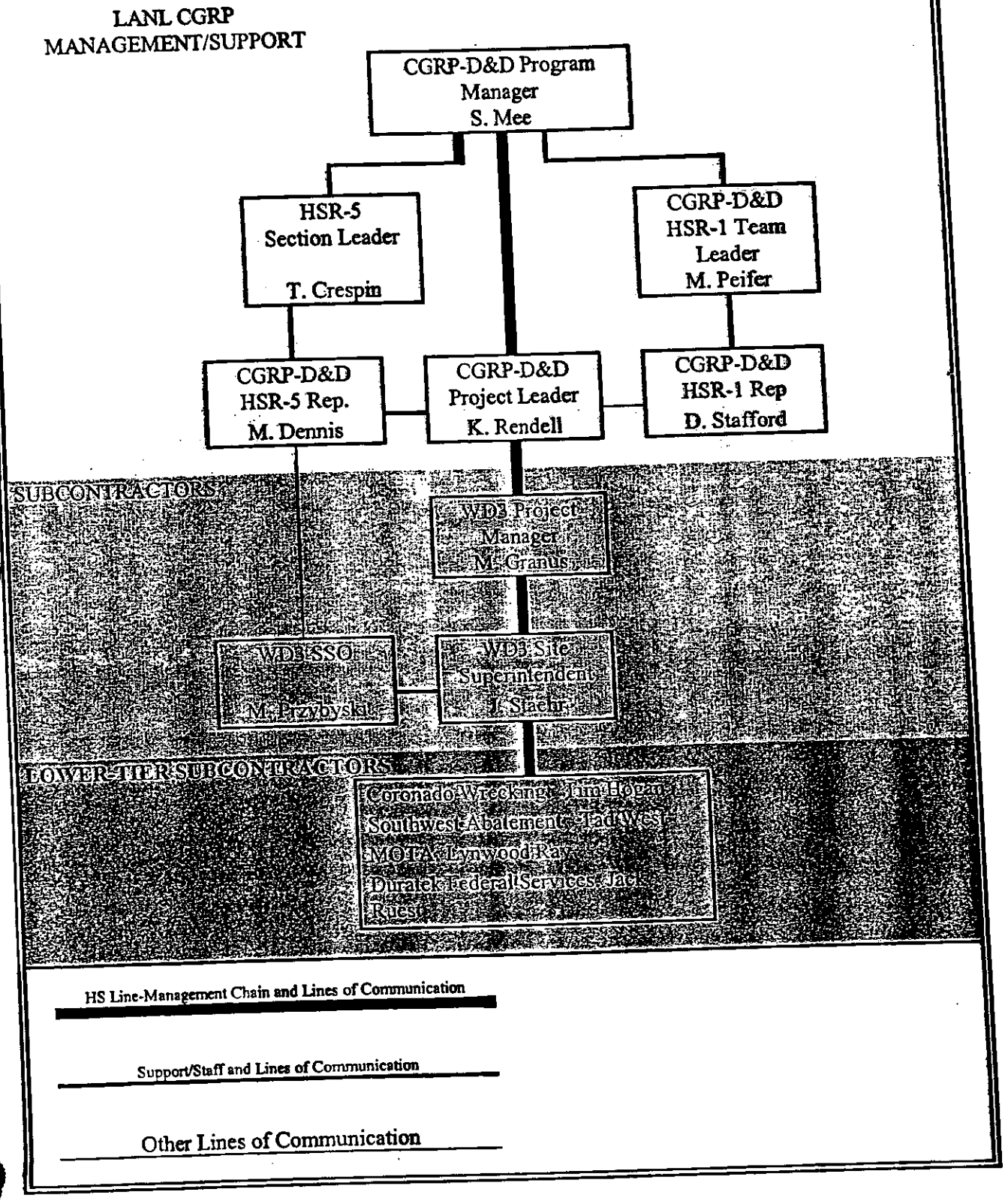
Printed Name | Title | Employer or LANL Group | Z Number

Signature | Date

I acknowledge that I understand the DHASP requirements applicable to this project, and have read or been briefed on the contents of this SSHASP in accordance with requirements of Sections 1.2.2 and 10.1.1 of the DHASP.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

1.11 Project Health and Safety Line Management Responsibility and Lines of Communication.



2.1 TASK HAZARD ANALYSIS (THA)/WORK PACKAGE

PROJECT NAME: OWR D&D

TASK 1: MOBILIZATION/DEMOBILIZATION/SITE RESTORATION AND SET UP

ESTIMATED DATE (S) & DURATION OF WORK: JULY 2002 – JANUARY 2003

2.1 TASK DESCRIPTION

This task involves non-HAZWOPER and non-radiological activities such as:

- Mobilization/demobilization and loading /off loading of equipment to the site
- Establishing work and support zones in and around the Omega West Reactor
- Mobilization and demobilization of subcontractor equipment
- Loading and off loading of equipment and supplies at the site
- Establishing construction and support zones
- Placement of storm water pollution prevention (SWPP) measures
- Setting up site trailers
- Setting up utilities to trailers
- Having a licensed electrician verify that all circuit panels in the structures are dead, and that the facility is isolated from electric power.
- Verifying that utilities are isolated from hazardous energy.

In general, WD3 and subcontractors will abide by all DOT requirements for transportation on public roads. The site perimeter will be posted as appropriate to discourage unauthorized entry.

At a minimum, the following zones shall be established for this project:

- The fenced work area will be managed as a construction zone to keep site-seers and members of the public a safe distance from all demolition and excavation activities. It is expected that all Task 1 activities can be completed in a construction area.
- Radiological control areas as specified in the Radiological Work Permit
- Asbestos regulated work areas for OSHA regulated ACM removal activities
- Lead regulated work areas for OSHA regulated removal of lead painted items
- HAZWOPER zones during activities where there is a potential for exposures to hazardous waste

To establish zones the subcontractor will utilize freestanding stantions or driven metal posts to hold up flagging, rope or other suitable materials to distinguish individual areas. Signs identifying each zone and the entry requirements will be posted at the zone entrance. Signs shall meet OSHA and LANL requirements. The SWPP measures may include anchoring straw bales and/or sandbags around sewer drains and on down hill slopes to prevent water runoff.

Restoration activities will include backfilling excavations and trenches, restoring the land to the original grade and re-seeding.

The applicable requirements of the WGI Fire Hazard Control THA are also incorporated by reference into this Task Hazard Analysis.

2.1.1 KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.2 of the SSHASP.

2.1.2 HAZARD ASSESSMENT

Biological:

Bloodborne pathogens	Bloodborne Pathogens - Occupational exposure to bloodborne pathogens while rendering first aid or CPR could result in life-threatening illness, HAR of negligible to minor.
Hanta Virus	Hanta Virus - Presence of rodent droppings/nests in or around site, and associated potential for Hanta virus illness is unlikely, HAR of negligible to minor.
Venomous creatures	Insect/Snake Stings or Bites - Demolition work always presents a potential for encounters with insects or snakes. Severity of stings and bites is dependent upon insect/snake type and individuals tolerance/allergic reactions, HAR of negligible to minor..

Radiological:

External radiation exposure	Exposure to external ionizing radiation fields is unlikely to exceed LANL's administrative action levels because all Task 1 activities are non-intrusive. HAR = negligible.
Contamination exposure	Exposure to the radiological contaminants is unlikely to exceed LANL's administrative action levels because all Task 1 activities are non-intrusive. HAR = negligible.

High Explosives:

Not applicable. High Explosive materials not identified in LANL Characterization Report as a COPC. HAR of negligible.

Chemical Exposure

Chemical exposure	Potential for exposure to the following chemical compounds/substances resulting in skin or eye irritation or minor injury is unlikely to occur or possibly could occur: unleaded gasoline, diesel, hydraulic fluids and lubricants. HAR of negligible to minor.

Physical/Safety:

Equipment loading/off-loading	Equipment falling off lowboy during loading/off loading could possibly occur resulting in injury or equipment damage. HAR = minor to serious.
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR = minor to serious.

Hoisting Equipment Failure	Failure of hoisting equipment, a crane or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Inadequate illumination	Inadequate site illumination during low-light/night conditions could result in possible reversible injury. HAR = negligible to minor.
Lifting and Carrying	Lifting and carrying equipment and materials (ergonomic considerations) resulting in the possibility of reversible injury. HAR = negligible to minor.
Hazardous energy	Pinching, crushing, electrocution from the sudden release of energy resulting in serious injury or death is possible but unlikely. HAR = minor to serious
Skin puncture/wounds	Skin puncture/wounds, and/or electrocution from mishandling of or use of defective hand and power tools/equipment resulting in possible reversible injury. HAR = negligible to minor.
Lightning	Struck by lightning while working outdoors is unlikely to occur but could occur resulting in irreversible injury or death. HAR = minor to serious.
Transportation Accident	Transportation accidents in the parking lot or on the road possibly could occur or is unlikely to occur resulting in reversible injury. HAR = negligible to minor
Unsanitary work conditions	Unsanitary working conditions (i.e., site sanitation/housekeeping) could possibly result in serious injury/illness or death. HAR = minor to serious
Energized equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR = minor to serious.
Suspended power lines	Working with/around suspended electric power lines could possibly result in irreversible injury or death. HAR = minor to serious.
Excessive Noise	Working around equipment my expose employees to noise levels above the action level, which could result in irreversible hearing loss. HAR + minor to serious
Temperature stress	Employees could be exposed to temperature extremes, which could result in irreversible injury or death. HAR = minor to serious
Confined Space	Entry into a confined space possibly could be required. Unauthorized entry into confined spaces can result in irreversible injury or death, HAR of minor to serious.
Fall from Ladder	A fall from a ladder possibly could occur resulting in irreversible injury. HAR of moderate.
Contact with energized underground utility	Contact with energized underground utilities possibly could occur resulting in serious injuries or death. HAR = moderate to serious.

2.1.3 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be

inforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical sed on the project will be maintained on site and will be made available to affected personnel upon request.

It is anticipated that this task may involve the use of petroleum-based fuels, lubricants and hydraulic fluids.

SITE CONTROL

This task involves the setup of site control zones prior to demolition activities. A perimeter fence will be set up to discourage entry by unauthorized personnel. The zones are subject to change as field conditions warrant and as different tasks become active.

2.1.4 ADMINISTRATIVE and ENGINEERING (A&E) CONTROLS

Applicable LANL LIRS:

LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-820-01.0	Noise and Temperature Stresses
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	Avoid contact with bodily fluids when performing CPR or first aid. Use bloodborne pathogen kit when cleaning up spills of blood or OPIM and while rendering first aid Use micro-shield when performing CPR. Report all exposures to SSO and PM immediately and seek medical attention. Comply with Subcontractor's Bloodborne Pathogens Program.
Hanta Virus	Look for and avoid rodent droppings and nests. Notify JCNNM for proper disinfection if the droppings/nests must be disturbed to complete the work.
Venomous creatures	Avoid contact with insects and snakes. Inform SSO or PM if you are allergic to insect stings/bites. Use insect repellants.
Chemical Exposure	
Chemical exposure	Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals.
Physical/Safety	
Equipment loading/off-loading	All equipment shall be loaded/off-loaded in a safe and controlled manner. Spotters shall be used to help direct the operator drive equipment off the lowboy. All unauthorized personnel shall be removed from the off loading area.
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed
Hoisting Equipment Failure (Cont'd)	for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Inadequate illumination	Compliance with 29 CFR 1926.26 and 1926.56 for required illumination levels. General construction areas require a minimum of 5 foot-candles illumination.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Skin puncture/wounds	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated.
Lightning	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Suspended power lines	Maintain the following minimum distances for stationary operations, as specified in 29 CFR 1926.550(a)(15)(i) and (ii): For live lines rated < 50 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated > 50 kV; Maintain a minimum distance of 10 ft + 0.4 inches ($1/30^{th}$ foot) for each 1 kV over 50 kV or twice the length of line insulator but never less than 10 ft. Examples: voltages < 50 kV (10-ft. minimum), 345 KV (20-ft minimum), and 750 kV (33-ft minimum). Maintain the following minimum distances for transit operations with no load and boom lowered, as specified in 29 CFR 1926.550(a)(15)(iii): For live lines rated < 50 kV; Maintain a minimum distance of 4 ft between live lines and any part of equipment or load. For live lines rated above 50 kV and up to and including 345 kV; Maintain a minimum distance
Suspended power lines (Cont'd)	of 10 ft between live lines and any part of equipment or load. For live lines rated above 345 kV and up to and including 750 kV; Maintain a minimum distance of 16 ft between live lines and any part of equipment or load. Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
Confined Spaces	• Comply with the WGI Confined Space Program. • No entry into a confined space is allowed until the space has been evaluated by the Confined Space Entry Supervisor. • All confined spaces must be labeled in accordance with WGI Confined Space Program. • Only personnel who have received training approved by WD3 may enter a confined space or serve as an entry supervisor. • Provide intermittent monitoring for carbon monoxide, oxygen deficiency and combustible vapors within confined space.
Fall from Ladder	• Ladders will be inspected before the first use of the day. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". • Only commercially manufactured ladders will be used. • Ladder use will conform to 29 CFR 1926.1053, Ladders.
Underground Utility	Determine the estimated location(s) of utilities. Notify utility owners of intended work and request surface demarcation(s) of underground utilities; field team member should accompany utility owner representative to identify intended driven post locations and any other specifics of utility location(s). No posts shall be driven into the ground with 2 feet of an identified utility. Work shall be conducted under a LANL Excavation Permit and LANL "Electrical Safety" LIR 402-600-01.0.

Will task affect other operations, employees, or tasks? No. X

2.1.6 MEDICAL/RADIOLOGICAL SURVEILLANCE

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

Hearing Conservation

Annual audiograms and medical evaluation for those potentially exposed to a sound level of 82 dBA 8-hour time weighted average per LANL LIR 420-820-01

1.7 EXPOSURE MONITORING

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/ Rationale	Response Action(s)
Cold Stress Refer to the current ACGIH-TLVs and Appendix G of the ER-HASP and Subs cold stress prevention program	Thermometer and access to an anemometer for current wind speed information.	Temperature conditions will be monitored by PM/SSO at the start of each workday and after any significant change in weather condition. Individuals at work site will be monitored as necessary.	< 40°F adequate insulating dry clothing required. < 30°F heated shelters should be available near work site. When wind chill is a factor, Tables 2 and 3 in the ACGIH-TLVs booklet shall be applied. **Rationale:** Refer to ACGIH-TLVs and LIR 402-820-01.0 Noise and Temperature Stresses	When temperatures are below 30° F the crew will be allowed additional work breaks to warm up in a heated shelter.
Combustion gases from internal combustion engine, oxygen deficiency.	MSA 360 or equivalent	Monitor prior to entry into non-permit confined space or excavation and intermittently during occupancy.	Prior to initial entry, intermittently during day, when a smell of IC engine exhaust is present. O2 < 19.5%, CO > 35 ppm, or combustible vapors > 10% of LEL.	Compliance with 29 CFR 1910.1000. Leave the excavation, relocate internal combustion (IC) engines downwind of excavation if possible, turn off unnecessary IC engines, prevent contaminated air from entering excavation. Notify ESH-5.
Noise 29 CFR 1910.95; ACGIH-TLVs and Subs Hearing Conservation Program	Noise dosimeter/ Type 2 sound level meter	Perform noise survey of operations. Perform noise dosimetry on representative employees and subcontractors who could be exposed above the action level. Repeat whenever operations change and follow-up monitoring is warranted. Periodic monitoring frequency thereafter per SSO discretion.	>82 dB(A) 8 hr TWA Hearing Conservation Program Enrollment >85 dBA 8 hr TWA Hearing protection required - **Rationale:** Per LIR 402-820-01.0 Noise and Temperature Stresses	When feasible, implement engineering controls to reduce excessive noise levels (in particular, mufflers on all equipment shall be in functional). Post zones of excessive noise and exclude persons who authorized employees. Increase the distance between employee work zones and noise operations when possible. Appropriate hearing protectors will be available when noise level is at or above the applicable action level. Conduct octave band analysis to determine frequencies/hearing protection requirements operations involve an 8-hr TWA > 110 dBa.

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/ Rationale	Response Action(s)
Heat Stress	Ear-canal thermometer or oral thermometer Clock/watch with second hand or sphygmomanometer, or WBGT area monitor.	At beginning of each rest period (immediately following each work period) monitor: radial pulse and ear canal temperature Monitoring frequency based on ambient air temperature for employees wearing breathable protective clothing: T ≥ 90°F every 45 to 60 - minutes T ≥ 85°F every 60 to 90 - minutes T ≥ 80°F every 90 to 120 - minutes 80°F Area Heat Stress Monitoring/ Document Action level exceeded: Adherence to Table 1, of the ACGIH-TLVs, worker weight and temperature taken at the beginning and end of each shift.	Monitoring will only be in effect if personnel are in PPE higher than Level D. Temperature: Core Body > 100.4 °F, Oral> 99.4 °F or Ear drum > 99.0 °F Heart Rate (measure ≥ 30-seconds): Initial > 110 beats per minute (bpm) or Recovery (3-min later) still ≥ 90 bpm Rationale: Potential for high heat levels during summer-time operations. Increased core body temp. is primary indicator of heat stress; increased heart rate is secondary indicator. Heart rate will not be used if a decontamination line is necessary due to time considerations removing PPE. LIR 402-820-01.0 Noise and Temperature Stresses	Shorten next work cycle by one third. If using an Area Heat Stress Monitor follow the guidelines in Table 1 of the ACGIH-TLVs for allowable work-rest regimen.

2.1.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: At a minimum, all personnel shall wear long pants and shirt with sleeves (Level D PPE). All workers exposed to traffic shall wear reflective or high visibility warning vest/garment in compliance with 29 CFR 1926.201.

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury.

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: Not applicable.

Ears: If necessary, plugs/muffs with sufficient NRR.

An RWP, if developed, for this Task1 activities may require additional PPE.

2.1.9 DECONTAMINATION

Not applicable. The activities involved in this task are not likely to result in exposure to radioactive materials.

2.1.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.1.11 EMERGENCY PLANS (task-specific)

See section 1.4 of this SSHASP for the Project Emergency Action Response Plan.

.1.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

An excavation permit must be obtained prior to driving the metal posts into the ground and securing any straw bales, sandbags or fencing.

Compliance with requirements of ESH-5 Confined Space Evaluation required prior to into non-permit confined spaces. Entry into a permit required confined space requires an ESH-5 Confined Space Evaluation and an Entry Permit completed by Entry Supervisor.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee
Forklift in accordance with 29 CFR 1910.178 before first use of the day.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	Keep On-site
Scope of Work	
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

1.13 TRAINING REQUIREMENTS

Types of training: R = Read training; C = Classroom training; F = Field training; AN = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement		Personnel to be trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All on-site personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All field personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	—
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO, designated First Aid CPR Providers (if any)
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
WD3 Confined Space Entry Program	C	All field personnel entering or supervising the entry of a confined space
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel
Forklift – per 29 CFR 1910.178 Powered Industrial Trucks	C	Forklift operator
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

2.1.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR D&D SSHASP No.: _____

Task: SITE MOBILIZATION/DEMOBILIZATION, RESTORATION SETUP Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number

Signature Date

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

2.2 TASK HAZARD ANALYSIS (THA)/WORK PACKAGE

PROJECT NAME: OWR D&D

TASK 2: REACTOR DECOMMISSIONING AND REMOVAL

ESTIMATED DATE(S) & DURATION OF WORK: JULY 2002 – JANUARY 2003

2.2 TASK DESCRIPTION

This task involves dismantling and disposal of the Omega West Reactor. All resources and available technology will be employed to keep health and safety exposures to workers and the public and releases to the environment as low as reasonably achievable ALARA.

The phases of this are summarized in section 1.3.3 of this document under the sub-heading "Reactor Removal."

Equipment expected to be used during this task may include concrete saws, nibblers, a crane, and a forklift.

Prior to dismantling of the reactor, an engineered ventilation system will be established around the reactor to provide an effective radiological control barrier to minimizes the spread of particulate or airborne contamination. This system will be maintained for the duration of this task.

The applicable requirements of the WGI Fire Hazard Control THA are also incorporated by reference into this Task Hazard Analysis.

2.2.1 KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.2 of the SSHASP.

2.2.2 HAZARD ASSESSMENT

Biological:

Bloodborne Pathogens	HAR or negligible to minor. See THA-1, section 2.1.2
Hanta Virus	HAR or negligible to minor. See THA-1, section 2.1.2
Venomous Creatures	HAR or negligible to minor. See THA-1, section 2.1.2

Radiological Exposure:

External Radiation Exposure	Exposure to external ionizing radiation fields in radiation areas and high radiation areas could exceed LANL's administrative action levels. HAR of minor to serious.
Exposure to loose contamination	Exposure to loose radioactive contamination could result in skin contamination or internal depositions of radioactive materials. HAR of minor to serious.

High Explosives:

HAR of negligible. See THA-1, section 2.1.2

Chemical Exposure:	
Beryllium	The need for a beryllium program for protection of workers will be evaluated and a beryllium hazard assessment will be performed. A beryllium management plan will be developed if warranted. HAR: open item.
Common Construction Site Chemicals	HAR or negligible to minor. See THA-1, section 2.1.2
Safety/Physical:	
Scaffolding	Working on scaffolding could result in injury from falls or from dropped tools and materials.
Respirable Crystalline Silica	Exposure to respirable crystalline silica possibly could result in death or debilitating disease. HAR of minor to serious.
Excessive Noise	Exposure to excessive noise associated with the use of generators/heavy equipment is unlikely to occur contributing to irreversible injury; HAR of negligible to minor.
Unstable Loads	Exposure to unstable loads as the buildings are razed and placed on transport truck is unlikely to occur but possibly could occur resulting in serious injury/illness or death. HAR of minor to serious
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR of minor to serious.
Cranes and Derricks	Crane mishaps could possibly could possibly occur resulting in serious injury or equipment damage, HAR of minor to serious.
Hoisting Equipment Failure	Failure of hoisting equipment, or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Excess noise	Working around equipment my expose employees to noise levels above the action level, which could result in irreversible hearing loss. HAR = minor to serious
Temperature stress	Employees could be exposed to temperature extremes, which could result in irreversible injury or death. HAR = minor to serious
Falls From > 6 Feet	Falls from elevated work levels (> 6-feet above working surface, i.e., working on top of equipment) could possibly result in death. HAR of minor to serious
Fire During Routine Cutting/Burning	Fire hazard(s) associated with repair or routine cutting/burning operations could result in possible injury HAR of minor to serious.
Inadequate Illumination	HAR or negligible to minor. See THA-1, section 2.1.2
Lifting And Carrying	HAR or negligible to minor. See THA-1, section 2.1.2
Hazardous Energy Skin Puncture/ Wounds - (Hand and Power Tools)	HAR or minor to serious. See THA-1, section 2.1.2 HAR or negligible to minor. See THA-1, section 2.1.2

Flying Debris	Struck by Flying Debris while completing the scope of work is possible but unlikely to occur causing irreversible injury. HAR of negligible to minor.
Lightning or Other Severe Weather	HAR or minor to serious. See THA-1, section 2.1.2
Heavy Equipment	Struck or run over by heavy equipment resulting in serious injury or death is possible but unlikely. HAR of minor to serious.
Transportation Accident	HAR or negligible to minor. See THA-1, section 2.1.2
Contact with Energized Underground Utilities	HAR or minor to serious. See THA-1, section 2.1.2
Unsanitary Work Conditions	HAR or minor to serious. See THA-1, section 2.1.2
Slips Trips Falls	Walking on terrain in/around work site where slips, trips, falls could result in possible reversible injury. HAR of minor.
Energized Equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR of minor to serious.
Suspended Power Lines	HAR or minor to serious. See THA-1, section 2.1.2
Confined Space	HAR or minor to serious. See THA-1, section 2.1.2
Fall from Stairs and Ladders	HAR of moderate. See THA-1, section 2.1.2
Compressed Gasses	Compressed gasses could present life-threatening injury/illness. HAR of minor to serious.
Floor and Wall Openings	Falls through floor or wall openings or being struck by objects that fall through floor or wall openings could possibly occur resulting in irreversible injury or death. HAR of minor to serious.
Structural Failure	Unanticipated structural failure of build is not likely but if it occurred the results could be disastrous. HAR of minor to serious.
Forklift mishap	Improper use of a forklift possibly could result in irreversible injury of personnel, puncture of waste containers or spilling a load of material. HAR of moderate.

2.2.3 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request. It is anticipated that this task may involve the use of petroleum-based fuels, lubricants or hydraulic fluids.

2.2.4 SITE CONTROL

Radiological work at the site will be controlled by radiation work permit. Workers shall work in groups of at least two people (buddy system) and have a means of direct communication or maintain visual contact at all times. The radiological control areas (RCAs) will be controlled in accordance with 10 CFR 835 and LIR402-700-01.1, Occupational Radiation Protection Requirements.

Radiation Area: A radiation area is any area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent in excess of 5 mR in one hour at 30 cm from the radiation source or from any surface that the radiation penetrates.

High Radiation Area: A high radiation area is any area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent in excess of 100 mR in one hour at 30 cm from the radiation source or from any surface that the radiation penetrates.

Airborne Radioactivity Area: An airborne radioactivity area is any area where the concentration of airborne radioactivity, above background exceeds or is likely to exceed 10% of the Derived Air Concentration (DAC) values. DAC values are specified in 10 CFR ~~20~~ 835

Contamination Area: A surface contamination area is a radiological area where surface contamination levels are greater than 1000 dpm/100 cm^2.

2.2.5 ADMINISTRATIVE and ENGINEERING (A&E) CONTROLS

Applicable LANL LIRs:

LIR 402-700-01.1	Occupational Radiation Protection Requirements.
LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-820-01.0	Noise and Temperature Stresses
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	See THA-1, section 2.1.5.
Hanta Virus	See THA-1, section 2.1.5.
Venomous creatures	See THA-1, section 2.1.5.
Radiological	
External Radiation Exposure	Plan radiological work, perform mock up practice runs for high dose activities, use shielding, distance and time constraints to maintain doses ALARA. Comply with RWP requirements
Exposure to loose contamination	Specify respiratory protection when needed, use local exhaust ventilation or construct a containment around the work to manage fugitive releases, maintain removable contamination levels in work areas at the lowest feasible values. Comply with RWP requirements.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Chemical	
Beryllium	Evaluate beryllium hazard and develop beryllium management program if needed.
Chemical exposure	The use of hazardous materials shall be avoided wherever possible. Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals. Material Safety Data Sheets (MSDS) are available for all chemicals used in the project operations. Contact with surfaces, which are known or suspected to be contaminated, will be minimized. When required, only National Institute of Occupational Safety and Health (NIOSH) approved respirators will be used. If necessary, protective clothing such as coveralls, boots (or shoe covers), and gloves will be worn to minimize skin contact with contaminants. Temporary containments shall be used if conditions warrant.
Physical/Safety	
Scaffolding	All scaffolding used on the project shall be erected and used in accordance with requirements specified in 29 CFR 1926 Subpart L. Workers erecting scaffolding shall be trained by the vendor or other competent entity. Additionally, any involved persons must read and be familiar with these requirements. All scaffolding should have inspection forms attached or be posted within a reasonable distance of the scaffolding. A competent person shall inspect all scaffolds prior to use each day.
Respirable Crystalline Silica	Wet down construction debris prior to and during demolition to reduce the amount of airborne dust or use local ventilation. Wear respiratory protection during activities producing high quantities of airborne mineral dust.
Excessive Noise	Whenever voice(s) must be raised to communicate between two or more persons located < 3 feet of each other, the noise level is likely exceeding the action level; designate areas requiring hearing protection; conduct noise monitoring in accordance with LIR 402-820-01.0 Noise and Temperature Stresses.
Unstable Loads	Keep unauthorized personnel away for the site while the buildings are being lifted and loaded. No personnel shall be allowed under a raised. All personnel shall stay away for any item that is under tension that could become a projectile due to sudden release of tension.
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Cranes and Derricks	• A suitably qualified crane operator or a trainee under the direct supervision of a qualified operator shall only operate all facility cranes. • The rated load capacity of any lifting device shall not be exceeded at any time (see exception note below). The operator shall inspect lifting devices prior to use. Any deficiencies that would create an unsafe condition shall be corrected prior to use of the equipment. Current load testing documentation is required for all lifting devices and shall be maintained in project files. All cranes shall have a current annual inspections and be inspected daily by a competent person. All facility cranes shall be maintained in accordance with manufacturer requirements.. **NOTE:** Planned Engineered Lifts and exceptions specifically authorized by equipment vendors allow rated load capacities to be exceeded. These situations are approved by project management on a case-by-case basis and must meet all applicable requirements stated by ANSI and/or vendor standards.
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926.· A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. · Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Falls from > 6 feet	While working on elevated surfaces, workers who are exposed to any other fall hazard >than 6', conventional fall protection will be provided. As a minimum, fall protection shall include, full body harness with attaching lanyard while leading edge work is being performed. Fall protection will be in accordance with 29 CFR 1926, Subpart M.
Fire during routine cutting/burning	Compliance with 29 CFR 1926 Subpart F and 1926.150 and 151, as applicable. Fire extinguishers shall be maintained and readily accessible on site and ready for use at all times. Typical size/type will be 10 lb. ABC multipurpose dry-chemical or equivalent. A LANL spark/flame permit shall be issued prior to using any flame/spark producing equipment. A trained fire watch shall be used at all times during cutting and welding.
Inadequate illumination	See THA-1, section 2.1.5.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Skin puncture/wounds (Hand and Power Tools)	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be kept in a designated storage area, shall be maintained in a safe condition, and shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated. Proper personal protective equipment shall be used to provide adequate protection while using tools.
Flying debris	Keep unauthorized personnel away from demolition area. Demolish buildings in a controlled fashion. Wear PPE specified in Sections 2.3.8 of this THA.
Lightning or other severe weather	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building. No operations involving work in high contamination areas or with components/materials >1 rem/hr contact dose will be performed during a tornado or storm watch (or warning) as declared by the Laboratory or the National Weather Service.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Underground Utilities	Determine the estimated location(s) of utilities. Notify utility owners of intended work and request surface demarcation(s) of underground utilities; field team member should accompany utility owner representative to identify intended driven post locations and any other specifics of utility location(s). No posts shall be driven into the ground with 2 feet of an identified utility. Work shall be conducted under a LANL Excavation Permit and LANL "Electrical Safety" LIR 402-600-01.0.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Slips trips falls	Use good housekeeping on-site and minimize threat of slick surfaces. If necessary, tripping hazards will be marked to make them more visible.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site
Suspended power lines	Maintain the following minimum distances for stationary operations, as specified in 29 CFR 1926.550(a)(15)(i) and (ii): For live lines rated < 50 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated > 50 kV; Maintain a minimum distance of 10 ft + 0.4 inches ($1/30^{th}$ foot) for each 1 kV over 50 kV or twice the length of line insulator but never less than 10 ft. Examples: voltages < 50 kV (10 ft. minimum), 345 KV (20 ft minimum), 750 kV (33 ft minimum). Maintain the following minimum distances for transit operations with no load and boom lowered, as specified in 29 CFR 1926.550(a)(15)(iii): For live lines rated < 50 kV; Maintain a minimum distance of 4 ft between live lines and any part of equipment or load. For live lines rated above 50 kV and up to and including 345 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated above 345 kV and up to and including 750 kV; Maintain a minimum distance of 16 ft between live lines and any part of equipment or load. Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
Confined Spaces	See THA-1, section 2.1.5.
Fall from Stairs and Ladders	All stairways and ladders shall be kept clear and permit free passage of employees. When work must be performed or equipment must be used to restrict access, a second point of access shall be provided and used. All occupants must be notified in advance of any operations or changes, which may affect personnel, access. During the use of ladders, ensure that the load limits established for the ladder are not exceeded at any time. Prior to use of the ladder, visually check the ladder to assure proper operation and ensure it is free of damage. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". Only commercially manufactured ladders will be used.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Compressed gasses	Cylinders of compressed gas stored inside of buildings shall not be less than 20 feet from any and all combustible or flammable materials. The total gas capacity for fuel gas storage shall not be greater than 2500 cubic feet. Oxygen shall be separated from fuel gases by at least 20 feet or by a fire resistive barrier having not less than a 1/2 hour rating. Gas cylinder valve protection caps shall be securely in place during transport, and any time that the cylinder is not in use. Cylinders shall be secured in place in designated areas (minimum of one strap to restrain cylinder) during use to prevent them from being knocked over. Gas cylinders not in use shall be stored in designated storage areas and properly secured with caps installed. Gas cylinder valves shall be shut when work is finished, when cylinders are empty or when cylinders are moved. Empty cylinders must be segregated from all other cylinders and labeled as "Empty" using suitable means. Hoses, as applicable, which remain attached are to have anti-flashback or check valves installed. Cylinders containing oxygen, acetylene or other fuel gases shall not be taken into confined spaces. Cylinders should be tagged to indicate status (full, in use, empty).
Floor and Wall Openings	Floor and wall openings shall be conspicuously posted and adequately barricaded to prevent falls or other hazards. The H&S Officer, prior to the start of any elevated tasks, will evaluate fall protection requirements in applicable areas. Fall protection requirements will be established in accordance with 29 CFR 1926 Subpart M.
Structure Failure	The structural integrity of the building support structures should not be altered or violated during any phase of the project, without proper review and authorization by a qualified structural engineer. Prior to using the bridge crane in the Omega West Reactor, a qualified structural engineer shall determine that the building will support the load of the moving crane.
Forklift mishap	• Inspect forklift before first use of the day. • Use a spotter to guide forklift operator in tight spaces. • Use a spotter at all times if the forklift does not have a backup alarm. • Carry loads as low as possible. • Limit forklift speed.

2.2.6 MEDICAL/RADIOLOGICAL SURVEILLANCE

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

2.2.7 EXPOSURE MONITORING

Exposure monitoring for noise shall be conducted in accordance with the LIR 402-820-01.0 Noise and Temperature Stresses

Exposure monitoring for dust using a mini ram, to document that the action level of 2.5 mg/m^3 is not exceeded. This will be in accordance with the WD3 Industrial Hygiene Procedures Manual.

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Radiological	See the radiation work permit for this task, when developed.			
Heat Stress	See Section 2.1.7 of THA-1			
Cold Stress	See Section 2.1.7 of THA-1			
Excessive Noise	See Section 2.1.7 of THA-1			
Combustion gases from internal combustion engine, oxygen deficiency.	See Section 2.1.7 of THA-1			
Respirable Mineral Dust	Mini-ram / personal air sampling pump with dust cyclone	In workers breathing zones when action level is likely to be exceeded.	> 10. mg/m^3 concrete dust or 1.5 mg/m^3 of other mineral dust with RAM. OEL unlikely to be exceeded if total dust maintained at these levels.	Initiate feasible dust controls and collect representative air samples for . Compliance with 29 CFR 1910.1000. If 8 hr TWA > action level then modify work practices and collect samples for respirable crystalline silica.

2.2.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: As required by the RWP

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury. RWP may require additional hand protection

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: As required by the RWP.

Ears: If necessary, plugs/muffs with sufficient NRR.

2.2.9 DECONTAMINATION

All personnel who come in direct contact with radiological material will follow the instructions for personnel decontamination as directed by Radiological Controls.

2.2.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.2.11 EMERGENCY PLANS (task-specific)

See section 1.4 of this SSHASP for the Project Emergency Action Response Plan.

2.2.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

Spark/Flame permit shall be obtained prior to using a cutting/welding torch or any other flame producing equipment. An excavation permit will be obtained prior to commencement of excavation. WD3 will verify the LANL has isolated the structures and affected utilities from hazardous energy to the structure before proceeding.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Excavation (prior to first entry of the day)	Competent Person
Scaffolding (once erected, daily prior to each use)	Competent Person
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee

INSPECTION REQUIREMENTS	
Inspections	Inspector
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee
Forklift in accordance with 29 CFR 1910.178 before first use of the day.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	**Keep On-site**
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

2.2.13 TRAINING REQUIREMENTS

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel

Types of training: R = Read training; C = Classroom training; F = Field training; AN = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	---
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
Scaffold training per 29 CFR 1910.454		All field personnel who will work from scaffolding
WD3 Confined Space Program	C	All field personnel entering or surpervising the entry of a confined space
Fall protection training per 29 CFR 1926.503		All field personnel who could have a 6' free fall while doing their work
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel
Forklift – per 29 CFR 1910.178 Powered Industrial Trucks	C	Forklift operator
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

2.2.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.: _____

Task: REACTOR DECOMMISSIONING AND REMOVAL Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number

Signature Date

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

2.3 TASK HAZARD ANALYSIS (THA)/WORK PACKAGE

PROJECT NAME: OWR D&D

TASK 3: BUILDING DEMOLITION AND REMOVAL

ESTIMATED DATE(S) & DURATION OF WORK: JULY 2002 – JANUARY 2003

2.3 TASK DESCRIPTION

During demolition, materials containing asbestos or lead will be handled as described in Asbestos and Lead Abatement Plans. This task involves the demolition and disposal of the buildings. It may occur concurrently with, or after the asbestos and lead abatement tasks. Heavy equipment such as a track hoe or, front-end loader may be used to tear down buildings. This work may also involve the use of scaffolding, power tools, man-lifts and a crane/hoist.

As the demolition proceeds, the construction debris (ordinary solid waste) will be loaded onto end dump trailers and hauled off for disposal at an industrial landfill. Items that have a residual value may be removed and recycled or salvaged.

This task will also involve the use of a water truck to wet the construction debris during demolition to help reduce the amount of airborne dust.

If water accumulates in the excavation used to access below-ground structures and systems, it would be pumped out under this task.

The task also requires removal of the foundations of the structures.

During this task, manufactured articles such as PCB capacitors and ballasts, mercury switches and fluorescent lights will be removed and stock piled for recycling or disposal in accordance with RCRA and TSCA regulations.

The applicable requirements of the WGI Fire Hazard Control THA are also incorporated by reference into this Task Hazard Analysis.

2.3.1 KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.2 of the SSHASP.

2.3.2 HAZARD ASSESSMENT

Biological:

Bloodborne Pathogens	Bloodborne Pathogens - Occupational exposure to bloodborne pathogens while rendering first aid or CPR could result in life-threatening illness, HAR of negligible to minor.
Hanta Virus	Hanta Virus - Presence of rodent droppings/nests in or around site, and associated potential for Hanta virus illness is unlikely, HAR of negligible to minor.

Venomous Creatures	Insect/Snake Stings or Bites - Demolition work always presents a potential for encounters with insects or snakes. Severity of stings and bites is dependent upon insect/snake type and individuals tolerance/allergic reactions, HAR of negligible to minor.
Radiological Exposure:	
Exposure to external radiation and internal deposition of radioactive materials.	The buildings will have been decontaminated and passed a final status survey prior to demolition.
High Explosives:	
	Not applicable. High Explosive materials not identified in LANL Characterization Report as a COPC. HAR of negligible.
Chemical Exposure:	
	Potential for exposure to the following chemical compounds/substances resulting in skin or eye irritation or minor injury is unlikely to occur or possibly could occur: unleaded gasoline, diesel, hydraulic fluids, lubricants, HAR of negligible to minor.
Safety/Physical:	
Scaffolding	Working on scaffolding could result in injury from falls or from dropped tools and materials.
Excavation Hazards	Excavation hazards such as cave-ins/personnel engulfment live underground utilities, vehicles, pedestrians falling into excavation can possibly occur resulting in serious injuries even death. HAR = minor to serious
Nuisance Dust	Exposure to airborne nuisance dust possibly could occur resulting in reversible illness. HAR = negligible to minor.
Temperature Stress	Employees could be exposed to temperature extremes, which could result in irreversible injury or death. HAR = minor to serious
Excessive Noise	Exposure to excessive noise associated with the use of generators/heavy equipment is unlikely to occur contributing to irreversible injury; HAR = negligible to minor
Hazardous Atmosphere In Excavation	Exposure to hazardous atmosphere in the excavation possibly could occur resulting in reversible injury or illness. HAR = minor
Unstable Loads	Exposure to unstable loads as the buildings are razed and placed on transport truck is unlikely to occur but possibly could occur resulting in serious injury/illness or death. HAR = minor to serious
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR = minor to serious.
Hoisting Equipment Failure	Failure of hoisting equipment, a crane or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Falls From > 6 Feet	Falls from elevated work levels (> 6-feet above working surface, i.e., working on top of equipment) could possibly result in death. HAR = minor

	to serious
Fire During Routine Cutting/Burning	Fire hazard(s) associated with repair or routine cutting/burning operations could result in possible injury HAR = minor to serious.
Inadequate Illumination	Inadequate site illumination during low-light/night conditions could result in possible reversible injury. HAR = negligible to minor.
Lifting And Carrying	Lifting and carrying equipment and materials (ergonomic considerations) resulting in the possibility of reversible injury. HAR = negligible to minor.
Hazardous Energy	Pinching, crushing, electrocution from the sudden release of energy resulting in serious injury or death is possible but unlikely. HAR = minor to serious
Skin Puncture/Wounds	Skin puncture/wounds, and/or electrocution from mishandling of or use of defective hand and power tools/equipment resulting in possible reversible injury.HAR = negligible to minor.
Flying Debris	Struck by Flying Debris while completing the scope of work is possible but unlikely to occur causing irreversible injury. HAR = negligible to minor.
Lightning	Struck by lightning while working outdoors is unlikely to occur but could occur resulting in irreversible injury or death. HAR = minor to serious.
Heavy Equipment	Struck or run over by heavy equipment resulting in serious injury or death is possible but unlikely. HAR = minor to serious.
Transportation Accident	Transportation accidents in the parking lot or on the road possibly could occur or is unlikely to occur resulting in reversible injury. HAR = negligible to minor
Underground Utilities	Underground utilities could present life-threatening injury/illness from the possibility of a single encounter occurring. HAR = minor to serious.
Unsanitary Work Conditions	Unsanitary working conditions (i.e., site sanitation/housekeeping) could possibly result in serious injury/illness or death. HAR = minor to serious
Slips Trips Falls	Walking on terrain in/around work site where slips, trips, falls could result in possible reversible injury. HAR = minor.
Energized Equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR = minor to serious.
Suspended Power Lines	Working with/around suspended electric power lines could possibly result in irreversible injury or death. HAR = minor to serious.
Confined Space	Entry into a confined space possibly could be required. Unauthorized entry into confined spaces can result in irreversible injury or death, **HAR of minor to serious.**
Fall from Ladder	A fall from a ladder possibly could occur resulting in irreversible injury. **HAR of moderate.**
Forklift mishap	Improper use of a forklift possibly could result in irreversible injury of personnel, puncture of waste containers or spilling a load of material. **HAR of moderate.**

2.3.3 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request.

It is anticipated that this task may involve the use of petroleum-based fuels, lubricants or hydraulic fluids.

2.3.4 SITE CONTROL

Workers shall work in groups of at least two people (buddy system) and have a means of direct communication or maintain visual contact at all times. The perimeter of the site will be fenced. The demolition areas will be demarcated and posted to prevent unauthorized entry into the work area. Posting and demarcation will be in accordance with 29 CFR 1926.

2.3.5 ADMINISTRATIVE and ENGINEERING (A&E) CONTROLS

Applicable LANL LIRs:

LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-820-01.0	Noise and Temperature Stresses
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	Avoid contact with bodily fluids when performing CPR or first aid. Use bloodborne pathogen kit when rendering first aid and micro-shield when performing CPR. Report all exposures to SSO and PM immediately and seek medical attention. Comply with Subcontractor's Bloodborne Pathogens Program.
Hanta Virus	Look for and avoid rodent droppings and nests. Notify JCNNM for proper disinfection if the droppings/nests must be disturbed to complete the work.
Venomous creatures	Avoid contact with insects and snakes. Inform SSO or PM if you are allergic to insect stings/bites. Use insect repellants.
Radiological	
Radiation	No A&E controls for radiation are anticipated since this activity would occur after the final status survey of the structures.
Chemical	
Chemical exposure	Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	A&E Control
Physical/Safety	
Scaffolding Mishap	Inspection before the first use of the day by a competent person. Compliance with 29 CFR 1926 subpart L, Scaffolds.
Excavation hazards	Soil stability will be evaluated in Task 2 (Soil Borings) prior to commencement of excavation activities. A professional engineer will design the excavation and any required shoring. The site will be fenced to keep spectators away. PERMIT REQUIRED prior to excavating/trenching; A&E controls shall be implemented in accordance with the LANL LIR402--880-01.1, AR 1-12 Excavation/Soil Disturbance Permit Process and as specified below. Compliance with 29 CFR 1926 Subpart P for all excavation activities. No personnel will be allowed to enter trenches or excavations if depths exceed 4 ft unless appropriate engineering controls have been implemented in accordance with 29 CFR 1926.651 and the competent person has cleared entry. If entry into the excavation deeper than 5 feet is required, the excavation will be shored, sloped or benched as appropriate to the soil type. Inspections by a competent person shall be made prior to start of work, as needed throughout shift and after every rainstorm or other hazard increasing occurrence (29 CFR 1926.651). Appropriate engineering controls shall be implemented whenever the stability of a structure adjoining an excavation may be endangered. Excavated materials (spoils) shall be kept at least 2 ft. away from edges of excavations. Trench/excavation > 4 ft. deep shall have a stairway, ladder, ramp, or other safe means of egress located so as to require no more than 25 ft. of lateral travel by personnel working in trench/excavation (e.g., 1 ladder for >25' and <50' long trench) (29 CFR 1926.651). Any excavation that is 4 feet or more in depth that must be open for any period of time shall be barricaded in accordance with 29 CFR 1926.202. In the event personnel are required to enter for emergency purposes, appropriate engineering controls shall be implemented. Water that accumulates in a trench or excavation shall be removed.
Nuisance Dust	Wet down construction debris prior to and during demolition to reduce the amount of airborne dust.
Excessive Noise	Whenever voice(s) must be raised to communicate between two or more persons located < 3 feet of each other, the noise level is likely exceeding the Action level; designate areas requiring hearing protection; conduct noise monitoring in accordance with LIR 402-820-01.0 Noise and Temperature Stresses
Hazardous Atmosphere in Excavation/Confined Space	Provide intermittent monitoring for carbon monoxide, oxygen deficiency and combustible vapors within excavation.
Unstable Loads	Keep unauthorized personnel away for the site while the buildings are being lifted and loaded. No personnel shall be allowed under a raised. All personnel shall stay away for any item that is under tension that could become a projectile due to sudden release of tension.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. · A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. · Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Falls from > 6 feet	While working on the roof or if workers are exposed to any other fall hazard >than 6', conventional fall protection will be provided. As a minimum, fall protection shall include, full body harness with attaching lanyard while leading edge work is being performed. Fall protection will be in accordance with 29 CFR 1926, Subpart M.
Fire during routine cutting/burning	Compliance with 29 CFR 1926 Subpart F and 1926.150 and 151, as applicable. Fire extinguishers shall be maintained and readily accessible on site and ready for use at all times. Typical size/type will be 10 lb. ABC multipurpose dry-chemical or equivalent. A LANL spark/flame permit shall be issued prior to using any flame/spark producing equipment. A trained fire watch shall be used at all times during cutting and welding.
Inadequate illumination	Compliance with 29 CFR 1926.26 and 1926.56 for required illumination levels. General construction areas require a minimum of 5 foot-candles illumination.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Skin puncture/wounds	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Flying debris	Keep unauthorized personnel away from demolition area. Demolish buildings in a controlled fashion. Wear PPE specified in Sections 2.3.8 of this THA.
Lightning	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Underground Utilities	Determine the estimated location(s) of utilities. Notify utility owners of intended work and request surface demarcation(s) of underground utilities; field team member should accompany utility owner representative to identify intended driven post locations and any other specifics of utility location(s). No posts shall be driven into the ground with 2 feet of an identified utility. Work shall be conducted under a LANL Excavation Permit and LANL "Electrical Safety" LIR 402-600-01.0.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.
Slips trips falls	Use good housekeeping on-site and minimize threat of slick surfaces. If necessary, tripping hazards will be marked to make them more visible.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Suspended power lines	Maintain the following minimum distances for stationary operations, as specified in 29 CFR 1926.550(a)(15)(i) and (ii): For live lines rated < 50 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated > 50 kV; Maintain a minimum distance of 10 ft + 0.4 inches ($1/30^{th}$ foot) for each 1 kV over 50 kV or twice the length of line insulator but never less than 10 ft. Examples: voltages < 50 kV (10 ft. minimum), 345 KV (20 ft minimum), 750 kV (33 ft minimum). Maintain the following minimum distances for transit operations with no load and boom lowered, as specified in 29 CFR 1926.550(a)(15)(iii): For live lines rated < 50 kV; Maintain a minimum distance of 4 ft between live lines and any part of equipment or load. For live lines rated above 50 kV and up to and including 345 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated above 345 kV and up to and including 750 kV; Maintain a minimum distance of 16 ft between live lines and any part of equipment or load. Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
Confined Spaces	• See THA-1, section 2.3.5
Fall from Ladder	• Ladders will be inspected before the first use of the day. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". • Only commercially manufactured ladders will be used. • Ladder use will conform to 29 CFR 1926.1053, Ladders.
Forklift mishap	• Inspect forklift before first use of the day. • Use a spotter to guide forklift operator in tight spaces. • Use a spotter at all times if the forklift does not have a backup alarm. • Carry loads as low as possible. • Limit forklift speed.

2.3.6 MEDICAL/RADIOLOGICAL SURVEILLANCE

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82 decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

2.3.7 EXPOSURE MONITORING

Exposure monitoring for noise shall be conducted in accordance with the WGI hearing conservation program.

Exposure monitoring for dust using a mini ram, to document that the action level of 2.5 mg/m^3 TWA is not exceeded. This will be in accordance with the WGI Industrial Hygiene Procedures Manual.

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Radiation	*Monitoring per the radiation work permit for this task, if issued.*			
Excessive Noise	See THA 1, section 2.1.7.			
Combustion gases from internal combustion engine, oxygen deficiency.	See THA 1, section 2.1.7.			
Respirable Mineral Dust	Mini-ram / personal air sampling pump with dust cyclone	In workers breathing zones when action level is likely to be exceeded.	> 1.0 mg/m^3 TWA concrete dust or 1.5 mg/m^3 TWA of other mineral dust with RAM. OEL unlikely to be exceeded if total dust maintained at these levels.	Initiate feasible dust controls and collect representative air samples for . Compliance with 29 CFR 1910.1000. If 8 hr TWA > action level then modify work practices and collect samples for respirable crystalline silica.
Heat Stress	See THA-1, section 2.1.7.			
Cold Stress	See THA-1, section 2.1.7.			

2.3.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: At a minimum, all personnel shall wear long pants and shirt with sleeves (Level D PPE). All workers exposed to traffic shall wear reflective or high visibility warning vest/garment in compliance with 29 CFR 1926.201.

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury.

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: Not required.

Ears: If necessary, plugs/muffs with sufficient NRR.

If an RWP is issued for this task, it may prescribe additional PPE requirements.

2.3.9 DECONTAMINATION

Hand and face wash shall be available.

2.3.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.3.11 EMERGENCY PLANS (task-specific)

See section 1.4 of this SSHASP for the Project Emergency Action Response Plan.

2.3.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

Spark/Flame permit shall be obtained prior to using a cutting/welding torch or any other flame producing equipment. An excavation permit will be obtained prior to commencement of excavation. WD3 will verify the LANL has isolated the structures and affected utilities from hazardous energy to the structure before proceeding.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Excavation (prior to first entry of the day)	Competent Person
Scaffolding (once erected, daily prior to each use)	Competent Person
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial –	PM, Operator, SSO or designee - Initial Operator - Daily

INSPECTION REQUIREMENTS	
prior to acceptance at the site and daily).	
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee
Forklift in accordance with 29 CFR 1910.178 before first use of the day.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	Keep On-site
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

2.3.13 TRAINING REQUIREMENTS

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	—
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
Scaffold training per 29 CFR 1910.454		All field personnel who will work from scaffolding
LIR 402-810-01.0 - Confined Spaces	C	All field personnel entering or supervising the entry of a confined space

Types of training: **R** = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
Fall protection training per 29 CFR 1926.503		All field personnel who could have a 6' free fall while doing their work
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel
Forklift – per 29 CFR 1910.178 Powered Industrial Trucks	C	Forklift operator
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

.3.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.: _____

Task: BUILDING DEMOLITION AND REMOVAL Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number

Signature	Date

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

2.4 TASK HAZARD ANALYSIS (THA)/WORK PACKAGE

PROJECT NAME: OWR D&D

TASK 4: UNDERGROUND UTILITIES REMOVAL

ESTIMATED DATE(S) & DURATION OF WORK: JULY 2002 – JANUARY 2003

2.4 TASK DESCRIPTION

This task will involve the removal of all underground utilities from the main to the buildings. LANL is responsible for disconnecting utilities to the Omega West Reactor. WD3 is responsible for ensuring that utilities are not energized prior to removal. WD3 will use a track hoe, backhoe, or other suitable piece of equipment along with hand tools or power tools to remove the abandoned utilities. A circular saw may be used to cut through the asphalt prior to digging out the utilities. If water accumulates in a trench or excavation, it would be pumped out under this task.

The applicable requirements of the WGI Fire Hazard Control THA are also incorporated by reference into this Task Hazard Analysis.

2.4.1 KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.2 of the SSHASP.

2.4.2 HAZARD ASSESSMENT

Biological:

Bloodborne Pathogens	Bloodborne Pathogens - Occupational exposure to bloodborne pathogens while rendering first aid or CPR could result in life-threatening illness, HAR of negligible to minor.
Hanta Virus	Hanta Virus - Presence of rodent droppings/nests in or around site, and associated potential for Hanta virus illness is unlikely, HAR of negligible to minor.
Venomous Creatures	Insect/Snake Stings or Bites - Demolition work always presents a potential for encounters with insects or snakes. Severity of stings and bites is dependent upon insect/snake type and individuals tolerance/allergic reactions, HAR of negligible to minor.

Radiological Exposure:

Contaminated Soil and Piping	Internal deposition of radioactive material or external exposure to radiation is unlikely to result in exposures that cause administrative limits to be exceeded. HAR of minor.

High Explosives:

Not applicable. High Explosive materials not identified in LANL Characterization Report as a COPC. HAR of negligible.

Chemical Exposure:

Potential for exposure to the following chemical compounds/substances resulting in skin or eye irritation or minor injury is unlikely to occur or possibly could occur :

	unleaded gasoline, diesel, hydraulic fluids or lubricants. HAR of negligible to minor.
Safety/Physical:	
Excavation Hazards	Excavation hazards such as cave-ins/personnel engulfment live underground utilities, vehicles, pedestrians falling into excavation can possibly occur resulting in serious injuries even death. HAR = minor to serious
Nuisance Dust	Exposure to airborne nuisance dust possibly could occur resulting in reversible illness. HAR = negligible to minor.
Excessive Noise	Exposure to excessive noise associated with the use of generators/heavy equipment is unlikely to occur contributing to irreversible injury; HAR = negligible to minor
Temperature Stress	Employees could be exposed to temperature extremes, which could result in irreversible injury or death. HAR = minor to serious
Hazardous Atmosphere In Excavation	Exposure to hazardous atmosphere in the excavation possibly could occur resulting in reversible injury or illness. HAR = minor
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR = minor to serious.
Hoisting Equipment Failure	Failure of hoisting equipment, a crane or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Falls From > 6 Feet	Falls from elevated work levels (> 6-feet above working surface, i.e., working on top of equipment) could possibly result in death. HAR = minor to serious
Fire During Routine Cutting/Burning	Fire hazard(s) associated with repair or routine cutting/burning operations could result in possible injury HAR = minor to serious.
Inadequate Illumination	Inadequate site illumination during low-light/night conditions could result in possible reversible injury. HAR = negligible to minor.
Lifting And Carrying	Lifting and carrying equipment and materials (ergonomic considerations) resulting in the possibility of reversible injury. HAR = negligible to minor.
Hazardous Energy	Pinching, crushing, electrocution from the sudden release of energy resulting in serious injury or death is possible but unlikely. HAR = minor to serious
Skin Puncture/Wounds	Skin puncture/wounds, and/or electrocution from mishandling of or use of defective hand and power tools/equipment resulting in possible reversible injury. HAR = negligible to minor.
Flying Debris	Struck by Flying Debris while completing the scope of work is possible but unlikely to occur causing irreversible injury. HAR = negligible to minor.
Lightning	Struck by lightning while working outdoors is unlikely to occur but could occur resulting in irreversible injury or death. HAR = minor to serious.
Heavy Equipment	Struck or run over by heavy equipment resulting in serious injury or death is possible but unlikely. HAR = minor to serious.
Transportation Accident	Transportation accidents in the parking lot or on the road possibly could occur or is unlikely to occur resulting in reversible injury. HAR = negligible to minor
Underground Utilities	Underground utilities could present life-threatening injury/illness from the possibility of a single encounter occurring. HAR = minor to serious.
Unsanitary Work Conditions	Unsanitary working conditions (i.e., site sanitation/housekeeping) could possibly result in serious injury/illness or death. HAR = minor to serious

Slips Trips Falls	Walking on terrain in/around work site where slips, trips, falls could result in possible reversible injury. HAR = minor.
Energized Equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR = minor to serious.
Suspended Power Lines	Working with/around suspended electric power lines could possibly result in irreversible injury or death. HAR = minor to serious.
Confined Space	See THA-1, section 2.1.2.
Fall from Ladder	A fall from a ladder possibly could occur resulting in irreversible injury. HAR of moderate.

2.4.3 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request.

It is anticipated that this task may involve the use of petroleum-based fuels, lubricants, hydraulic fluids, surfactants, detergents or fixatives.

2.4.4 SITE CONTROL

All utility removal will be completed as defined in the scope of work. This task may occur before, during or after Task 3 (Building Demolition and Removal).

2.4.5 ADMINISTRATIVE AND ENGINEERING (A&E) CONTROLS

Applicable LANL LIRs:

LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-820-01.0	Noise and Temperature Stresses
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	Avoid contact with bodily fluids when performing CPR or first aid. Use bloodborne pathogen kit when rendering first aid and micro-shield when performing CPR. Report all exposures to SSO and PM immediately and seek medical attention. Comply with Subcontractor's Bloodborne Pathogens Program.
Hanta Virus	Look for and avoid rodent droppings and nests. Notify JCNNM for proper disinfection if the droppings/nests must be disturbed to complete the work.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	A&E Control
Biological (Cont'd)	
Venomous creatures	Avoid contact with insects and snakes. Inform SSO or PM if you are allergic to insect stings/bites. Use insect repellants.
Radiological	
Contaminated Soil and Piping	Plan work based on an assessment of radiological data. Comply with A&E controls provided in the RWP, if issued.
Chemical	
Chemical exposure	Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals.
Physical/Safety	
Excavation hazards	Soil stability will be evaluated in Task 2 (Soil Borings) prior to commencement of excavation activities. A professional engineer will design the excavation and any required shoring. The site will be fenced to keep spectators away. PERMIT REQUIRED prior to excavating/trenching; A&E controls shall be implemented in accordance with the LANL LIR402--880-01.1, AR 1-12 Excavation/Soil Disturbance Permit Process and as specified below. Compliance with 29 CFR 1926 Subpart P for all excavation activities. No personnel will be allowed to enter trenches or excavations if depths exceed 4 ft unless appropriate engineering controls have been implemented in accordance with 29 CFR 1926.651 and the competent person has cleared entry. If entry into the excavation deeper than 5 feet is required, the excavation will be shored, sloped or benched as appropriate to the soil type. Inspections by a competent person shall be made prior to start of work, as needed throughout shift and after every rainstorm or other hazard increasing occurrence (29 CFR 1926.651). Appropriate engineering controls shall be implemented whenever the stability of a structure adjoining an excavation may be endangered. Excavated materials (spoils) shall be kept at least 2 ft. away from edges of excavations. Trench/excavation > 4 ft. deep shall have a stairway, ladder, ramp, or other safe means of egress located so as to require no more than 25 ft. of lateral travel by personnel working in trench/excavation (e.g., 1 ladder for >25' and <50' long trench) (29 CFR 1926.651). Any excavation that is 4 feet or more in depth that must be open for any period of time shall be barricaded in accordance with 29 CFR 1926.202. In the event personnel are required to enter for emergency purposes, appropriate engineering controls shall be implemented. Water that accumulates in a trench or excavation shall be removed.
Nuisance Dust	Wet down soil during excavation, if necessary, to reduce the amount of airborne dust.
Excessive Noise	Whenever voice(s) must be raised to communicate between two or more persons located < 3 feet of each other, the noise level is likely exceeding the Action level; designate areas requiring hearing protection; conduct noise monitoring in accordance with LIR 402-820-01.0 Noise and Temperature Stresses
Hazardous Atmosphere in Excavation	Provide intermittent monitoring for carbon monoxide, oxygen deficiency and combustible vapors within excavation.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926.· A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. · Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Falls from > 6 feet	While working on the roof or if workers are exposed to any other fall hazard >than 6', conventional fall protection will be provided. As a minimum, fall protection shall include, full body harness with attaching lanyard while leading edge work is being performed. Fall protection will be in accordance with 29 CFR 1926, Subpart M.
Fire during routine cutting/burning	Compliance with 29 CFR 1926 Subpart F and 1926.150 and 151, as applicable. Fire extinguishers shall be maintained and readily accessible on site and ready for use at all times. Typical size/type will be 10 lb. ABC multipurpose dry-chemical or equivalent. A LANL spark/flame permit shall be issued prior to using any flame/spark producing equipment. A trained fire watch shall be used at all times during cutting and welding.
Inadequate illumination	Compliance with 29 CFR 1926.26 and 1926.56 for required illumination levels. General construction areas require a minimum of 5 foot-candles illumination.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Skin puncture/wounds	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Flying debris	Keep unauthorized personnel away from demolition area. Demolish buildings in a controlled fashion. Wear PPE specified in Sections 2.4.8 of this THA.
Lightning	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Underground Utilities	Determine the estimated location(s) of utilities. Notify utility owners of intended work and request surface demarcation(s) of underground utilities; field team member should accompany utility owner representative to identify intended driven post locations and any other specifics of utility location(s). No posts shall be driven into the ground with 2 feet of an identified utility. Work shall be conducted under a LANL Excavation Permit and LANL "Electrical Safety" LIR 402-600-01.0.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.
Slips trips falls	Use good housekeeping on-site and minimize threat of slick surfaces. If necessary, tripping hazards will be marked to make them more visible.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site

ADMINISTRATIVE and ENGINEERING (A & E) CONTR	
Hazard	A&E Control
Physical/Safety (Cont'd)	
Suspended power lines	Maintain the following minimum distances for stationary operations, as specified in 29 CFR 1926.550(a)(15)(i) and (ii): For live lines rated < 50 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated > 50 kV; Maintain a minimum distance of 10 ft + 0.4 inches (1/30th foot) for each 1 kV over 50 kV or twice the length of line insulator but never less than 10 ft. Examples: voltages < 50 kV (10 ft. minimum), 345 KV (20 ft minimum), 750 kV (33 ft minimum). Maintain the following minimum distances for transit operations with no load and boom lowered, as specified in 29 CFR 1926.550(a)(15)(iii): For live lines rated < 50 kV; Maintain a minimum distance of 4 ft between live lines and any part of equipment or load. For live lines rated above 50 kV and up to and including 345 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated above 345 kV and up to and including 750 kV; Maintain a minimum distance of 16 ft between live lines and any part of equipment or load. Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
Confined Spaces	See THA-1 section 2.1.5.
Fall from Ladder	• Ladders will be inspected before the first use of the day. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". • Only commercially manufactured ladders will be used. • Ladder use will conform to 29 CFR 1926.1053, Ladders.

2.4.6 MEDICAL/RADIOLOGICAL SURVEILLANCE

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82 decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030(f).

2.4.7 EXPOSURE MONITORING

Exposure monitoring for noise shall be conducted in accordance with the WD3 hearing conservation program.

Excavations and trenches: Monitor periodically for oxygen deficiency, combustible gases and carbon monoxide

Non-permit confined spaces: At a minimum, monitor periodically for oxygen deficiency, combustible gases and carbon monoxide.

Permit required confined space (if any): Monitor continuously for the atmospheric contaminants identified on the Confined Space Entry Supervisor's evaluation.

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/ Rationale	Response Action(s)
Excessive Noise	See THA-1, section 2.1.7.			
Heat Stress	See THA-1, section 2.1.7.			
Cold Stress	See THA-1, section 2.1.7.			
Combustion gases from internal combustion engine, oxygen deficiency.	See THA-1, section 2.1.7.			
Nuisance Dust	Mini-ram	In workers breathing zones when action level is likely to be exceeded.	1.5 mg/m^3 TWA provides a safety factor of 4 for the nuisance dust TLV.	Compliance with 29 CFR 1910.1000. If 8 hr TWA > 2.5 mg/m^3 then modify work practices to reduce nuisance dust levels or use respirators.

2.4.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: At a minimum, all personnel shall wear long pants and shirt with sleeves (Level D PPE). All workers exposed to traffic shall wear reflective or high visibility warning vest/garment in compliance with 29 CFR 1926.201. **Contact with sanitary sewage:** disposable coveralls.

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury.

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: Not applicable.

Ears: If necessary, plugs/muffs with sufficient NRR.

An RWP, if issued for this task may provide additional PPE requirements.

2.4.9 DECONTAMINATION

The need for personal and equipment decontamination will be based on radiological monitoring. The RCT will be immediately notified if contamination is found. If required, a boot wash will be available to remove contamination from boots and gloves. Potentially contaminated soils will be scraped from equipment prior to radiological surveys. If contamination is found dry and/or wet decontamination for free release may be required at the discretion of the RCT. If pressure washing is required, a separate THA will be developed to identify the hazards and controls associated with this activity. All rinsates generated during decontamination activities will be captured and managed in accordance with the waste management plan.

2.4.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.4.11 EMERGENCY PLANS (task-specific)

See section 1.1.4 of this SSHASP for the Project Emergency Action Response Plan.

2.4.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

Excavation permit is required prior to starting this activity.

Compliance WGI confined space program, required for entry into permit or non-permit confined spaces such as manholes. The WD3 Confined Space Entry Supervisor will evaluate prior to entry into non-permit confined spaces. Entry into a permit required confined space requires an Entry Permit completed by Entry Supervisor.

Use an alternating current sensor to verify that electric utilities are not energized.

Verify that all utilities have been isolated from hazardous energy and establish positive control to insure that connection cannot be re-established without the consent of the on-site WD3 Lockout/Tagout authorized person per LIR 402-860-01.0 (Lockout/Tagout for Personal Safety).

INSPECTION REQUIREMENTS	
Inspections	Inspector
Excavation (prior to first entry of the day)	Competent Person
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee

INSPECTION REQUIREMENTS	
Inspections	Inspector
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
Operator - Daily	
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	Keep On-site
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

2.4.13 TRAINING REQUIREMENTS

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	---
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel

Types of training: R = Read training; C = Classroom training; F = Field training; AN = As necessary per the DHASP or applicable (regulatory or employer) requirement.		
Training Requirement	**Type**	**Personnel to be trained**
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
WGI Confined Space Program	C	All field personnel entering or supervising the entry of a confined space
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel
GET Training	C	All field personnel
Rad Worker II	C	Persons requiring unescorted access to radiological areas.
Forklift – per 29 CFR 1910.178 Powered Industrial Trucks	C	Forklift operator
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

2.4.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST RECTOR SSHASP No.: _____

Task: UNDERGROUND UTILITIES REMOVAL Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name | Title | Employer or LANL Group | Z Number

Signature | Date

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

2.5 TASK HAZARD ANALYSIS (THA)/WORK PACKAGE

PROJECT NAME: OWR D&D

TASK 5: EQUIPMENT MAINTENANCE/REPAIR/REFUELING

ESTIMATED DATE(S) & DURATION OF WORK: JULY 2002 – JANUARY 2003

2.5 TASK DESCRIPTION

This task will involve the maintenance, repair and refueling of subcontractor equipment. It is anticipated that Southwest Abatement or Coronado Wrecking will have a fuel truck on site for dispensing fuel.

The applicable requirements of the WGI Fire Hazard Control THA are also incorporated by reference into this Task Hazard Analysis.

2.5.1 KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.1.2 of the SSHASP.

2.5.2 HAZARD ASSESSMENT

Biological:

Bloodborne Pathogens	Bloodborne Pathogens - Occupational exposure to bloodborne pathogens while rendering first aid or CPR could result in life-threatening illness, HAR of negligible to minor.
Hanta Virus	Hanta Virus - Presence of rodent droppings/nests in or around site, and associated potential for Hanta virus illness is unlikely, HAR of negligible to minor.
Venomous Creatures	Insect/Snake Stings or Bites - Demolition work always presents a potential for encounters with insects or snakes. Severity of stings and bites is dependent upon insect/snake type and individuals tolerance/allergic reactions, HAR of negligible to minor.

Radiological Exposure:

Not Applicable. This work will be performed outside of radiological controlled areas.

High Explosives:

Not applicable. High Explosive materials not identified in LANL Characterization Report as a COPC. HAR of negligible.

Chemical Exposure:

Potential for exposure to the following chemical compounds/substances resulting in skin or eye irritation or minor injury is unlikely to occur or possibly could occur : unleaded gasoline, diesel, hydraulic fluids or lubricants. HAR of negligible to minor

Physical/Safety:

Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR = minor to serious.
Hoisting Equipment Failure	Failure of hoisting equipment, a crane or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Inadequate Illumination	Inadequate site illumination during low-light/night conditions could result in possible reversible injury. HAR = negligible to minor.
Lifting And Carrying	Lifting and carrying equipment and materials (ergonomic considerations) resulting in the possibility of reversible injury. HAR = negligible to minor.
Hazardous Energy	Pinching, crushing, electrocution from the sudden release of energy resulting in serious injury or death is possible but unlikely. HAR = minor to serious
Refueling	Refueling of vehicles/heavy equipment could present fire and/or explosion potential resulting in irreversible injury or death. HAR = minor to serious.
Excessive noise	Working around equipment my expose employees to noise levels above the action level, which could result in irreversible hearing loss. HAR = minor to serious
Temperature Stress	Employees could be exposed to temperature extremes, which could result in irreversible injury or death. HAR = minor to serious
Skin Puncture/Wounds	Skin puncture/wounds, and/or electrocution from mishandling of or use of defective hand and power tools/equipment resulting in possible reversible injury. HAR = negligible to minor.
Lightning	Struck by lightning while working outdoors is unlikely to occur but could occur resulting in irreversible injury or death. HAR = minor to serious.
Heavy Equipment	Struck or run over by heavy equipment resulting in serious injury or death is possible but unlikely. HAR = minor to serious.
Transportation Accident	Transportation accidents in the parking lot or on the road possibly could occur or is unlikely to occur resulting in reversible injury. HAR = negligible to minor
Unsanitary Work Conditions	Unsanitary working conditions (i.e., site sanitation/housekeeping) could possibly result in serious injury/illness or death. HAR = minor to serious
Energized Equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR = minor to serious.
Fall from Ladder	A fall from a ladder possibly could occur resulting in irreversible injury. **HAR of moderate.**

2.5.3 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be

reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request.

It is anticipated that this task may involve the use of petroleum based fuels, lubricants, hydraulic fluids, surfactants, detergents or fixatives.

2.5.4 SITE CONTROL

Workers shall work in groups of at least two people (buddy system) and have a means of direct communication or maintain visual contact at all times. The perimeter of the site will be fenced. The demolition areas will be demarcated and posted to prevent unauthorized entry into the work area. Posting and demarcation will be in accordance with 29 CFR 1926.

2.5.5 ADMINISTRATIVE and ENGINEERING (A&E) CONTROLS

Applicable LANL LIRs:

LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-820-01.0	Noise and Temperature Stresses
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	Avoid contact with bodily fluids when performing CPR or first aid. Use bloodborne pathogen kit when rendering first aid and micro-shield when performing CPR. Report all exposures to SSO and PM immediately and seek medical attention. Comply with Subcontractor's Bloodborne Pathogens Program.
Hanta Virus	Look for and avoid rodent droppings and nests. Notify JCNNM for proper disinfection if the droppings/nests must be disturbed to complete the work.
Venomous creatures	Avoid contact with insects and snakes. Inform SSO or PM if you are allergic to insect stings/bites. Use insect repellants.
Chemical	
Chemical exposure	Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals.
Physical/Safety	
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety	
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Inadequate illumination	Compliance with 29 CFR 1926.26 and 1926.56 for required illumination levels. General construction areas require a minimum of 5 foot-candles illumination.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Refueling	Compliance with 29 CFR 1926.152, specifically paragraphs (d), (e), and (f). Refueling of vehicles/heavy equipment in no case be allowed in the presence of spark and/or flame sources. Portable containers for refueling purposes shall be provided with flame arresters and adequate bonding systems. A 20lb ABC fire extinguisher shall be located at refueling areas. See also the requirements of the WGI Fire Hazard Control THA.
Skin puncture/wounds	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated.
Lightning	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety	
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site
Fall from Ladder	• Ladders will be inspected before the first use of the day. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". • Only commercially manufactured ladders will be used. • Ladder use will conform to 29 CFR 1926.1053, Ladders.

Will task affect other LANL operations, employees, or tasks? **Yes**_____ **No**__X__

If yes for other than emergency response matters, explain precautions taken and contacts notified:

2.5.6 MEDICAL/RADIOLOGICAL SURVEILLANCE

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82 decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

2.5.7 EXPOSURE MONITORING

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/ Rationale	Response Action(s)
Excessive Noise	Quest M27 Noise Dosimeter or equivalent	Initial exposure determination and periodically within the hearing zone of workers where sound pressure levels are suspected of exceeding 85 DBA.	Ensure that workers are enrolled in a hearing conservation program and wear hearing protectors if noise dose exceeds 50% per 29 CFR 1910.95.	Compliance with 29 CFR 1910.95. Abate sound pressure levels, use hearing protectors, or restrict occupancy of area.
Excessive Noise	Type A Sound Level Meter	At various work locations if sound pressure levels are suspected of exceeding 82 DBA.	These are quick measurements intended to supplement the noise dosimetry program for the purpose of identifying whether changed conditions are present, etc.	Compliance with 29 CFR 1910.95. Abate sound pressure levels, use hearing protectors, or restrict occupancy of area.

2.5.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: At a minimum, all personnel shall wear long pants and shirt with sleeves (Level D PPE). All workers exposed to traffic shall wear reflective or high visibility warning vest/garment in compliance with 29 CFR 1926.201.

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury.

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: Not applicable.

Ears: If necessary, plugs/muffs with sufficient NRR.

2.5.9 DECONTAMINATION

A hand and face wash shall be available for sanitation purposes. .

2.5.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.5.11 EMERGENCY PLANS (task-specific)

See section 1.1.4 of this SSHASP for the Project Emergency Action Response Plan and also the WGI fire hazard control THA.

2.5.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

Flame/Spark permit is required prior to using cutting/welding torches.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
Operator - Daily	
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	Keep On-site
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

TRAINING REQUIREMENTS

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	---
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
Fall protection training per 29 CFR 1926.503	C&F	All field personnel who could have a 6' free fall while doing their work
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel

2.5.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.: _____

Task: EQUIPMENT MAINTENANCE/REPAIR/REFUELING Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name | Title | Employer or LANL Group | Z Number

Signature | Date

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

2.6 TASK HAZARD ANALYSIS (THA)/WORK PACKAGE

PROJECT NAME: OWR D&D

TASK 6: WASTE MANAGEMENT ACTIVITIES

ESTIMATED DATE(S) & DURATION OF WORK: JULY 2002 – JANUARY 2003

2.6 TASK DESCRIPTION

Task 6 involves all waste management activities related to the Omega West Reactor D&D Project. As part of the respective removal tasks, asbestos, lead paint waste, PCB waste, and RCRA hazardous waste will be packaged in a manner suitable for direct disposal or for transfer to the waste management area. Sampling of waste in waste management areas will be completed under tasks 3 (Asbestos Removal), task 4 (Lead Removal), or task 7 (HAZWOPER activities) where appropriate.

Potential wastes generated during the Omega West Reactor D&D Project are summarized below.

Item	Waste Type
Water (decontamination water)	Liquid, non-hazardous
Debris (concrete, asphalt, rebar, metal)	Solid, non-hazardous
PPE, plastic, material packaging, expendable supplies	Solid, non-hazardous
Asbestos: thermal insulation, flooring material, roofing material, gaskets, pipe lagging, etc.	Asbestos Waste
PCB waste, 50 ppm of greater and manufactured articles containing PCBs.	Potential TSCA Waste
Radiological	Solid and Liquid mixed waste
Soil and debris from PRS-3-054C storm drain/outfall that fails TCLP test, certain manufactured articles (mercury switches, etc.), lead contaminated material that fails TCLP test. Other Hazardous	RCRA Waste

All wastes will be characterized, packaged, and disposed of in compliance with DOE Order 5820.2A; New Mexico Administrative Code (20 NMAC 4.1 and 9.1, as amended); Federal Resource Conservation and Recovery Act (RCRA) and Toxic Substances Control Act (TSCA) regulations (Title 40 CFR); LANL Waste Acceptance Criteria (WAC); and applicable Laboratory Implementation Requirements, Guidelines, and Standard Operating Procedures.

The applicable requirements of the WGI Fire Hazard Control THA are also incorporated by reference into this Task Hazard Analysis.

2.6.1 KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.1.2 of the SSHASP.

2.6.2 HAZARD ASSESSMENT

Biological:	
Bloodborne pathogens	Bloodborne Pathogens - Occupational exposure to bloodborne pathogens while rendering first aid or CPR could result in life-threatening illness, HAR of negligible to minor.
Hanta Virus	Hanta Virus - Presence of rodent droppings/nests in or around site, and associated potential for Hanta virus illness is unlikely, HAR of negligible to minor.
Venomous creatures	Insect/Snake Stings or Bites - Demolition work always presents a potential for encounters with insects or snakes. Severity of stings and bites is dependent upon insect/snake type and individuals tolerance/allergic reactions, HAR of negligible to minor.
Radiological:	
External radiation exposure	Exposure to the radiological contaminants is possible but it is unlikely to exceed LANL's administrative action levels while performing this task. HAR = negligible to minor.
High Explosives:	
HE	Not applicable. High Explosive materials not identified in LANL Characterization Report as a COPC. HAR of negligible.
Chemicals:	
Chemical exposure	Potential for limited exposure to lead, asbestos and other hazardous materials in wastes if a spill occurs. HAR of negligible to minor.
Safety/Physical:	
Unstable Loads	Exposure to unstable loads as the buildings are razed and placed on transport truck is unlikely to occur but possibly could occur resulting in serious injury/illness or death. HAR = minor to serious
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR = minor to serious.
Hoisting Equipment Failure	Failure of hoisting equipment, a crane or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Excessive noise	Working around equipment my expose employees to noise levels above the action level, which could result in irreversible hearing loss. HAR = minor to serious
Temperature Stress	Employees could be exposed to temperature extremes, which could result in irreversible injury or death. HAR = minor to serious
Inadequate Illumination	Inadequate site illumination during low-light/night conditions could result in possible reversible injury. HAR = negligible to minor.
Lifting and Carrying	Lifting and carrying equipment and materials (ergonomic considerations) resulting in the possibility of reversible injury. HAR = negligible to minor.

Hazardous energy	Pinching, crushing, electrocution from the sudden release of energy resulting in serious injury or death is possible but unlikely. HAR = minor to serious
Skin puncture/wounds	Skin puncture/wounds, and/or electrocution from mishandling of or use of defective hand and power tools/equipment resulting in possible reversible injury. HAR = negligible to minor.
Lightning	Struck by lightning while working outdoors is unlikely to occur but could occur resulting in irreversible injury or death. HAR = minor to serious.
Heavy Equipment	Struck or run over by heavy equipment resulting in serious injury or death is possible but unlikely. HAR = minor to serious.
Transportation Accident	Transportation accidents in the parking lot or on the road possibly could occur or is unlikely to occur resulting in reversible injury. HAR = negligible to minor
Unsanitary work conditions	Unsanitary working conditions (i.e., site sanitation/housekeeping) could possibly result in serious injury/illness or death. HAR = minor to serious
Energized equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR = minor to serious.
Suspended power lines	Working with/around suspended electric power lines could possibly result in irreversible injury or death. HAR = minor to serious.
Forklift mishap	Improper use of a forklift possibly could result in irreversible injury of personnel, puncture of waste containers or spilling a load of material. HAR of moderate.

2.6.3 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request.

2.6.4 SITE CONTROL

A fence will be established around the perimeter of the site as indicated in Task 1. Workers must work in groups of at least two people (buddy system), and have means of direct communication or maintain visual contact at all times. Barrier tape and postings will be used to demarcate the storage areas. All postings will be in compliance with 29 CFR 1926, Subpart G.

2.6.5 ADMINISTRATIVE AND ENGINEERING (A&E) CONTROLS

Applicable LANL LIRs:

LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

Asbestos, lead paint waste, and Rad waste will be packaged in a manner suitable for direct disposal or for transfer to the waste management area.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	Avoid contact with bodily fluids when performing CPR or first aid. Use bloodborne pathogen kit when rendering first aid and micro-shield when performing CPR. Report all exposures to SSO and PM immediately and seek medical attention. Comply with Subcontractor's Bloodborne Pathogens Program.
Hanta Virus	Look for and avoid rodent droppings and nests. Notify JCNNM for proper disinfection if the droppings/nests must be disturbed to complete the work.
Venomous creatures	Avoid contact with insects and snakes. Inform SSO or PM if you are allergic to insect stings/bites. Use insect repellants.
Radiological	
External Radiation Exposure	Plan radiological work. Use techniques such as remote handling, shielding and stay time limitation to maintain doses ALARA.
Chemicals	
Chemical exposure	Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals.
Physical/Safety	
Unstable Loads	Keep unauthorized personnel away for the site while the buildings are being lifted and loaded. No personnel shall be allowed under a raised. All personnel shall stay away for any item that is under tension that could become a projectile due to sudden release of tension.
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
	manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. · Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Inadequate illumination	Compliance with 29 CFR 1926.26 and 1926.56 for required illumination levels. General construction areas require a minimum of 5 foot-candles illumination.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Skin puncture/wounds	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated.
Lightning	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Suspended power lines	Maintain the following minimum distances for stationary operations, as specified in 29 CFR 1926.550(a)(15)(i) and (ii): For live lines rated < 50 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated > 50 kV; Maintain a minimum distance of 10 ft + 0.4 inches (1/30th foot) for each 1 kV over 50 kV or twice the length of line insulator but never less than 10 ft. Examples: voltages < 50 kV (10 ft. minimum), 345 KV (20 ft minimum), 750 kV (33 ft minimum). Maintain the following minimum distances for transit operations with no load and boom lowered, as specified in 29 CFR 1926.550(a)(15)(iii): For live lines rated < 50 kV; Maintain a minimum distance of 4 ft between live lines and any part of equipment or load. For live lines rated above 50 kV and up to and including 345 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated above 345 kV and up to and including 750 kV; Maintain a minimum distance of 16 ft between live lines and any part of equipment or load. Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
Forklift mishap	• Inspect forklift before first use of the day. • Use a spotter to guide forklift operator in tight spaces. • Use a spotter at all times if the forklift does not have a backup alarm. • Carry loads as low as possible. • Limit forklift speed.

Will task affect other operations, employees, or tasks? No. X

2.6.6 MEDICAL SURVEILLANCE

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82 decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01.

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

2.6.7 EXPOSURE MONITORING

Not applicable.

2.6.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: At a minimum, all personnel shall wear long pants and shirt with sleeves (Level D PPE). All workers exposed to traffic shall wear reflective or high visibility warning vest/garment in compliance with 29 CFR 1926.201.

Head: All personnel working near any overhead hazard shall wear a hard hat, conforming to ANSI Z89.1-1986, in compliance with 29 CFR 1926.100.

Face & Eye: All personnel shall wear safety glasses with side shields, conforming to ANSI Z87.1-1968, for all fieldwork in compliance with 29 CFR 1926.102 (Tables E-1 and E-2). Goggles or face shield shall be worn when splash hazards are present.

Hearing: Hearing protection, that has been tested in accordance with ANSI S-3. 19-1974, if necessary.

Feet: All personnel shall wear safety-toed boots, conforming to ANSI Z41-1967, for all fieldwork.

Hands: Wear work gloves in compliance with 29 CFR 1926.95 for moving/opening drums.

An RWP for this task, if issued, may contain additional PPE requirements.

2.6.9 DECONTAMINATION

All personnel who come in direct contact with radiological material will follow the instructions for personnel decontamination as directed by Radiological Controls.

The need for personal and equipment decontamination will be based on radiological monitoring. The RCT will be immediately notified if contamination is found. If required, a boot wash will be available to remove contamination from boots and gloves. Potentially contaminated soils will be scraped from equipment prior to radiological surveys. If contamination is found dry and/or wet decontamination for free release may be required at the discretion of the RCT. If pressure washing is required, a separate THA will be developed to identify the hazards and controls associated with this activity. All rinsates generated during decontamination activities will be captured and managed in accordance with the waste management plan.

2.6.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.6.11 EMERGENCY PLANS (task-specific)

See Section 1.1.4 of this SSHASP for the Emergency Action Response Plan.

2.6.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

INSPECTION REQUIREMENTS	
Inspections	**Inspector**
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee
Forklift in accordance with 29 CFR 1910.178 before first use of the day.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	Keep On-site
Scope of Work	
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

2.6.13 TRAINING REQUIREMENTS

Types of training: **R** = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	---
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel
Forklift – per 29 CFR 1910.178 Powered Industrial Trucks	C	Forklift operator
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM
GET	C	All field personnel on-site for more than 10 days
Rad Worker II	C	All personnel requiring unescorted access to radiological controlled areas.

2.6.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR D&D SSHASP No.: _____

Task: WASTE MANAGEMENT Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number

Signature Date

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

OUTDOOR ENVIRONMENTAL RESTORATION AND DECONTAMINATION AND DECOMMISSIONING ACTIVITIES THA NUMBER WGII/PMC/SEA-2002-01

RISK*	
Initial Risk: High	Residual Risk: Low

CONSULTATION/ CONCURRENCE

Signature	Name	LANL Group	Date
Eugene F. Darling	Eugene Darling	S-8/EM&R	5/29/02
Subject Matter Expert			
Robert Farris	Robert Farris	FWO-Fire	29May02
Subject Matter Expert			
Mark D Shepard for	John DeJoia	WGII	5/31/02
WGII H&S Responsible Line Manager			
Alan I. Funk	Al Funk	PMC	5/31/02
PMC H&S Responsible Line Manager			
for	Bill Lowry	SEA	5/31/02
SEA H&S Responsible Line Manager			

AUTHORIZATION

Signature	Name	LANL Group	Date
Warren Neff	Warren Neff	RRES-ER	6/3/02
RRESR-ER Group			
Gilbert Montoya	Gilbert Montoya	FWO-SWO	5-29-02
FWO-SWO D&D			
FOR	Stephen Mee	FWO-CGRP	5/29/02
CGRP D&D			

AUTHOR

Signature	Name	Mail Stop	Company	Date
Ken Gillespie	Ken Gillespie	M327	WGII	5/31/02
WGII ES&H Manager				

Next Authorization Review Date: May 1, 2003

SCOPE

This Task Hazard Analysis (THA) addresses all outdoor operations associated with environmental restoration and decontamination and decommissioning conducted by the WGII/PMC/SEA Los Alamos Team and is intended to mitigate the extreme wildland fire hazard. Operations addressed are those subject to recently released Los Alamos National Laboratory (LANL) restrictions pertaining to the extreme wild land fire conditions.

DESCRIPTION OF OPERATIONS

Work addressed by this THA include, but are not limited to:

- driving on unimproved roads;
- operation of heavy equipment;
- drilling operations;
- air sampling from previously drilled boreholes;
- soil sampling from both surface and subsurface locations;
- water sampling from both surface and subsurface locations;
- welding, cutting, and grinding operations;
- decontamination and demolition of facilities adjacent to wild lands;
- operation of chainsaws and other internal combustion engine powered equipment such as generators and compressors;
- refueling operations;
- erecting fencing for site control purposes;
- locating temporary field support trailers; and,
- any other activity that may pose a credible threat for ignition.

LANL AND REGULATORY REQUIREMENTS

The following pre-existing and recently issued requirements are applicable to the operations:

- LIR 402-910-01.X *LANL Fire Protection Program;*
- LIR 402-840-01.X-*Welding, Cutting and Other Spark-Flame Producing Operations;*
- LANL Alert No. 0001-*Restrictions Due to Wildland Fire Conditions* (attached);
- James L. Holt, AD-Ops: 02-053-*Additional Restrictions Due to Extreme Wild Land Fire Conditions* (attached);
- WGII/PMC/SEA Site Specific Health and Safety Plans;
- National Fire Protection Association (NFPA) 10, *Standard for Portable Fire Extinguishers, Section 4-3.2 Procedures* (attached); and,
- Facility Management Unit (FMU) specific inspection and approval requirements. For example, the permitting process for use of internal combustion powered equipment in the FMU-70 High Explosive Area.

EMERGENCY ACTIONS

Emergency actions associated with the extreme wildland fire condition are as follows:

- ensure means of communication that comply with FMU specific requirements. For example, emergency pagers when working in the FMU-70 High Explosive Area;
- emergency evacuation routes shall be determined prior to work activities and shall be communicated to personnel at the project kickoff meeting and during daily tailgate safety meetings; and,

- all fires, no matter the size and regardless if site personnel extinguish them, shall be immediately reported to the Los Alamos Fire Department and EM&R.

TRAINING REQUIREMENTS

- HSR-13 Course #15672 Fire Extinguisher: Designated Worker and Fire Watch (Self Study);
- HSR-13 Course #9893 Fire Extinguisher Hand-On Training; and,
- this Task Hazard Analysis.

ESSENTIAL EQUIPMENT

The only essential equipment is fire extinguishers. Current inspection status and charged state shall be verified prior to all work activities in remote areas.

CHANGE CONTROL PROCESS

This THA shall be controlled via the WGII/PMC/SEA site document control process and changes shall require signatures from those listed on page one.

WASTE

No waste materials are expected to be generated during these activities except in the event of an unexpected spill.

WORK ACTIVITIES, HAZARDS, AND CONTROLS

Activity	Hazard	Control
All work in remote areas	• Personnel getting trapped in remote areas during fire event	• Determine emergency evacuation routes prior to entering remote areas • Personnel shall sign in and out on the location board prior to entering remote areas
	• Inability to summons emergency response	• Ensure cell phones are charged or take extra batteries • Ensure cell phone coverage in remote work areas
	• Inability to extinguish small fires in the incipient stage	• Personnel shall stage shovels and rakes in the work area • Ensure extinguishers are available and have current annual and monthly inspections. Inspect extinguisher per NFPA-10 prior to all work activities in remote areas
Off road vehicle operations	• Ignition of grass and/or duff by catalytic converter	• Comply with requirements of Alert No.0001 and memo AD-Ops:02-053

Activity	Hazard	Control
Operation of heavy equipment and drill rigs	• Ignition of grass and/or duff by catalytic converter or exhaust • Hydraulic, brake, fuel, and oil line breaks, spills, and leaks resulting in fluid ignition	• Comply with requirements of Alert No.0001 and memo AD-Ops:02-053 • Internal combustion powered equipment shall be equipped with properly installed spark arresting devices • During heavy equipment/drill rig inspections, pay particular attention to hoses, lines and leaks
Welding, cutting, grinding and other spark-flame producing operations	• Ignition of combustible materials in work area	• Comply with requirements of Alert No.0001 and memo AD-Ops:02-053 and task specific Spark-Flame Permit • To the extent feasible, take equipment to pre-designated hot work areas such as the Drilling Field Support Facility • Stage a dedicated water tank or tanker equipped with a pump and hose to wet down the work area and to be used to respond to fires in the incipient stage. • Use fire resistant welding screens around spark-flame producing activities
Operation of chainsaws and other internal combustion powered equipment such as generators and compressors	• Ignition of combustible materials in work area	• Personnel shall ensure that internal combustion powered equipment is equipped with properly installed spark arresting devices and is properly grounded • Be aware of hot exhaust manifolds in relation to combustible materials • Do not leave internal combustion powered equipment running unattended • Clear combustible materials within 10-feet of point of operation

Activity	Hazard	Control
Refueling operations	• Ignition of fuels during refueling operations	• Conduct refueling operations when engines are cool • Ensure proper bonding and grounding when dispensing flammable liquids • Properly store flammable and combustible liquids • Limit amounts of fuels to those needed • Clear combustible materials within 10-feet of refueling area • Use secondary containments when refueling hand held equipment

ADDITIONAL INFORMATION

Per the James L. Holt, AD-Ops: 02-053-*Additional Restrictions Due to Extreme Wild Land Fire Conditions* memo, "Wind data is standardized using the LANL Weather Machine, Tower 6 postings". To access the data, go to http://weather.lanl.gov/LANL_Met_Conditions_Text/current_eng.html, and view the TA-6 wind "Speed".

TASK HAZARD ANALYSIS (THA)

OUTDOOR ENVIRONMENTAL RESTORATION
AND
DECONTAMINATION AND DECOMMISSIONING ACTIVITIES
THA NUMBER WGII/PMC/SEA-2002-01

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/	DATE

Los Alamos
NATIONAL LABORATORY
Memorandum

James L. Holt
Associate Director for Operations

To/MS: All Employees
From/MS: James L. Holt
Phone/Fax: 7-0079/Fax 5-1812
Symbol: AD-Ops:02-053
Date: May 20, 2002

Subject: **ADDITIONAL RESTRICTIONS DUE TO EXTREME WILD LAND FIRE CONDITIONS**

As you are aware, our neighbors at the National Park Service (NPS – Bandelier National Monument) and the US Forest Service (USFS) have closed access to the majority of their forested areas in response to regional drought and extreme forest fire danger conditions. It is appropriate and prudent for LANL to invoke similar restrictions on Lab-controlled wild land areas in light of the present fire danger. The purpose for these closures is two-fold:

1) to reduce the potential for wild land fire ignition by human causes (smoking, vehicles etc); and

2) to reduce the potential danger to employees of being trapped in a Laboratory forested area if a fire starts, recognizing that natural events such as lightning cannot be controlled.

Effective Tuesday, May 21, 2002, access to the Laboratory's undeveloped/wild land areas for non-work activities, such as walking, hiking, jogging, biking and similar types of activities is prohibited in parallel with the NPS and USFS restrictions. Closure to the public of Laboratory undeveloped/wild land areas to the south and west of State Route 4, instituted on May 13, 2002, shall also remain in effect in concert with the NPS and USFS restrictions.

Attached is an updated work restriction matrix to be implemented Lab-wide in light of the heightened wild land fire danger. The restrictions are listed by activity and were developed using a graded approach for the various levels of fire danger we are currently experiencing. These restrictions were developed based on NPS and USFS standards with consideration for rapid initial fire attack, availability of fire suppression personnel and on-site equipment. While the majority of the restrictions contained in the matrix for Low through Extreme fire danger are already established, forecast "RED FLAG" conditions will initiate additional restrictions, up to and including cessation or disallowance of many activities. The "RED FLAG" warning system is the means by which the National Weather Service informs fire management agencies of the onset or possibility of critical weather (e.g., low relative humidity, high winds, high lightning potential) and fuel conditions that could lead to extensive wildfire occurrences or extreme fire behavior. The Laboratory issues a fire weather report daily (normally by 10:00 AM) and includes any "RED FLAG" conditions anticipated for the day.

The work restriction matrix allows the continuation of forest fuels mitigation projects currently underway across the Laboratory in an effort to protect LANL and the public from neighboring high-risk lands in the event of an off-Lab wild land fire ignition. Other work-related activities within the Laboratory's undeveloped/wild land fire areas remain restricted to those operations essential to the Lab's mission and those required for ES&H and regulatory commitments. Restrictions previously implemented under

ALERT 0001 (March 5, 2002) and subsequent Master Management Memorandum AD-Ops:02-035 (April 11, 2002) remain in effect, including:

- Off-road vehicle usage is limited to activities essential/critical to LANL operations, ES&H/regulatory essential activities and fuel mitigation efforts only. All other vehicles and activities must be carried out from improved roads (asphalt, concrete and/or gravel or base-course surfaces). Deployment of multiple vehicles off-road is not acceptable when crews can carpool in one vehicle to the work site. Many off-road activities do not necessitate off-road vehicle use, vehicles can be parked in a safe location and crews can walk to the work site.

- Spark- and flame-producing operations performed outdoors require LANL Fire Marshal or designated representative review and signature/approval on Form 1563 of LIR 402-840-01, in addition to listed controls contained in ALERT 0001.

- Smoking is prohibited in all Laboratory areas except designated smoking areas per AM-626-Smoking.

- Following approved work conducted within any Lab undeveloped/wild land area, person(s) conducting the activity shall be responsible for ensuring that the operation has not caused a fire or hot spot. A check of work area(s) must be conducted at least 30 minutes following cessation of the operation.

These restrictions shall remain in effect until local fire danger and weather conditions improve to an acceptable level.

Attachment a/s

Cy: ADOPS Files

Fire Danger Rating	Wind Parameters	Shot/Burn Activity	Construction Sites	Fuels Mitigation	Spark Producing Activities	Non-Motorized Activities
*Red Flag		PROHIBITED	Approved with Restrictions: Approved Hazard Control Plan	PROHIBITED	PROHIBITED	Approved with Restrictions: Two-way Communications Management Accountability
Very High		Approved with Restrictions: Follow mitigation requirements listed in the approved burn plan or DX Shot Mitigation Procedure.	Approved with Restrictions: Approved Hazard Control Plan	Approved with Restrictions: Approved Communications Plan Approved Fire Suppression plan Field Activities must be approved by line management	Approved with Restrictions: Spark or Flame Permit Two-Way Communications Field activities must be approved by line management	Approved with Restrictions: Field activities must be approved by line management
High	*<10 mph	Approved: Follow mitigation requirements listed in the approved burn plan or DX Shot Mitigation Procedure.	Approved with Restrictions: Approved Hazard Control Plan	Approved with Restrictions: Two-Way Communications Field activities must be approved by line management.	Approved with Restrictions: Spark or Flame Permit Field activities must be approved by line management.	Approved
Medium	*<20 mph	Approved: Follow mitigation requirements listed in the approved burn plan or DX Shot Mitigation Procedure.	Approved with Restrictions: Approved Hazard Control Plan	Approved with Restrictions: Two-Way Communications Field activities must be approved by line management	Approved with Restrictions: Spark or Flame Permit	Approved
Low		Approved: Follow mitigation requirements listed in the approved burn plan or DX Shot Mitigation Procedure.	Approved with Restrictions: Approved Hazard Control Plan	Approved with Restrictions: Two-Way Communications Field activities must be approved by line management	Approved with Restrictions: Spark or Flame Permit	

*Wind speed in excess of the listed speed would cause the Fire Danger Rating to advance to the next higher level.

**Road: For purposes of this document, a road must be improved by either pavement, or by base course. A two wheel rut path is not considered a road.

Notes:

Any federal, state, or local officer, or member of an organized rescue or fire fighting force in the performance of an official duty are exempt from this procedure.

Wind data is standardized using the LANL Weather Machine, Tower 6 postings.

ALERT

FWO Division | March 5, 2002 | Alert No. 0001

Restrictions Due to Wildland Fire Conditions

Background

The Laboratory is facing the potential for an early and extreme wild fire season. Currently, the fuel moisture contents in both fine (e.g., grasses and pine needles) and 10-hour fuels are well-below normal. The Laboratory, along with other federal, state and local officials, urges all employees to be very cautious when conducting any activities that could result in igniting a wildland fire.

Requirements

Based on the fire danger, the LANL Fire Marshal is issuing the following restrictions that shall apply to all activities conducted on Laboratory-operated property, and that shall be effective upon the issuance of this alert:

- All spark- or flame-producing activities conducted outside of buildings or designated welding/cutting and hot work areas shall require written approval from the Laboratory Fire Marshal or designee. Approval must be in the form of a signature from the Fire Marshal or designee on the "Spark- or Flame-Producing Operations Permit" (Form 1563) of LIR 402-840-01, *Welding, Cutting, and Other Spark- or Flame-Producing Operations*, Attachment A. In addition to the requirements contained in LIR 402-840-01, the following requirements shall apply to outdoor spark- or flame-producing operations:
  - A trained/certified Fire Watch (current ESH-13 Course Nos. 15672 and 9893) must be present during the operation.
  - A currently inspected portable fire extinguisher commensurate with the potential fire hazards that may be present, must be provided for the Fire Watch by those conducting the activities.
  - All combustibles, including weeds or brush, within 35 ft of the spark- or flame-producing operation must be removed, covered with fire-protective blankets, or wet down (in order of descending preference). "All" combustibles include, but are not limited to, vegetation, weeds, brush, temporary construction and roofing materials, etc.
  - Personnel performing the spark- or flame-producing operation and the Fire Watch shall be cognizant of changing weather conditions, especially increased wind that might allow dispersal of hot embers beyond the 35-ft noncombustible perimeter. If weather conditions change adversely, work shall be stopped until safe conditions are re-established.

Continued on next page

- Outdoor activities involving cooking apparatus shall be prohibited, except gas-fired grills in established areas suitable for this activity.
  Guidance Note: Suitable areas would include areas such as parking lots or areas cleared of combustible materials and vegetation.
  The cooking apparatus must be attended at all times, and the area must be surveyed prior to the cessation of the event.

- All driving off of established roadways shall be restricted to mission-essential activities conducted using vehicles equipped with a spark arrester or other pertinent fire prevention equipment. Off-road driving must be held to the minimum required to complete the operation.

- Work conducted in wooded areas of the Laboratory shall be restricted to mission-essential or essential ES&H activities and must be approved by the Laboratory Fire Marshal or designee.

- Smoking shall never be allowed on Laboratory property except in "Designated Smoking Areas" established by the owning Facility Management Unit (see AM-626, *Smoking*).

- Following any operation that is performed in a wooded area, the person(s) conducting the activity shall be responsible for ensuring that the activity has not caused any fire or hot spots. A check of work areas must be conducted at least 30 minutes following cessation of operations in a wooded area.

These restrictions shall remain in effect until the local fire danger drops to an acceptable level.

The LANL Fire Marshal shall make determinations on activities that pose a potential fire hazard based on the most up-to-date, local, fire weather information available.

Questions?

The Laboratory Fire Marshal may be reached at 7-9045 for questions or information pertaining to this alert.

Los Alamos
NATIONAL LABORATORY

The OIC for this alert is the Fire Protection Office (FWO-Fire), and the responsible division leader is the FWO-DL. This alert shall remain in place until the local fire danger drops to an acceptable level.

Los Alamos
NATIONAL LABORATORY
Memorandum

James L. Holt
Associate Director for Operations

To/MS: All Employees
From/MS: James L. Holt
Phone/Fax: 7-0079/Fax 5-1812
Symbol: AD-Ops:02-053
Date: May 20, 2002

Subject: ADDITIONAL RESTRICTIONS DUE TO EXTREME WILD LAND FIRE CONDITIONS

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These restrictions shall remain in effect until local fire danger and weather conditions improve to an acceptable level.

Attachment a/s

Cy: ADOPS Files

Fire Danger Rating	Wind Parameters	Shot/Burn Activity	Construction Sites	Fuels Mitigation	Spark Producing Activities	Non-Motorized Activities
Red Flag		PROHIBITED	Approved with Restrictions: Approved Hazard Control Plan	PROHIBITED	PROHIBITED	Approved with Restrictions: Two-way Communications Management Accountability
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Medium	*<20 mph	Approved: Follow mitigation requirements listed in the approved burn plan or DX Shot Mitigation Procedure.	Approved with Restrictions: Approved Hazard Control Plan	Approved with Restrictions: Two-Way Communications Field activities must be approved by line management	Approved with Restrictions: Spark or Flame Permit	Approved
Low	*<30 mph	Approved: Follow mitigation requirements listed in the approved burn plan or DX Shot Mitigation Procedure.	Approved with Restrictions: Approved Hazard Control Plan	Approved with Restrictions: Two-Way Communications Field activities must be approved by line management	Approved with Restrictions: Spark or Flame Permit	Approved

*Wind speed in excess of the listed speed would cause the Fire Danger Rating to advance to the next higher level.

**Road: For purposes of this document, a road must be improved by either pavement, or by base course. A two wheel rut path is not considered a road.

Notes:

Any federal, state, or local officer, or member of an organized rescue or fire fighting force in the performance of an official duty are exempt from this procedure.

Wind data is standardized using the LANL Weather Machine, Tower 6 postings.

4-3.2* Procedures.

Periodic inspection of fire extinguishers shall include a check of at least the following items:

(a) Location in designated place

(b) No obstruction to access or visibility

(c) Operating instructions on nameplate legible and facing outward

(d) * Safety seals and tamper indicators not broken or missing

(e) Fullness determined by weighing or "hefting"

(f) Examination for obvious physical damage, corrosion, leakage, or clogged nozzle

(g) Pressure gauge reading or indicator in the operable range or position

(h) Condition of tires, wheels, carriage, hose, and nozzle checked (for wheeled units)

(i) HMIS label in place

4-3.3 Corrective Action.

When an inspection of any fire extinguisher reveals a deficiency in any of the conditions listed in 4-3.2 (a), (b), (h), and (i), immediate corrective action shall be taken.

4-3.3.1 Rechargeable Fire Extinguishers.

When an inspection of any rechargeable fire extinguisher reveals a deficiency in any of the conditions listed in 4-3.2 (c), (d), (e), (f), and (g), it shall be subjected to applicable maintenance procedures.

4-3.3.2 Nonrechargeable Dry Chemical Fire Extinguisher.

When an inspection of any nonrechargeable dry chemical fire extinguisher reveals a deficiency in any of the conditions listed in 4-3.2 (c), (e), (f), and (g), it shall be removed from further use, discharged, and destroyed at the direction of the owner or returned to the manufacturer.

4-3.3.3 Nonrechargeable Halon Agent Fire Extinguisher.

When an inspection of any nonrechargeable fire extinguisher containing a halon agent reveals a deficiency in any of the conditions listed in 4-3.2 (c), (e), (f), and (g), it shall be removed from service, not discharged, and returned to the manufacturer.

If the fire extinguisher is not returned to the manufacturer, it shall be returned to a fire equipment dealer or distributor to permit recovery of the halon.

4-3.4 Inspection Recordkeeping.

4-3.4.1

Personnel making inspections shall keep records of all fire extinguishers inspected, including

Copyright NFPA

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR D&D SSHASP No.: _____

Task: Outdoor Environmental Restoration Fire Hazards Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number

Signature Date

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

Los Alamos National Laboratory
CERRO GRANDE REHIBILITATION PROJECT (CGRP)
ASBESTOS ABATEMENT PLAN

Project Name: Omega West Reactor (OWR) Decommissioning and Demolition Project

APPROVALS/CONCURRENCE

Signature	Name	LANL Group	Date
	Steve Mee	CGRP-D&D	08/07/02

CGRP-D&D Program Manager Approval

Signature	Name	LANL Group	Date
	Keith Rendell	CGRP-D&D	8-6-02

CGRP-D&D Project Leader Approval

Signature	Name	LANL Group	Date
	Michael Dennis FOR	CGRP-D&D HSR-5	7-23-02

CGRP-D&D HSR-5 Representative Approval

Signature	Name	LANL Group	Date
	Martin Peifer	CGRP-D&D HSR-1	7-31-02

CGRP-D&D HSR-1 Team Leader Approval

Signature	Name	Company	Date
	Mark Granus	W-F D&D, LLC	7/31/02

WD3, LLC Project Manager Approval

Signature	Name	Company	Date
	Tim Hogan	Coronado Wrecking & Salvage	8/8/2002

Coronado Wrecking & Salvage Manager or HS Representative Approval

Signature	Name	Company	Date
	Tad West	Southwest Abatement	7/22/02

Southwest Abatement Inc. Manager or HS Representative Approval

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurrence

Comments of the above reviewers have been incorporated as stipulated or resolved with written record and copy to the respective reviewer.

Plan Preparer	Signature	Company	Date	Mailstop	Phone
Mary L Pongratz		IWA Washington	7-19-02		(505) 780-0371

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Description

This Asbestos Abatement Plan provides Information concerning the technical approach to implementing the OSHA Construction Industry Asbestos Standard. Requirements of this Asbestos Abatement Plan supplements the SSHASP developed for the OWR D&D Project.

This task involves the isolation, removal, and disposal of asbestos containing materials from the Omega West Reactor and associated facilities. This work may involve removal of roofing materials, flooring materials, asbestos pipe lagging and other ACM. Generated waste will be packaged for disposal. Some of this work may be done using scaffolding or could involve fall hazards. This work may involve use of scaffolding, tools or power tools. Man-lifts or hoist may also be used. The primary asbestos control techniques will vary with the particular item to be removed. The Asbestos Competent Person (Tad West, Southwest Abatement) for this task will employ some or all of the following techniques as the situation dictates:

- Wet methods,
- Wrapping materials to be discarded in plastic,
- Respiratory protection,
- General room ventilation,
- Enclosures with Negative Air Machine (NAM),
- HEPA vacuums (lead paint dust and paint chips),
- Poly drop cloths beneath spot removals,
- Proper housekeeping

2 Key Personnel Having Task-Specific H&S Responsibility

The key personnel for this task are listed in Section 1.1.2 of the SSHASP for the Omega West Reactor.

3 Hazard Assessment

See Attachment 1.

4 Hazard Communication

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request.

It is anticipated that this task may involve the use of surfactants, detergents or fixatives, mastic remover or adhesives.

5 Site Control

Workers shall work in groups of at least two people (buddy system) and have a means of direct communication or maintain visual contact at all times. The asbestos abatement regulated areas will be demarcated and posted to prevent unauthorized entry into the work area. Posting and demarcation will be in accordance with 29 CFR 1926.200 and 29 CFR 1910.1101. Warning signs that demarcate the regulated area will be posted at each location where a regulated area is required. The warning signs will bear the following information:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

RESPIRATORS AND PROTECTION CLOTHING ARE REQUIRED IN THIS AREA

For non-containment work, signs and regulated area demarcations may be taken down if an initial exposure assessment demonstrates the asbestos fiber concentration to be consistently below the PEL.

6 Administrative and Engineering Controls

See Attachment 2.

7 Medical Surveillance

Asbestos

All workers involved with the abatement of ACM or need to enter active asbestos abatement areas shall be enrolled in a medical surveillance program in accordance with 1926.1101(m).

Respirator

All workers required to wear a respirator shall be medically evaluated to determine the employee's ability to use the respirator in accordance with 1910.134 (e). Asbestos workers will have current quantitative respirator fit test certificates or cards.

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82 decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

8 Exposure Monitoring

Asbestos Monitoring

Exposure monitoring for asbestos will be conducted in accordance with 29 CFR 1926.1100 (f).

- Baseline air monitoring will be taken prior to the start of the removal, and will be via PCM analysis.
- Personal air monitoring will be performed on at least 25% of the workforce. A time-weighted average (TWA) will be calculated for each sample collected. The permissible exposure limit (PEL) for an 8 hr. work shift will be corrected to reflect an adjusted PEL.
- Perform short-term excursion level samples on tasks which may release the largest quantities of asbestos fibers.
- Area air monitoring outside of the asbestos abatement work areas will be performed on a limited basis to confirm that no asbestos fibers escaped the work area.
- Laboratory analysis will be performed at an independent laboratory, and laboratory results will be provided to LANL.
- OSHA air sample results representing employee exposure will be communicated to the employee in writing by posting at the clean room.

Other Monitoring

See Attachment 4.

9 Personal Protective Equipment (PPE)

Asbestos Regulated Areas:

Body/Torso: Disposable breathable protective clothing and head covering will be worn.

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989) shall be worn unless full face respirators are worn.

Feet: At all times during subject task, rubber safety-toe work boots dedicated to project (compliant with ANSI Z41-1991).

Hands: disposable nitrile gloves.

Head: head covering and non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135) shall be worn if overhead hazard exists.

Respiratory: Half-face with P-100 cartridges, minimum respiratory protection. Asbestos workers will have current quantitative respirator fit test certificates or cards.

Ears: If necessary, plugs/muffs with sufficient NRR.

Other areas:

Body/Torso: At a minimum, all personnel shall wear long pants and shirt with sleeves (Level D PPE).

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury.

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: Not applicable.

Ears: If necessary, plugs/muffs with sufficient NRR.

10 Decontamination

A separate hand and face wash shall be available for personnel working in regulated and in non-regulated areas. A personnel decontamination unit will be provided, in accordance with OSHA regulations for personnel exiting containment. This may be a portable unit, prefab unit, or custom built on-site. Personnel will be trained in proper decontamination procedures. A decontamination system for waste load-out will also be provided.

11 Spill Containment Plans (task-specific)

See section 1.1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan. A HEPA filtered vacuum cleaner will be used to clean up fine asbestos fibers.

12 Emergency Plans (task-specific)

See section 1.1.4 of the SSHASP for the Project Emergency Action Response Plan.

13 Additional Instructions/Procedures (task-specific)

Spark/Flame permit shall be obtained prior to using a cutting/welding torch or any other flame producing equipment. An excavation permit will be obtained prior to commencement of excavation. WD3 will verify the LANL has isolated the structures and affected utilities from hazardous energy to the structure before proceeding.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Excavation (prior to first entry of the day)	Competent Person
Scaffolding (once erected, daily prior to each use)	Competent Person
Chainsaw (initial – prior to acceptance at the site and prior to each use)	PMs, User, SSO or designee - Initial User - Daily
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W	PMs, Operator, SSO or designee

INSPECTION REQUIREMENTS	
Inspections	Inspector
(initial – prior to acceptance at the site only).	
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
Negative pressure containment (continuous monitoring data to demonstrate integrity of containment); inspect containment before first use of the day.	Asbestos Competent Person
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	Keep On-site
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

14 Training Requirements

Types of training: **R** = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.		
Training Requirement	**Type**	**Personnel to be Trained**
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	---
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
WD3 Hearing Conservation Program	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
Respiratory protection training & quantitative fit test, 29 CFR 1910.134 & WD3 Respirator Protection Program	C	All field personnel who grind or torch surfaces coated with lead paint.
Scaffold training per 29 CFR 1910.454	C&F	All field personnel who will work from scaffolding
Fall protection training per 29 CFR 1926.503	C&F	All field personnel who could have a 6' free fall while doing their work
Asbestos worker training: per 29 CFR 1926.1101 (k) 9	C	All persons entering an area that is controlled under 29 CFR 1926.1101.
LIR 402-810-01.0 - Confined Spaces	C	All field personnel entering or supervising the entry of a confined space
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060	C	All field personnel
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

ASBESTOS ABATEMENT PLAN HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.: _____

Task: REMOVAL OF ACM Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name Title Employer or LANL Group Z Number

Signature Date

I acknowledge that I understand this Plan, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

Attachment 1. Hazard Assessment.

Biological:

Bloodborne Pathogens	Bloodborne Pathogens - Occupational exposure to bloodborne pathogens while rendering first aid or CPR could result in life-threatening illness, HAR of negligible to minor.
Hanta Virus	Hanta Virus - Presence of rodent droppings/nests in or around site, and associated potential for Hanta virus illness is unlikely, HAR of negligible to minor.
Venomous Creatures	Insect/Snake Stings or Bites - Demolition work always presents a potential for encounters with insects or snakes. Severity of stings and bites is dependent upon insect/snake type and individuals tolerance/allergic reactions, HAR of negligible to minor.

Radiological:

Not applicable. LANL Characterization did not identify radioactive materials at concentrations that exceed background. HAR of negligible.

High Explosives:

Not applicable. High Explosive materials not identified in LANL Characterization Report as a COPC. HAR of negligible.

Asbestos Exposure:

Exposure to health hazards associated with asbestos abatement work causing irreversible illness/injury is possible but unlikely to occur. HAR = minor to serious

Chemical Exposure:

Potential for exposure to the following chemical compounds/substances resulting in skin or eye irritation or minor injury is unlikely to occur or possibly could occur : detergents, surfaceants, mastic remover and adhesives. HAR of negligible to minor.

Safety/Physical:

Unstable Loads	Exposure to unstable loads as the buildings are razed and placed on transport truck is unlikely to occur but possibly could occur resulting in serious injury/illness or death. HAR = minor to serious
Heat Stress	Exposure to warm/hot weather conditions (heat stress) resulting in reversible injury is unlikely to occur. HAR = minor.
Hoisting Equipment Failure	Failure of hoisting equipment, a crane or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Falls From > 6 Feet	Falls from elevated work levels (> 6-feet above working surface, i.e., working on top of equipment) could possibly result in death. HAR = minor to serious
Inadequate Illumination	Inadequate site illumination during low-light/night conditions could result in possible reversible injury. HAR = negligible to minor.
Lifting And Carrying	Lifting and carrying equipment and materials (ergonomic considerations) resulting in the possibility of reversible injury. HAR = negligible to minor.

Hazardous Energy	Pinching, crushing, electrocution from the sudden release of energy resulting in serious injury or death is possible but unlikely. HAR = minor to serious
Skin Puncture/Wounds	Skin puncture/wounds, and/or electrocution from mishandling of or use of defective hand and power tools/equipment resulting in possible reversible injury.HAR = negligible to minor.
Flying Debris	Struck by flying debris while completing the scope of work is possible but unlikely to occur causing irreversible injury. HAR = negligible to minor.
Lightning	Struck by lightning while working outdoors is unlikely to occur but could occur resulting in irreversible injury or death. HAR = minor to serious.
Heavy Equipment	Struck or run over by heavy equipment resulting in serious injury or death is possible but unlikely. HAR = minor to serious.
Transportation Accident	Transportation accidents in the parking lot or on the road possibly could occur or is unlikely to occur resulting in reversible injury. HAR = negligible to minor
Unsanitary Work Conditions	Unsanitary working conditions (i.e., site sanitation/housekeeping) could possibly result in serious injury/illness or death. HAR = minor to serious
Slips Trips Falls	Walking on terrain in/around work site where slips, trips, falls could result in possible reversible injury. HAR = minor.
Scaffolding	Working on scaffolding could result in injury from falls or from dropped tools and materials.
Energized Equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR = minor to serious.
Suspended Power Lines	Working with/around suspended electric power lines could possibly result in irreversible injury or death. HAR = minor to serious.
Confined Space	Entry into a confined space possibly could be required. Unauthorized entry into confined spaces can result in irreversible injury or death, HAR of minor to serious.
Excessive Noise	Exposure to excessive noise associated with the use of generators/heavy equipment is unlikely to occur contributing to irreversible injury; HAR of negligible to minor.
Fall from Ladder	A fall from a ladder possibly could occur resulting in irreversible injury. HAR of moderate.

Attachment 2: A & E Controls

Applicable LANL LIRs:

LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-810-01.0	Confined Spaces
LIR 402-820-01.0	Noise and Temperature Stresses
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

Surfaces to be protected from asbestos contamination will be covered with polyethylene (poly) sheeting.

In areas where floor tile will be removed, negative pressure containment asbestos regulated areas will be used.

Transite and roofing material will be removed in open air, but the removal areas will be posted and demarcated as asbestos regulated areas pending the results of the initial exposure assessment.

Thermal system insulation ACM on pipes will be removed using glove bags or equivalent or in containment.

A&E controls for other ACM will be determined by the asbestos competent person on a case-by-case basis.

Water with a suitable fixative or surfactant will be used to wet down ACM prior to disturbance.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	Avoid contact with bodily fluids when performing CPR or first aid. Use bloodborne pathogen kit when rendering first aid and micro-shield when performing CPR. Report all exposures to SSO and PM immediately and seek medical attention. Comply with Subcontractor's Bloodborne Pathogens Program.
Hanta Virus	Look for and avoid rodent droppings and nests. Notify JCNNM for proper disinfection if the droppings/nests must be disturbed to complete the work.
Venomous creatures	Avoid contact with insects and snakes. Inform SSO or PM if you are allergic to insect stings/bites. Use insect repellants.
Radiological	
Asbestos	
Asbestos exposure	Asbestos removal shall be in accordance with 29 CFR 1926.1101. HEPA equipped equipment shall be used. Abatement workers and supervisor shall have training as specified in 29 CFR 1926.1101. Wear PPE as specified in THA-3 (Asbestos Removal). Isolate ACM to prevent off site release of airborne fibers. Use wet removal techniques, glove bags and containment per recommendations of Asbestos Competent Person.
Chemical	
Chemical exposure	Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures,

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
	on MSDS, in the event of unprotected contact with chemicals.
Safety/Physical	
Unstable Loads	Keep unauthorized personnel away for the site while the buildings are being lifted and loaded. No personnel shall be allowed under a raised. All personnel shall stay away for any item that is under tension that could become a projectile due to sudden release of tension.
Heat Stress	Inform personnel of signs and symptoms of heat stress. If needed, appropriate exposure monitoring and work regime will be implemented to allow for work breaks so personnel may cool down, and take in fluids as necessary. Refer to HASP and the LIR 402-820-01.0 Noise and Temperature Stresses.
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. · A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. · Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Falls from > 6 feet	While working on the roof or if workers are exposed to any other fall hazard >than 6', conventional fall protection will be provided. As a minimum, fall protection shall include, full body harness with attaching lanyard while leading edge work is being performed. Fall protection will be in accordance with 29 CFR 1926, Subpart M.
Inadequate illumination	Compliance with 29 CFR 1926.26 and 1926.56 for required illumination levels. General construction areas require a minimum of 5 foot-candles illumination.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Skin puncture/wounds	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated.
Flying debris	Keep unauthorized personnel away from demolition area. Demolish buildings in

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	A&E Control
	a controlled fashion. Wear PPE specified in Sections 2.X.8, where x=3,4,5,6,7 of THAs.
Lightning	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.
Scaffolding Mishap	Inspection before the first use of the day by a competent person. Compliance with 29 CFR 1926 subpart L, Scaffolds.
Slips trips falls	Use good housekeeping on-site and minimize threat of slick surfaces. If necessary, tripping hazards will be marked to make them more visible.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site
Suspended power lines	Maintain the following minimum distances for stationary operations, as specified in 29 CFR 1926.550(a)(15)(i) and (ii): For live lines rated < 50 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated > 50 kV; Maintain a minimum distance of 10 ft + 0.4 inches ($1/30^{th}$ foot) for each 1 kV over 50 kV or twice the length of line insulator but never less than 10 ft. Examples: voltages < 50 kV (10 ft. minimum), 345 KV (20 ft minimum), 750 kV (33 ft minimum). Maintain the following minimum distances for transit operations with no load and boom lowered, as specified in 29 CFR 1926.550(a)(15)(iii): For live lines rated < 50 kV; Maintain a minimum distance of 4 ft between live lines and any part of equipment or load. For live lines rated above 50 kV and up to and including 345 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated above 345 kV and up to and including 750 kV; Maintain a minimum distance of 16 ft between live lines and any part of equipment or load. Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Confined Spaces	• Comply with LIR 402-810-01.0, Confined Spaces. • No entry into a confined space is allowed until the space has been evaluated by ESH-5. • All confined spaces must be labeled in accordance with LIR 402-810-01.0. • Only personnel who have received training approved by LANL ESH-13 may enter a confined space or serve as an entry supervisor.
Fall from Ladder	• Ladders will be inspected before the first use of the day. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". • Only commercially manufactured ladders will be used. • Ladder use will conform to 29 CFR 1926.1053, Ladders.

Will task affect other LANL operations, employees, or tasks? Yes_____ No__X__

Attachment 3. Other Monitoring

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Combustion gases from internal combustion engine, oxygen deficiency.	MSA 360 or equivalent	Monitor prior to entry into non-permit confined space or excavation and intermittently during occupancy.	Prior to initial entry, intermittently during day, when a smell of IC engine exhaust is present. O2 < 19.5%, CO > 35 ppm, or combustible vapors > 10% of LEL.	Compliance with 29 CFR 1910.1000. Leave the excavation, relocate internal combustion (IC) engines downwind of excavation if possible, turn off unnecessary IC engines, prevent contaminated air from entering excavation. Notify ESH-5.
Excessive Noise	Type A Sound Level Meter	At various work locations if sound pressure levels are suspected of exceeding 82 dBA.	Ensure that all persons are identified that need to be enrolled in a hearing conservation program. Provides conservative action level to prevent overexposures.	Compliance with LIR 402-820-01.0 Noise and Temperature Stresses. Abate sound pressure levels, use hearing protectors, or restrict occupancy of area.

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Heat Stress	Ear-canal thermometer or oral thermometer Clock/watch with second hand or sphygmomanometer , or area heat stress monitor	At beginning of each rest period (immediately following each work period) monitor: radial pulse and ear canal temperature Monitoring frequency based on ambient air temperature for employees wearing breathable protective clothing: T ≥ 90°F every 45 to 60 - minutes T ≥ 85°F every 60 to 90 - minutes T ≥ 80°F every 90 to 120 - minutes 80°F Area Heat Stress Monitoring/ Document Action level exceeded: Adherence to Table 1, of the ACGIH-TLVs, worker weight and temperature taken at the beginning and end of each shift.	Monitoring will only be in effect if personnel are in PPE higher than Level D. Temperature: Core Body > 100.4 °F, Oral> 99.4 °F or Ear drum > 99.0 °F Heart Rate (measure ≥ 30-seconds): Initial > 110 beats per minute (bpm) or Recovery (3-min later) still ≥ 80 bpm **Rationale:** Potential for high heat levels during summer-time operations. Increased core body temp. is primary indicator of heat stress; increased heart rate is secondary indicator. Heart rate will not be used if a decontamination line is necessary due to time considerations removing PPE.	Shorten next work cycle by one third. If using an Area Heat Stress Monitor follow the guidelines in Table 1 of the ACGIH-TLVs for allowable work-rest regimen. LIR 402-820-01.0 Noise and Temperature Stresses

Los Alamos National Laboratory
CERRO GRANDE REHIBILITATION PROJECT (CGRP)
LEAD ABATEMENT PLAN

Project Name: Omega West Reactor (OWR) Decommissioning and Demolition Project

APPROVALS/CONCURRENCE

Signature	Name	LANL Group	Date
	Steve Mee	CGRP-D&D	08/07/02

CGRP-D&D Program Manager Approval

Signature	Name	LANL Group	Date
	Keith Rendell	CGRP-D&D	8-6-02

CGRP-D&D Project Leader Approval

Signature	Name	LANL Group	Date
	FOR Michael Dennis	CGRP-D&D HSR-5	7-23-02

CGRP-D&D HSR-5 Representative Approval

Signature	Name	LANL Group	Date
	Martin Peifer	CGRP-D&D HSR-1	7-31-02

CGRP-D&D HSR-1 Team Leader Approval

Signature	Name	Company	Date
	Mark Granus	W-F D&D, LLC	7/31/0

WD3, LLC Project Manager Approval

Signature	Name	Company	Date
	Tim Hogan	Coronado Wrecking & Salvage	8-8-2002

Coronado Wrecking & Salvage Manager or HS Representative Approval

Signature	Name	Company	Date
	Tad West	Southwest Abatement	7/22/02

Southwest Abatement Inc. Manager or HS Representative Approval

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurrence

Comments of the above reviewers have been incorporated as stipulated or resolved with written record and copy to the respective reviewer.

Plan Preparer	Signature	Company	Date	Mailstop	Phone
MARTY PRZEPIORSKI		WASHINGTON	7-18-02		505 780-0371

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1 Description

This Lead Abatement Plan provides Information concerning the technical approach to implementing the OSHA Construction Industry Lead Standard. Requirements of this Lead Abatement Plan supplements the SSHASP developed for the OWR D&D Project.

This task involves the removal of items that are painted with lead based paint from the Omega West Reactor. This work may involve use of scaffolding, tools or power tools. A crane or hoist may also be used. The primary lead control techniques will vary with the particular item to be removed. The Lead Competent Person (Tad West, Southwest Abatement) for this task will employ some or all of the following techniques as the situation dictates:

- Wet methods,
- Wrapping materials to be discarded in plastic,
- Respiratory protection,
- Needle guns, paint blister gun, or vacuum blasting,
- Use of a cutting torch or other devices to segment large items in order to facilitate removal,
- General room ventilation,
- Enclosures with Negative Air Machine (NAM),
- HEPA vacuums (lead paint dust and paint chips),
- Poly drop cloths beneath spot removals,
- Proper housekeeping in accordance with 29 CFR 1926.62(h).

2 Key Personnel Having Task-Specific H&S Responsibility

The key personnel for this task are listed in Section 1.2 of SSHASP for the Omega West Reactor.

3 Hazard Assessment

See Attachment 1.

4 Hazard Communication

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological properties of the chemicals that the lead abatement contractor will bring on-site. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will be provided during the project H&S briefing before the start of field operations. The information will also be reinforced during H&S tailgate sessions before the task is started and as necessary throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request.

This task possibly could require the use of surfactants, detergents or adhesives.

5 Site Control

Workers shall work in groups of at least two people (buddy system) and have a means of direct communication or maintain visual contact at all times. To establish demarcated and posted lead work areas, the WD3 SSO may utilize freestanding stanchions, driven metal posts, or other means to hold up flagging, rope or other suitable materials.

Areas where lead painted surfaces are torched, cut or abraded will be posted in accordance with 29 CFR 1926.200 and 29 CFR 1926.62 (m) 2:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING.

All areas within 15 feet of the location where the work will be performed will be demarcated as lead work areas during torch work and for 10 minutes after work ceases. All surfaces within one-foot of the work and the floor under the work, if any, will be wiped with masslinn after the work has been completed. After 10 minutes have passed, the posting may be removed and other demolition work may proceed. At the discretion of the SSO or the IH, the distance may be increased.

6 Administrative and Engineering Controls

See Attachment 2.

The minimum engineering control will be to use a torch configured so that the user's face will be at least 30" away from the cut. Where feasible a drop cloth will be used to capture lead particles.

7 Medical/Radiological Surveillance

Lead

All personnel who enter active lead removal areas shall be enrolled in a medical surveillance program in accordance with 29 CFR 1926.62 (j).

Respirator

All workers required to wear a respirator shall be medically qualified to use the respirator in accordance with 1910.134 (e).

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82 decibels shall be enrolled in an audiometric testing program in accordance with LIR 402-820-01.0 Noise and Temperature Stresses

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

8 Exposure Monitoring

Exposure monitoring for lead shall be conducted in accordance with 29 CFR 1926.62 (d).

Initial Exposure Assessment

WD3 will perform an initial exposure assessment to confirm that workers are adequately protected from lead exposure. The personnel using a torch to cut surfaces contaminated by lead paint will wear full-face respirators equipped with P-100 cartridges during the assessment.

The outcome of the initial exposure assessment will determine which type of respirators is required for protection against lead.

Initial Monitoring

Air samples will be collected in accordance with OSHA ID 121.

The initial assessment will be conducted over 2 days. Each day, the following work shift samples will be collected as a minimum:

Days 1 and 2:

- Blank: 1
- Background (outside): 1
- At downwind boundary to lead regulated area: 1
- BZ per worker involved in the regulated area: 1

The average gross concentrations and standard deviations will be determined both with and without local exhaust ventilation. The 95th percentile of the average gross concentrations also will be determined. The results will be provided in writing to the employees, the employer and the ESH-5 representative.

The PEL will be adjusted, if necessary, to account for an extended work shift.

Based on the initial assessment, use of respiratory protection will be required for workers that torch, abrade or cut lead painted surfaces under the following circumstances:

average concentration < PEL	Downgrade to half-face respirators with P-100 cartridges.
PEL < average concentration < 10 X PEL	Continue use of full-face respirators with P-100 cartridges.

Follow-up Lead Sampling

One day per month of follow up lead air sampling will be provided.

Other Monitoring

See Attachment 4.

9 Personal Protective Equipment (PPE)

Lead Regulated Areas: Minimum Requirements

Body/Torso: Disposable coveralls will be used for all work regulated lead areas other than torch work. Company issued flame retardant coveralls for torch work. Flame retardant coveralls will be laundered or replaced at least weekly. Protective clothing will be made of breathable fabric to reduce the potential for worker heat stress. If visibly contaminated with dust or paint chips, protective clothing will be HEPA vacuumed before it is removed.

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989) shall be worn unless full-face respirators are worn.

Feet: At all times during subject task, safety-toe work boots (compliant with ANSI Z41-1991) shall be worn.

Hands: Nitrile examination gloves. Outer work glove if doing work that may tear the nitriles.

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135) shall be worn if overhead hazard exists.

Respiratory Protection for work in a posted lead work area:

Concentration < 3 X PEL	Downgrade to half-face respirators with P-100 cartridges.
3 X PEL < Concentration < 10 X PEL	Continue use of full-face respirators with P-100 cartridges.

Ears: If necessary, plugs/muffs with sufficient NRR.

Other Work Areas

Body/Torso: At a minimum, all personnel shall wear long pants and shirt with sleeves (Level D PPE). All workers exposed to traffic shall wear reflective or high visibility warning vest/garment in-compliance with 29 CFR 1926.201.

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: persons handling materials coated with lead paint shall wear Leather or cotton work gloves.

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986 and 29 CFR 1910.135).

Respiratory: Not applicable.

Ears: If necessary, plugs/muffs with sufficient NRR.

10 Decontamination

Hand and face wash shall be available for all workers.

Hand-washing facilities also will be used to decontaminate personnel who work in a Lead Work Area. The facilities will be located in a portable trailer, which will be parked near the work area. The trailer will contain two sinks, a fresh water tank, hot water heater, wastewater collection tank, and easily cleanable floors and benches. Labeled plastic bins with covers will be used to separate protective clothing from street clothing. Hot water, soap, and towels will be provided. Hands and face will be washed before all breaks and at the end of the day.

11 Spill Containment Plans (task-specific)

See section 1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan. A HEPA filtered vacuum cleaner or masslinn will be used to clean up fine lead particles.

12 Emergency Plans (task-specific)

See section 1.4 of the SSHASP for the Project Emergency Action Response Plan.

13 Additional Instructions/Procedures (task-specific)

Spark/Flame permit shall be obtained prior to using a cutting/welding torch or any other flame producing equipment. An excavation permit will be obtained prior to commencement of excavation. WD3 will verify the LANL has isolated the structures and affected utilities from hazardous energy to the structure before proceeding.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Excavation (prior to first entry of the day)	Competent Person
Scaffolding (once erected, daily prior to each use)	Competent Person
Lead Work Area (prior to first entry of the day)	Competent Person
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and blood borne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee

INSPECTION REQUIREMENTS (Cont'd)	
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b)(2).	PMs, SSO or designee .
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
Operator - Daily	
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee

On-site Records will include the following.

Record/Form	Keep On-site
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

14 Training Requirements

Types of training: **R** = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	---
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
WD3 Hearing Conservation Program	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
Respiratory protection training & quantitative fit test, 29 CFR 1910.134 & WD3 Respirator Protection Program	C	All field personnel who grind or torch surfaces coated with lead paint.
Scaffold training per 29 CFR 1910.454	C&F	All field personnel who will work from scaffolding
Fall protection training per 29 CFR 1926.503	C&F	All field personnel who could have a 6' free fall while doing their work
Lead worker 29 CFR 1926.62 (l)	C	All field personnel who grind or torch surfaces coated with lead paint.
LIR 402-810-01.0 - Confined Spaces	C	All field personnel entering or supervising the entry of a confined space
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tagout for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060	C	All field personnel
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

15 Lead Plan Health and Safety Briefing Form

LEAD PLAN HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.: _____

Task: REMOVAL OF LEAD PAINTED MATERIALS Date: _____

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number

Signature Date

I acknowledge that I understand this Plan, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE

Attachment 1. Hazard Assessment.

Biological:

Bloodborne Pathogens	Bloodborne Pathogens - Occupational exposure to bloodborne pathogens while rendering first aid or CPR could result in life-threatening illness, HAR of negligible to minor.
Hanta Virus	Hanta Virus - Presence of rodent droppings/nests in or around site, and associated potential for Hanta virus illness is unlikely, HAR of negligible to minor.
Venomous Creatures	Insect/Snake Stings or Bites - Demolition work always presents a potential for encounters with insects or snakes. Severity of stings and bites is dependent upon insect/snake type and individuals tolerance/allergic reactions, HAR of negligible to minor.

Radiological Exposure:

Exposure to health hazards associated with the radiological contaminated items causing irreversible illness/injury may occur. HAR = negligible to minor

High Explosives:

Not applicable. High Explosive materials not identified in LANL Characterization Report as a COPC. HAR of negligible.

Lead Exposure:

Exposure to health hazards associated with the removal of lead painted items causing irreversible illness/injury is unlikely to occur. HAR = negligible to minor

Chemical Exposure:

Potential for exposure to the following chemical compounds/substances resulting in skin or eye irritation or minor injury is unlikely to occur or possibly could occur: detergents, surfactants, mastic remover and adhesives. HAR of negligible to minor.

Safety/Physical:

Scaffolding	Working on scaffolding could result in injury from falls or from dropped tools and materials.
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR = minor to serious.
Heat Stress	Exposure to warm/hot weather conditions (heat stress) resulting in reversible injury is unlikely to occur. HAR = minor.
Hoisting Equipment Failure	Failure of hoisting equipment, a crane or rigging could possibly occur resulting in injury or equipment damage, HAR of minor to serious
Falls From > 6 Feet	Falls from elevated work levels (> 6-feet above working surface, i.e., working on top of equipment) could possibly result in death. HAR = minor to serious
Fire During Routine Cutting/Burning	Fire hazard(s) associated with repair or routine cutting/burning operations could result in possible injury HAR = minor to serious.
Inadequate Illumination	Inadequate site illumination during low-light/night conditions could result in possible reversible injury. HAR = negligible to minor.

Lifting And Carrying	Lifting and carrying equipment and materials (ergonomic considerations) resulting in the possibility of reversible injury. HAR = negligible to minor.
Hazardous Energy	Pinching, crushing, electrocution from the sudden release of energy resulting in serious injury or death is possible but unlikely. HAR = minor to serious
Skin Puncture/Wounds	Skin puncture/wounds, and/or electrocution from mishandling of or use of defective hand and power tools/equipment resulting in possible reversible injury. HAR = negligible to minor.
Flying Debris	Struck by Flying Debris while completing the scope of work is possible but unlikely to occur causing irreversible injury. HAR = negligible to minor.
Lightning	Struck by lightning while working outdoors is unlikely to occur but could occur resulting in irreversible injury or death. HAR = minor to serious.
Heavy Equipment	Struck or run over by heavy equipment resulting in serious injury or death is possible but unlikely. HAR = minor to serious.
Transportation Accident	Transportation accidents in the parking lot or on the road possibly could occur or is unlikely to occur resulting in reversible injury. HAR = negligible to minor
Unsanitary Work Conditions	Unsanitary working conditions (i.e., site sanitation/housekeeping) could possibly result in serious injury/illness or death. HAR = minor to serious
Slips Trips Falls	Walking on terrain in/around work site where slips, trips, falls could result in possible reversible injury. HAR = minor.
Energized Equipment	Working with/around electrically energized equipment (generators) could possibly result in irreversible injury or death. HAR = minor to serious.
Confined Space	Entry into a confined space possibly could be required. Unauthorized entry into confined spaces can result in irreversible injury or death, HAR of minor to serious.
Excessive Noise	Exposure to excessive noise associated with the use of generators/heavy equipment is unlikely to occur contributing to irreversible injury; HAR of negligible to minor.
Fall from Ladder	A fall from a ladder possibly could occur resulting in irreversible injury. HAR of moderate.

Attachment 2: A & E Controls

Applicable LANL LIRs:

LIR 402-10-01.4	Hazard Analysis and Control for Facility Work,
LIR 402-860-01.0	Lockout/Tagout for Personnel Safety
LIR 402-810-01.0	Confined Spaces
LIR 402-880-01.1	Excavation/Soil Disturbance Permit Process.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne pathogens	Avoid contact with bodily fluids when performing CPR or first aid. Use bloodborne pathogen kit when rendering first aid and micro-shield when performing CPR. Report all exposures to SSO and PM immediately and seek medical attention. Comply with Subcontractor's Bloodborne Pathogens Program.
Hanta Virus	Look for and avoid rodent droppings and nests. Notify JCNNM for proper disinfection if the droppings/nests must be disturbed to complete the work.
Venomous creatures	Avoid contact with insects and snakes. Inform SSO or PM if you are allergic to insect stings/bites. Use insect repellants.
Radiological Contamination	
Contamination exposure	
Lead	
Lead exposure	Removal of the lead painted items shall be in accordance with this THA. HEPA equipped equipment shall be used to pick up paint chips. Abatement workers and supervisor shall have training as specified in 29 CFR 1926.62 (l). Wear PPE as specified in this THA. Remove items in a fashion that does create airborne lead. Collect personal air samples to verify adequate removal method.
Chemical	
Chemical exposure	Proper storage of chemical shall be required. Clean up any spill as soon as possible. Use proper bonding as required when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals.
Physical/Safety	
Scaffolding Mishap	Inspection before the first use of the day by a competent person. Compliance with 29 CFR 1926 subpart L, Scaffolds.
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.
Heat Stress	Inform personnel of signs and symptoms of heat stress. If needed, appropriate exposure monitoring and work regime will be implemented to allow for work breaks so personnel may cool down, and take in fluids as necessary. Refer to HASP and the LIR 402-820-01.0 Noise and Temperature Stresses.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, *DOE/ID-10500*) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Falls from > 6 feet	While working on the roof or if workers are exposed to any other fall hazard >than 6', conventional fall protection will be provided. As a minimum, fall protection shall include, full body harness with attaching lanyard while leading edge work is being performed. Fall protection will be in accordance with 29 CFR 1926, Subpart M.
Fire during routine cutting/burning	Compliance with 29 CFR 1926 Subpart F and 1926.150 and 151, as applicable. Fire extinguishers shall be maintained and readily accessible on site and ready for use at all times. Typical size/type will be 10 lb. ABC multipurpose dry-chemical or equivalent. A LANL spark/flame permit shall be issued prior to using any flame/spark producing equipment. A trained fire watch shall be used at all times during cutting and welding.
Inadequate illumination	Compliance with 29 CFR 1926.26 and 1926.56 for required illumination levels. General construction areas require a minimum of 5 foot-candles illumination.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tagout Program.
Skin puncture/wounds	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated.
Flying debris	Keep unauthorized personnel away from demolition area. Demolish buildings in a controlled fashion. Wear PPE specified in Sections 8 of the Lead Plan.

ADMINISTRATIVE and ENGINEERING (A & E) CONTROLS	
Hazard	**A&E Control**
Physical/Safety (Cont'd)	
Lightning	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Unsanitary work conditions	Compliance with OSHA housekeeping standards [29 CFR 1926.25 and 250 (c)]. As necessary, subcontractor to provide and maintain sanitary potable water supply and portable toilet facilities at clean site location (29 CFR 1926.51). Project personnel will also be advised of practicing good personal hygiene.
Slips trips falls	Use good housekeeping on-site and minimize threat of slick surfaces. If necessary, tripping hazards will be marked to make them more visible.
Energized equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site
Confined Spaces	• Comply with LIR 402-810-01.0, Confined Spaces. • No entry into a confined space is allowed until the space has been evaluated by ESH-5. • All confined spaces must be labeled in accordance with LIR 402-810-01.0. • Only personnel who have received training approved by LANL ESH-13 may enter a confined space or serve as an entry supervisor.
Fall from Ladder	• Ladders will be inspected before the first use of the day. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". • Only commercially manufactured ladders will be used. • Ladder use will conform to 29 CFR 1926.1053, Ladders.

Will task affect other LANL operations, employees, or tasks? **Yes**_____ **No** **X**

Attachment 3. Other Monitoring

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Combustion gases from internal combustion engine, oxygen deficiency.	MSA 360 or equivalent	Monitor prior to entry into non-permit confined space or excavation and intermittently during occupancy.	Prior to initial entry, intermittently during day, when a smell of IC engine exhaust is present. O2 < 19.5%, CO > 35 ppm, or combustible vapors > 10% of LEL.	Compliance with 29 CFR 1910.1000. Leave the excavation, relocate internal combustion (IC) engines downwind of excavation if possible, turn off unnecessary IC engines, prevent contaminated air from entering excavation. Notify ESH-5.
Excessive Noise	Type A Sound Level Meter	At various work locations if sound pressure levels are suspected of exceeding 82 dBA.	Ensure that all persons are identified that need to be enrolled in a hearing conservation program. Provides conservative action level to prevent overexposures. LIR 402-820-01.0 Noise and Temperature Stresses	Compliance LIR 402-820-01.0 Noise and Temperature Stresses. Abate sound pressure levels, use hearing protectors, or restrict occupancy of area.

Hazardous Condition / Substance	Instrument	Location and Frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Heat Stress	Ear-canal thermometer or oral thermometer Clock/watch with second hand or sphygmomanometer, or area heat stress monitor	At beginning of each rest period (immediately following each work period) monitor: radial pulse and ear canal temperature Monitoring frequency based on ambient air temperature for employees wearing breathable protective clothing: T ≥ 90°F every 45 to 60 - minutes T ≥ 85°F every 60 to 90 - minutes T ≥ 80°F every 90 to 120 - minutes 80°F Area Heat Stress Monitoring/ Document Action level exceeded: Adherence to Table 1, of the ACGIH-TLVs, worker weight and temperature taken at the beginning and end of each shift.	Monitoring will only be in effect if personnel are in PPE higher than Level D. Temperature: Core Body > 100.4 °F, Oral> 99.4 °F or Ear drum > 99.0 °F Heart Rate (measure ≥ 30-seconds): Initial > 110 beats per minute (bpm) or Recovery (3-min later) still ≥ 80 bpm Rationale: Potential for high heat levels during summer-time operations. Increased core body temp. is primary indicator of heat stress; increased heart rate is secondary indicator. Heart rate will not be used if a decontamination line is necessary due to time considerations removing PPE.	Shorten next work cycle by one third. If using an Area Heat Stress Monitor follow the guidelines in Table 1 of the ACGIH-TLVs for allowable work-rest regimen. LIR 402-820-01.0 Noise and Temperature Stresses

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
[redacted]CONTRACT 41968-000-02-CJ

87 18.021.01 SSHASP - Acknowledgement Forms
SSHASP THA Tent Eviction & Dismantlement
(Addendum) 17
Provided By Document Controls

Basic Type: Proj. Mgt.____ Proj. Tech. ✓ Confidential____ Proposals____

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Los Alamos National Laboratory
CERRO GRANDE REHIBILITATION PROJECT (CGRP)
SITE- SPECIFIC HEALTH &SAFETY PLAN (SSHASP)
Addendum

Project Name: **Omega West Reactor (OWR) D&D Project**

The LANL D&D Health & Safety Plan (DHASP) and contract provisions supplement this SSHASP and shall be complied with as applicable. Copies of the DHASP and this SSHASP are to be readily accessible for review onsite by individuals who may be exposed to hazards resulting from work conducted under the scope of this SSHASP. Personnel performing work under the scope of this SSHASP are required to sign the SSHASP acknowledgement page signifying that they are aware of the hazard information documented herein. This acknowledgement will also signify that they will abide by the requirements of this plan to eliminate or lessen the risk of injury or illness from exposure to the hazards identified

This addendum to the OWR D&D Project SSHAP incorporates the Task Hazard Analysis (THA) for the erection and dismantlement of the containment tent.

APPROVALS/CONCURENCE

Signature	Name	LANL Group	Date
	Stephen Mee	CGRP-D&D	10/24/02

CGRP-D&D Program Manager Approval

Signature	Name	LANL Group	Date
	Keith Rendell	CGRP-D&D	10/24/02

CGRP –D&D Project Leader Approval

Signature	Name	LANL Group	Date
	Michael Dennis	CGRP-D&D	10/25/02

CGRP- D&D HRS 5 Representative Approval

Signature	Name	LANL Group	Date
	Martin Peifer	CGRP-D&D	

CGRP- D&D HSR 1 Team Leader Approval

for Mark Granus W-F D&D,LLC 24 Oct 02

Signature Name Company Date

Washington – Framatome ANP DE&S Project Manager Approval

Signature Name Company Date

Manager or HS Representative Approval/Concurence

Signature Name Company Date

Manager or HS Representative Approval/Concurence

Signature Name Company Date

Manager or HS Representative Approval/Concurence

Signature Name Company Date

Manager or HS Representative Approval/Concurence

Signature Name Company Date

Manager or HS Representative Approval/Concurence

Marty L. Przybyski WGII October 24, 2002 (505) 780-0371

Plan Preparer Signature Company Date Phone

2.7 TASK HAZARD ANALYSIS (THA)

PROJECT NAME: OWR D&D

TASK 7: CONTAINMENT TENT ERECTION AND DISMANTLEMENT

ESTIMATED DATE(S) & DURATION OF WORK: OCTOBER 2002- MAY 2003

2.7 TASK DESCRITION

Task 7 involved the erection and dismantlement of the Omega West Reactor containment tent. The containment tent will be erected prior to the start of the reactor internals removal, and will remain in place throughout the bioshield demolition.

Upon completion of the OWR demolition, the containment tent components will be surveyed and disposed of in accordance with the Waste Management Plan.

2.7.1 KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.2 of the SSHASP.

2.7.2 HAZARD ASSMENT

Biological:

Blood borne Pathogens	HAR of negligible to minor. See THA-1, section 2.1.2
Hanta Virus	HAR of negligible to minor. See THA-1, section 2.1.2
Venomous Creatures	HAR of negligible to minor. See THA-1, section 2.1.2

Radiological Exposure:

External Radiation Exposure	Exposure to external ionizing radiation fields in radiation areas and high radiation areas could exceed LANL's administrative action levels. HAR of minor to serious
Exposure to loose contamination	Exposure to loose radioactive contamination could result in skin contamination or internal depositions of radioactive materials. HAR of minor to serious.

Chemical Exposure:

Common construction site chemicals	HAR of negligible to minor. See THA-1, section 2.1.2

Personnel Safety:

Scaffolding, scissor lifts and boom lifts	Working on elevated work platforms could result in injury from falls or from dropped tools and materials. HAR of minor to serious.
Excessive Noise	Exposure to excessive noise associated with the use of tool and equipment, which could contribute to irreversible hearing loss, is unlikely to occur. HAR of negligible to minor.
Unstable Loads	Exposure to unstable loads while the containment is being erected or dismantled is unlikely to occur but possibly could occur resulting in serious injury or death. HAR of minor to serious.
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR of minor to serious.
Cranes	Crane mishaps could possibly occur resulting in serious injury or equipment damage. HAR of minor to serious.
Hoisting Equipment Failure	Failure of hoisting equipment, or rigging could possibly occur resulting in injury or equipment damage. HAR or minor to serious.
Falls from > 6 feet	Falls from elevated work areas (>6 feet above working surface) could possibly result in serious injury or death. HAR of minor to serious.
Fire During Routine Cutting/Burning	Fire hazard(s) associated with routine cutting/burning operations could result in injury. HAR of minor to serious.
Inadequate Illumination	HAR of negligible to minor. See THA-1, section 2.1.2
Lifting and Carrying	HAR of negligible to minor. See THA-1, section 2.1.2
Hazardous Energy	HAR of negligible to minor. See THA-1, section 2.1.2
Skin Puncture/ Wounds (hand and power tools)	HAR of negligible to minor. See THA-1, section 2.1.2
Flying Debris	Struck by flying debris, which would cause irreversible injury, while completing the scope of work is unlikely to occur. HAR of negligible to minor
Lighting or Other Severe Weather	HAR of negligible to minor. See THA-1, section 2.1.2
Heavy Equipment	Struck by or run over by heavy equipment resulting in serious injury or death is possible but unlikely to occur. HAR of minor to serious.
Transportation Accident	HAR of negligible to minor. See THA-1, section 2.1.2
Slips, Trips and Falls	Walking on terrain in/around work site where slips, trips, falls could result in possible reversible injury. HAR of minor.
Energized Equipment	Working with/around electrically energized equipment could possibly result in irreversible injury or death. HAR of minor to serious.
Suspended Power Lines	HAR of minor to serious. See THA-1, section 2.1.2
Fall From Stairs and Ladders	HAR of moderate. See THA-1, section 2.1.2

2.7.3 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological propertities of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will also be reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request. It is anticipated that this task may involve the use of petroleum-based fuels, lubricants or hydraulic fluids.

2.7.4 SITE CONTROL

Radiological work at the site will be controlled by Radiation Work Permits. Workers shall work in groups of at least two people (buddy system) and have a means of direct communication or maintain visual contact at all times. The Radiological Control Areas (RCAs) will be controlled in accordance with 19 CFR 835 and LIR402-700-01.1, Occupational Radiation Protection Requirements.

Radiation Area: A radiation area is any area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent in excess 5 mR in one hour at 30 cm from the radiation source or from any surface that the radiation penetrates.

High Radiation Area: A high radiation area is any area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent in excess 100 mR in one hour at 30 cm from the radiation source or from any surface that the radiation penetrates.

AirBorne Radioactivity Area: an airborne radioactivity area in any area where the concentration of airborne radioactivity, above background exceeds or is likely to exceed 10% of the Derived Air Concentration (DAC) values. DAC values are specified in 10 CFR 835

Contamination Area: A surface contamination area is a radiological area where the surface contamination levels are greater than 1000 dmp/100 cm2

2.7.5 ADMINISTRATIVE and ENGINEERING CONTROLS

Applicable LANL LIRs:

LIR 402-702-01.1 Occupational Radiation Protection
LIR 402-10-01-4 Hazard Analysis and Control for Facility Work
LIR 402-820-01.0 Noise and Temperature Stresses
LIR 300-00-01.3 Safe Work Practices
LIR 402-1110-01.1 Forklifts and Powered Industrial Trucks

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne Pathogens	See THA-1 section 2.1.5
Hanta Virus	See THA-1 section 2.1.5
Venomous Creatures	See THA-1 section 2.1.5
Radiological	
External Radiation Exposure	Plan radiological work, perform mock up practice runs for high dose activities, use shielding, distance and time constraints to maintain dose ALARA. Comply with RWP requirements
Exposure to loose contamination	Specify respiratory protection when needed, use local exhaust ventilation or construct containment around the work to manage fugitive releases, maintain removable contamination levels in work area at the lowest feasible values. Comply with RWP requirements
Chemical	
Chemical Exposure	The use of hazardous materials shall be avoided whenever possible. Proper storage of chemicals shall be required. Clean up spill as soon as possible. Use proper bonding, as required, when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals. Material Safety Data Sheets (MSDS) are available for all chemicals used in the project operations. If necessary, protective clothing such as boots, shoe covers, and gloves will be worn to minimize skin contact.
Personnel safety	
Scaffolding, Scissor lifts and boom lifts	All scaffolding used on the project shall be erected and used in accordance with requirements specified in 29 CFR 1926 Subpart L. Workers erecting scaffolding shall be trained by the vendor or other competent entity. Additionally, any involved persons must read and be familiar with these requirements. All scaffolding should have inspection forms attached or be posted within a reasonable distance of the scaffolding. A competent person shall inspect all scaffolds prior to use each day. Personnel using scissor lifts and boom lifts shall be trained on the use of that specific equipment.

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Controls**
Personnel safety	
Excessive Noise	Whenever voice(s) must be raised to communicate between two or more persons located < 3 feet of each other, the noise level is likely exceeding the action level; designate areas requiring hearing protection; conduct noise monitoring in accordance with LIR 402-820-01.0 Noise and Temperature Stresses.
Unstable Loads	Keep unauthorized personnel away for the site while the buildings are being lifted and loaded. No personnel shall be allowed under a raised load. All personnel shall stay away for any item that is under tension that could become a projectile due to sudden release of tension.
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.
Cranes	• A suitably qualified crane operator or a trainee under the direct supervision of a qualified operator shall only operate all facility cranes. • The rated load capacity of any lifting device shall not be exceeded at any time. The operator shall inspect lifting devices prior to use. Any deficiencies that would create an unsafe condition shall be corrected prior to use of the equipment. Current load testing documentation is required for all lifting devices and shall be maintained in project files. All cranes shall have a current annual inspections and be inspected daily by a competent person. All facility cranes shall be maintained in accordance with manufacturer requirements.

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Control**
Personnel Safety	
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. · A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. · Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Falls from >6 feet	While working on elevated surfaces, workers who are exposed to any other fall hazard >than 6', conventional fall protection will be provided. As a minimum, fall protection shall include, full body harness with attaching lanyard while leading edge work is being performed. Fall protection will be in accordance with 29 CFR 1926, Subpart M.
Fire During Routine Cutting/Burning	Compliance with 29 CFR 1926 Subpart F and 1926.150 and 151, as applicable. Fire extinguishers shall be maintained and readily accessible on site and ready for use at all times. Typical size/type will be 10 lb. ABC multipurpose dry-chemical or equivalent. A LANL spark/flame permit shall be issued prior to using any flame/spark producing equipment. A trained fire watch shall be used at all times during cutting and welding
Inadequate Illumination	See THA-1, section 2.1.5.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous Energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tag out Program.

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazards	**A&E Controls**
Personnel Safety	
Skin Punctures/ Wounds (hand and Power Tools)	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be kept in a designated storage area, shall be maintained in a safe condition, and shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated. Proper personal protective equipment shall be used to provide adequate protection while using tools.
Flying Debris	Keep unauthorized personnel away from demolition area. Demolish buildings in a controlled fashion. Wear PPE specified in Sections 2.3.8 of this THA.
Lightning or Other Severe Weather	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building. No operations involving work in high contamination areas or with components/materials >1 rem/hr contact dose will be performed during a tornado or storm watch (or warning) as declared by the Laboratory or the National Weather Service.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Slips, Trips and Falls	Use good housekeeping on-site and minimize threat of slick surfaces. If necessary, tripping hazards will be marked to make them more visible.
Energized Equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Control**
Personnel Safety	
Suspended Power Lines	Maintain the following minimum distances for stationary operations, as specified in 29 CFR 1926.550(a)(15)(i) and (ii): For live lines rated < 50 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated > 50 kV; Maintain a minimum distance of 10 ft + 0.4 inches ($1/30^{th}$ foot) for each 1 kV over 50 kV or twice the length of line insulator but never less than 10 ft. Examples: voltages < 50 kV (10 ft. minimum), 345 KV (20 ft minimum), 750 kV (33 ft minimum). Maintain the following minimum distances for transit operations with no load and boom lowered, as specified in 29 CFR 1926.550(a)(15)(iii): For live lines rated < 50 kV; Maintain a minimum distance of 4 ft between live lines and any part of equipment or load. For live lines rated above 50 kV and up to and including 345 kV; Maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For live lines rated above 345 kV and up to and including 750 kV; Maintain a minimum distance of 16 ft between live lines and any part of equipment or load. Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
Falls From Stairs and Ladders	All stairways and ladders shall be kept clear and permit free passage of employees. When work must be performed or equipment must be used to restrict access, a second point of access shall be provided and used. All occupants must be notified in advance of any operation or change, which may affect personnel access. During the use of ladders, ensure that the load limits established for the ladder are not exceeded at any time. Prior to use of the ladder, visually check the ladder to assure proper operation and ensure it is free of damage. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". Only commercially manufactured ladders will be used.

2.7.6 MEDICAL/RADIOLOGICAL SURVEILLANCE

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

2.2.7 EXPOSURE MONITORING

Exposure monitoring for noise shall be conducted in accordance with the LIR 402-820-01.0 Noise and Temperature Stresses

Exposure monitoring for dust using a mini ram, to document that the action level of 2.5 mg/m^3 is not exceeded. This will be in accordance with the WD3 Industrial Hygiene Procedures Manual.

Hazardous Condition / Substance	Instrument	Location and frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Radiological	See the radiation work permit for this task, when developed.			
Heat Stress	See Section 2.1.7 of THA-1			
Cold Stress	See Section 2.1.7 of THA-1			
Excessive Noise	See Section 2.1.7 of THA-1			

27.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: As required by the RWP

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury. RWP may require additional hand protection

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: As required by the RWP.

Ears: If necessary, plugs/muffs with sufficient NRR.

2.7.9 DECONTAMINATION

All personnel who come in direct contact with radiological material will follow the instructions for personnel decontamination as directed by Radiological Controls.

27.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.7.11 EMERGENCY PLANS (task-specific)

See section 1.4 of this SSHASP for the Project Emergency Action Response Plan.

2.7.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

Spark/Flame permit shall be obtained prior to using a cutting/welding torch or any other flame producing equipment. An excavation permit will be obtained prior to commencement of excavation. WD3 will verify the LANL has isolated the structures and affected utilities from hazardous energy to the structure before proceeding.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Scaffolding (once erected, daily prior to each use)	Competent Person
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and bloodborne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b) (2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee

2.7 TASK HAZARD ANALYSIS (THA)

INSPECTION REQUIREMENTS	
Inspections	Inspector
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee
Forklift in accordance with 29 CFR 1910.178 before first use of the day.	PMs, User, SSO or designee

On-site Records will include the following

Record/Form	Keep On-site
DHASP	X
This SSHASP	X
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

2.7.13 TRAINING REQUIREMENTS

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	---
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
Scaffold training per 29 CFR 1910.454		All field personnel who will work from scaffolding

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.		
Training Requirement	**Type**	**Personnel to be Trained**
WD3 Confined Space Program	C	All field personnel entering or supervising the entry of a confined space
Fall protection training per 29 CFR 1926.503		All field personnel who could have a 6' free fall while doing their work
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tag out for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel
Forklift – per 29 CFR 1910.178 Powered Industrial Trucks	C	Forklift operator
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

2.7.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.: _____

Task: Containment Tent Erection and Dismantlement Date: 10-25-02

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number
MARTY L PAZYBYLSKI	SSO	WGI	190417

Signature _____ Date 10-25-02

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE
DANA WILLIAMS	WG11	178110	
Jonathon Coleman	WD3	190383	
JOHN CARLSON	WD3	190921	
JIM STAEHR	WD 3	190831	
SCOTT KERR	MOTA	190389	
Josh Bybee	JAKES	191792	
Matt Williams	Jake's	191796	
HAL RUTLAND	MOTA	190588	
Robert Livingston	MOTA	192794	
Shawn Laurent	MOTA	192795	
DAN DANSARD	MOTA	190586	
Adam Scott	Coronado Abatement	176367	
Nancy Vargas	Southwest Abatement	181351	
Floratino Stanley	Southwest Abatement	148146	
CABB HINKLE	SOUTHWEST abatement	187062	
Donahan Torivio	Coronado	170066	
Jay DiAngelo	SEC	193022	10/25/02
ELAINE BROWN	SEC	190385	10-25-02
D S HEICHMAN	SEC	190386	10-25-

2.7.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.: _____

Task: Containment Tent Erection and Dismantlement Date: 10-25-02

TA(s)/Location(s): 2

Conducted by:

Printed Name	Title	Employer or LANL Group	Z Number
MARTIN J PAZYBYLSKI	SSO	WCT	190412

Signature _____ Date 10-25-02

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE
Tom Lemmon	South West Mat.	192794	10/25/02
Michael Dennis	ASR-S/FWO	88554	10/25/02

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
SUBCONTRACT 41968-000-02-CJ

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Project Code: 26300 00

DOCUMENT DATE: 2-12-03 CATEGORY: SE

TO: Project File AUTHOR/ORIGINATOR: Marty Prysybski

TITLE/SUBJECT: SSHASP Addendum justification for Restart of OWR reactor component removal Operations

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Los Alamos National Laboratory

CERRO GRANDE REHIBILITATION PROJECT (CGRP)
SITE- SPECIFIC HEALTH &SAFETY PLAN (SSHASP)
Addendum

Project Name: Omega West Reactor (OWR) D&D Project

The LANL D&D Health & Safety Plan (DHASP) and contract provisions supplement this SSHASP and shall be complied with as applicable. Copies of the DHASP and this SSHASP are to be readily accessible for review onsite by individuals who may be exposed to hazards resulting from work conducted under the scope of this SSHASP. Personnel performing work under the scope of this SSHASP are required to sign the SSHASP acknowledgement page signifying that they are aware of the hazard information documented herein. This acknowledgement will also signify that they will abide by the requirements of this plan to eliminate or lessen the risk of injury or illness from exposure to the hazards identified

This addendum to the OWR D&D Project SSHAP Provides justification for restart of OWR reactor component removal operations per recommendations made by DOE at the meeting with SABM on Friday November 15, 2002. This SSHASP follows the guidelines for document preparation under the requirements in 10 CFR 835.

APPROVALS/CONCURENCE

Signature	Name	LANL Group	Date
Per Phone For	Stephen Mee	CGRP-D&D	12-18-02

CGRP-D&D Program Manager Approval

Signature	Name	LANL Group	Date
	Keith Rendell	CGRP-D&D	12-18-02

CGRP –D&D Project Leader Approval

Signature	Name	LANL Group	Date
	Michael Dennis	CGRP-D&D	12-18-02

CGRP- D&D HRS 5 Representative Approval

Signature	Name	LANL Group	Date
	Martin Peifer	CGRP-D&D	12/18/02

CGRP- D&D HSR / Team Leader Approval

Signature	Name	Company	Date
	Mark Granus	W-F D&D,LLC	12/12/12

Washington – Framatome ANP DE&S Project Manager Approval

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Plan Preparer	Signature	Company	Date	Phone
Marty L. Przybyski		WGII	December 12, 2002	(505) 780-0371

Los Alamos
NATIONAL LABORATORY

memorandum

Facility and Waste Operations
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From/MS: Dennis McLain, FWO-WFM, MS J593
Phone/Fax: 5-5099/Fax 5-5242
Symbol: FWO-WFM 02-198
Date: November 26, 2002

SUBJECT: ADDENDUM TO CERRO GRANDE REHABILITATION PROJECT (CGRP) SITE-SPECIFIC HEALTH & SAFETY PLAN (SSHASP): OMEGA WEST REACTOR (OWR) D&D PROJECT

The attached Addendum to the *Cerro Grande Rehabilitation Project (CGRP) Site-Specific Health & Safety Plan (SSHASP: Omega West Reactor (OWR) D&D Project* provides justification for restart of OWR reactor component removal operations per recommendations made by DOE at the meeting with SABM on Friday November 15, 2002. This SSHASP follows the guidelines for document preparation under the requirements in 10 CFR 835.

Based on current modeling, the facility is being conservatively assumed to contain Hazard Category 2 quantities (mainly H-3 and Co-60, see attached). Our characterization data, based on neutron activation analysis, is in the final stages of generation. We anticipate that this data will receive a quality assurance review by the contractor and then be forwarded to LANL for independent review no later than December 16th, 2002. Upon completion of this review cycle, FWO-CGRP will provide notification to your office regarding updated MAR values at the OWR facility as soon as it is made available.

Please note that all reactor vessel components are in a non-dispersible solid metallic form. Therefore, there is not any significant risk to the public or on-site workers from dispersion of contaminants (both radiological and beryllium). Additionally, disposing of this waste at TA-54 Area G eliminates the radiological hazard, as it will be placed underground.

With your approval, we will resume all D&D activities on the TA-02-1 complex utilizing the controls detailed in Section 3 of the attachment. These items are to be considered authorization basis controls and the programs/procedures used to ensure their implementation will be verified by the Facility Manager, or his designee prior to resumption of these D&D activities.

This memo and the attached addendum will be located under the approval page of the SSHASP for Omega West Reactor D&D Operations. If you have any questions please call me at 665-5099.

DS:ct

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[redacted]

Restart Justification For Omega West Reactor Component Removal Operations:
Addendum to Site Specific HASP, 11/26/02

Background:
On November 15, 2002 a Stop Work order was issued for Decommissioning operations at the Omega West Reactor (OWR). The OWR facility was downgraded to Radiological status in 1995, however, upon review of current characterization data, FWO-CGRP personnel decided that the Material At Risk (MAR) for the facility likely exceeded the *Category 3 Threshold.*

Description of OWR Component Removal Operations:
Component removal operations will be controlled with the following Work Instruction Packages, which are performed in the order as listed:

8.0 Remove Reactor Tank Lid & 10.0 Install Shielded Work Platform
This procedure involves disconnecting all ancillary equipment from the Reactor Tank Lid (i.e., Sample Changer/Hydraulic Rabbit, Access Ports, Vertical Ports,) installation of the Shielded Work Platform (SWP), and Reactor Tank Lid Removal. Equipment utilized under this procedure will include pneumatic hand tools, and a Plasma Arc Torch Cutter (PAT).

9.0 Remove Internal Vertical Equipment, Bridges and Fuel Racks
This procedure involves removal and size reduction of the two vertical port tubes, eight extension rods, upper and lower bridges and the fuel racks. Approximately 24 PAT cuts are planned, and all cuts will be at least 6 vertical feet away from the aluminum/steel frame of the Beryllium Reflector (BeR).

12.0 Remove Beam Port Liners
Approximately 6 PAT cuts will be utilized to remove the stainless steel and aluminum beam port liners. These operations will be performed outside the reactor vessel on the outside of the concrete bioshield.

11.0 Remove Thermal Column Lead Gamma Shield & Beryllium Assembly
Beryllium Reflector Removal:
The BeR consists of twenty-one 4"x4"x8" beryllium bricks mounted in a nickel plated mild steel and aluminum framework that rests over row 6 of the bottom grid plate located on the West side of the reactor. The framework is fastened together with stainless steel socket head cap screws and the beryllium blocks are held in place with stainless steel dowel pins. The calculated weight of the BeR is 260 lbs. The BeR meets the requirements of a Beryllium Article as identified in LIR 402-560-01.0, therefore beryllium exposure is not a risk and beryllium worker qualifications are not required. Removal of the BeR will involve mechanical extraction of 3 socket head cap screws along the top west side of the upper reactor grid box. The entire BeR assembly will be removed and packaged into a specially designed overpack container for High Activity Tritium waste (as required by the TA-54 WAC). The overpack container will then be placed in a shield cask for transport.

[redacted]

Thermal Column Lead Gamma Shield Removal:
The lead gamma shield is an aluminum-clad frame approximately 3"x30"x35", filled with lead and weighs approximately 1,000 pounds. There are two lifting lugs with ¾" diameter holes located at the top of the frame. This component is not secured; therefore, it will be lifted out.

14.0 Remove and/or Size Reduce and Package the Upper Reactor Grid Box and Lower Base Assembly
This procedure involves removal and/or size reduction and packaging of the upper reactor grid box and the lower reactor base (casting) assembly. Approximately 16 PAT cuts are planned to remove these components.

13.0 Section, Remove, and Package the Thermal Column Head &15.0 Removal of Lead Brick and Graphite from Thermal Column and Shield Door
The Thermal Column Head removal procedure includes the sectioning of the thermal column head into two pieces, removing them from the reactor tank and packaging them into a waste container. Sectioning operations will utilize a diamond embedded wire cutting device. No PAT operations are planned. The remaining thermal column components (lead and graphite bricks) will then be removed.

1. Concerns for the Public:
The major contaminants of concern to the public are H-3 and Co-60. The potential for contaminant dispersal is negligible due to the following considerations:

- The reactor vessel is equipped with 2 parallel 6,000 cfm HEPA ventilation units to achieve an estimated max. flow of 8,000 cfm.
- A third 6,000 cfm HEPA unit will serve as a backup as needed to boost ventilation.
- All HEPA unit intake manifolds (located in the reactor vessel) are equipped with spark arresting screens.
- Tritium dispersal from the BeR requires heating the beryllium to very high temperatures (data available upon request). PAT cutting operations will not take place within 6 vertical feet of the BeR steel top cover.
- No combustibles will be introduced into the vessel during cutting operations.
- Operations specific to BeR removal will not involve any spark/flame producing operations.
- PAT cutting locations have been carefully planned so that these operations are minimized and when possible conducted away from highly activated components (thus reducing the potential for radionuclide dispersal within reactor vessel).
- The components being cut are intrinsically stable solid metal, in a non-dispersible form. The ventilation system is the control for removing any airborne particulates.
- Conservative analysis for unmitigated dose to the public during cutting operations is estimated to be 0.949 rem (Co-60).

- A biological shield of high-density concrete in an irregular octagonal shape surrounds the stainless steel reactor vessel. Additionally, a five-foot thick concrete-earth wall separates the reactor vessel building from other remaining TA-2 structures. Both concrete structures provide protection to the reactor vessel, and the MAR contained therein, in the event of a fire.

Estimated MAR Remaining at the OWR

	Estimated H-3 MAR	Estimated Co-60 MAR
BeR[(a)(b)(c)]	101,500 to 256,000 Ci	679 to 5,720 Ci
Other Components[(b)(d)]	1 to 3 Ci	<190,000 Ci[(e)]

a) Recent modeling from neutron activation analysis determined that the H-3 amount contained in the BeR is much closer to 101,500 Ci, instead of the previously reported 256,000 Ci.
b) This radiological data is considered preliminary and is in final stages of generation.
c) This value is the Category 2 Threshold
d) Other Mixed Activation Products (MAP) such as Fe-55 and Ni-63 are anticipated. However, Co-60 is considered to be the most significant external dose contributor.
e) Tritium does not readily offgas from beryllium under STP conditions, therefore this item is considered intrinsically stable. The Co-60 within the BeR is bound within the stainless steel pins, screws and framework.

2. Worker Safety Associated with Cutting:

Cutting operations on activated components will take place using industry standard remote handling tools. The worker will be isolated from radiological hazards via a shielded work platform equipped with multiple steel plates and video equipment. The worker inserts hands through an adjustable opening in order to manipulate the remote handling tools. The reactor vessel HEPA ventilation system will ensure negative ventilation is maintained during all operations associated with component removal. This system will pull airborne radioactive particulates out of the vessel through the external HEPA ventilation system.

A representative from the HSR-12 Radiological Engineering Team has been involved with several aspects of work planning for the entire project. Additionally, HSR-12 personnel have been critical members of all ALARA Activity Reviews performed for OWR D&D operations. The ALARA review for removal of OWR internals estimates that the overall collective external dose for completion of these series of tasks is 12.8 person-rem. Workers will also utilize video systems for remote handling operations, which will reduce worker exposure significantly.

3. Specific Controls:

- Fire loading around the reactor vessel will be minimized.
- Time to remove reflector will be minimized to the greatest extent possible.
- All operations not associated with Hot Picks (i.e., BeR removal) will be shut down during these operations.
- The BeR will be disposed of at TA-54, Area G expediently (i.e., after packaging operations are complete).

- In the event of ventilation system failure, all work will immediately cease; workers will seal the reactor vessel (close opening on SWP) and exit the facility.
- All lifting and rigging devices will be inspected and certified for the load in which they are utilized to lift.
- In addition to the SWP, lead blankets will be utilized throughout operations to help maintain worker dose ALARA.
- RCTs shall be present during all component removal operations.
- All non-essential personnel will be restricted from entering the work area and the TA-2 site during Hot Pick operations (such as the BeR).
- A video inspection for signs of cracks or damage will be conducted for components equipped with lifting lugs prior to lifting operations (such as the BeR). If damage is suspected, then a safe alternative mode of rigging will be utilized.
- Workers will wear alarming dosimeters.

4. Disposition of Components Causing Category 3 Threshold Exceedence:
FWO-CGRP commits to removal and disposition of all necessary components, which collectively cause the Category 3 Threshold to be exceeded, by April 10, 2003. The operations for reactor vessel component removal are currently conservatively identified as Hazard Category 2 based on modeling. The controls specified in this document are adequate to cover this limited time operation and the potential for dispersal of radionuclides is considered very minimal. Further, we are confident that the reactor vessel components will be removed and disposed of at TA-54 well before the April 10, 2003 deadline (based on shipping cask availability).

5. Reactor Vessel Component Packaging, Transportation, & Disposal:
The majority of reactor components will be segregated as NRC Class B/C waste, which will be destined for disposal on-site at TA-54 Area G. All packaging and transportation operations will be conducted in accordance with Department of Transportation (DOT) regulations. We anticipate approximately 3 cask shipments that could exceed the DOT two-meter dose requirement (The BeR and approximately 2 Activated Component shipments). Therefore, such shipments will be conducted under the Rolling Work Zone authorization with BUS-4. Listed below are the 3 distinct waste streams anticipated from this operation:

Beryllium Reflector

The BeR is expected to have a contact dose reading of 1,100 R/hr, however, the combination of special packaging and the shield cask should reduce this dose rate appreciably to within DOT limits. Since the H-3 levels slightly exceed the current Area G SAR package limit of 100,000 Ci, we request special relief from this requirement since immediate shaft disposal will be provided at TA-54. The BeR will be packaged in accordance with the High Activity Waste requirements specified in the LANL H-3 WAC for Area G.

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Construction Activities within containment tent or within 25' of the reactor vessel

1. Install Lighting in Containment tent (Man-lift required)

Pre-manufactured light stringers will be installed in the overhead area of the tent. The lights are UL approved 110V lights. Each lamp is protected with a wire or plastic cage to prevent the bulb from coming in contact with any combustible material. The light stringers will be attached to the metal tent frame with plastic tie-wraps. The light stringers will be connected to a GFCI protected outlet.

Work will be performed using the Genie articulating boom lift, operating on with a single propane cylinder. Personnel operating the lift have received training and a pre-use inspection will be performed on the lift prior to use. A dedicated fire watch, with a 20 dry chemical fire extinguisher will be stationed in the work area during uses of the lift. Upon completion of the task the lift will be removed from the containment structure, to a distance greater than 25'.

2. Clean concrete floor & prepare floor for air pallets, e.g., lay down plates

A visual inspection of the floor will be conducted to determine if the floor need leveled prior to placing the metal plates. If it is determined that there are high spots in the floor, a hand held electric grinder with diamond concrete cutting /polishing disk will be used to smooth the floor. The personnel using the grinder will wear the proper PPE including, but not limited to, hardhat, faceshield and hearing protection. Dust generated during this operation will be collected with the use of a HEPA vacuum. The 4'x8'metal plates will be installed with the use of a small propane powered fork truck. Personnel operating the fork truck have received training and a pre-use inspection will be performed on the fork truck prior to use. A dedicated fire watch, with a 20 dry chemical fire extinguisher will be stationed in the work area during uses of the fork truck. Upon completion of the work the fork truck will be removed from the building to a distance greater the 25' from the tent structure.

3. Install and test HEPA ventilation units (man-lift required) outside west side of tent & ductwork inside tent. (mechanical joints no welding or cutting)

Work will be performed using the Genie articulating boom lift, operating on with a single propane cylinder. Personnel operating the lift have received training and a pre-use inspection will be performed on the lift prior to use. A dedicated fire watch, with a 20 dry chemical fire extinguisher will be stationed in the work area during uses of the lift. Upon completion of the task the lift will be removed from the containment structure, to a distance greater than 25'.

All duct joints will be connected with screws and/or duct tape. No hot work will be required to perform this work.

All personnel involved in this task will wear the proper PPE.

4. Remove steel plate from fuel pool (fork truck required) Decontaminate pool, which is located west of the Reactor vessel.

The removal of the steel plate over the fuel pool will require the use of the 5000 pound fork truck. Personnel operating the fork truck have received training and a pre-use inspection will be performed on the fork truck prior to use. A dedicated fire watch, with a 20 dry chemical fire extinguisher will be stationed in the work area during uses of the fork truck. Upon completion of the work the fork truck will be removed from the building to a distance greater the 25' from the tent structure.

The decontamination of the fuel pool will be done with hand-held electric tools. All tools are UL listed and connected to a GFCI power source. All potentially combustible waste, generated during this operation, will be removed for the containment structure at least daily. If need, decontamination chemicals will be non-flammable. All chemical will have a MSDS on file prior to being used.

All personnel involved in this task will wear the proper PPE.

5. Construct air lock on south west side of containment tent. (crane and man lift required.)

The installation of the air lock tent will require the use of the Genie articulating boom lift. The lift will be positioned outside of the tent, but within 10 feet of the containment tent. The crane will be located at least 25 feet from the tent structure, with the boom extended within 5 feet of the containment structure.

Personnel operating the lift have received training and a pre-use inspection will be performed on the lift prior to use. A dedicated fire watch, with a 20 dry chemical fire extinguisher will be stationed in the work area during uses of the lift. Upon completion of the task the lift will be removed from the containment structure, to a distance greater than 25'.

The crane will be operated by a State of New Mexico licensed equipment operator. Due to the location of the crane, it does not present a fire hazard to the containment structure.

This operation will be done in accordance with Task 7 Containment tent Erection and Dismantlement of the SSHASP.

All personnel involved in this task will wear the proper PPE.

6. Construct containment on south side of tent for segmenting reactor components.

This containment structure will be 10' x 10' by 8' high with a removable roof section. The containment will be constructed using metal studs and herculite sides. The floor and lower section of the walls of the containment will be lined with sheet metal.

The containment will be erected using UL listed electric hand tools. The tools will be either battery powered or connected to a GFCI breaker. All scrap material will be removed from the containment tent at least daily. The construction of this containment does not increase the fire loading within the containment tent.

All personnel involved in this task will wear the proper PPE.

7. Complete weather flap on West side of tent.

This work will require the use of a UL listed hand-held heat gun to "weld" the tent seams. The heat gun will be connected to a GFCI breaker. A dedicated fire watch, with a 20 dry chemical fire extinguisher will be stationed in the work area during uses of the heat gun.

All personnel involved in this task will wear the proper PPE.

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
SUBCONTRACT 41968-000-02-CJ

88 18.021.01 SSHASP - Acknowledgement Forms
SSHASP Task Hazard Analysis for OWR Vent Stack (TA-61) 31

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CERRO GRANDE REHIBILITATION PROJECT (CGRP)
SITE- SPECIFIC HEALTH &SAFETY PLAN (SSHASP)
Addendum

Project Name: Omega West Reactor (OWR) D&D Project

The LANL D&D Health & Safety Plan (DHASP) and contract provisions supplement this SSHASP and shall be complied with as applicable. Copies of the DHASP and this SSHASP are to be readily accessible for review onsite by individuals who may be exposed to hazards resulting from work conducted under the scope of this SSHASP. Personnel performing work under the scope of this SSHASP are required to sign the SSHASP acknowledgement page signifying that they are aware of the hazard information documented herein. This acknowledgement will also signify that they will abide by the requirements of this plan to eliminate or lessen the risk of injury or illness from exposure to the hazards identified

This addendum to the OWR D&D Project SSHAP incorporates the Task Hazard Analysis (THA) for the down ending of the Omega West Reactor Vent Stack located at TA -61.

APPROVALS/CONCURENCE

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CGRP-D&D Program Manager Approval

Signature	Name	LANL Group	Date
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CGRP –D&D Project Leader Approval

Signature	Name	LANL Group	Date
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CGRP- D&D HRS 5 Representative Approval

Signature	Name	LANL Group	Date
	Martin Peifer	CGRP-D&D	11-1-02

CGRP- D&D HSR 1 Team Leader Approval

Signature	Name	Company	Date
for	Mark Granus	W-F D&D,LLC	31 Oct 02

Washington – Framatome ANP DE&S Project Manager Approval

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Signature	Name	Company	Date

Manager or HS Representative Approval/Concurence

Plan Preparer	Signature	Company	Date	Phone
Marty L. Przybyski		WGII	October 31, 2002	(505) 780-0371

2.8 TASK HAZARD ANALYSIS (THA)

PROJECT NAME: OWR D&D

TASK 8: TA-61 Stack Down ending

ESTIMATED DATE(S) & DURATION OF WORK: OCTOBER 2002- NOVEMBER 2002

2.8 TASK DESCRITION

Task 8 involves the set-up, rigging, pick, and down ending of the Omega West reactor vent stack located at TA-61.

2.8.1KEY PERSONNEL HAVING TASK-SPECIFIC H&S RESPONSIBILITY

The key personnel for this task are listed in Section 1.2 of the SSHASP.

2.8.2HAZARD ASSMENT

Biological:

Blood borne Pathogens	HAR of negligible to minor. See THA-1, section 2.1.2
Hanta Virus	HAR of negligible to minor. See THA-1, section 2.1.2
Venomous Creatures	HAR of negligible to minor. See THA-1, section 2.1.2

Radiological Exposure:

External Radiation Exposure	Exposure to external ionizing radiation fields in radiation areas and high radiation areas could exceed LANL's administrative action levels. HAR of minor to serious
Exposure to loose contamination	Exposure to loose radioactive contamination could result in skin contamination or internal depositions of radioactive materials. HAR of minor to serious.

Chemical Exposure:

Common construction site chemicals	HAR of negligible to minor. See THA-1, section 2.1.2

Personnel Safety:

Man basket	Working on elevated work platforms could result in injury from falls or from dropped tools and materials. HAR of minor to serious.
Excessive Noise	Exposure to excessive noise associated with the use of tool and equipment, which could contribute to irreversible hearing loss, is unlikely to occur. HAR of negligible to minor.
Unstable Loads	Exposure to unstable loads while the containment is being erected or dismantled is unlikely to occur but possibly could occur resulting in serious injury or death. HAR of minor to serious.
Vehicular Traffic	Exposure to vehicular traffic during routine site operations could possibly result in life-threatening injury. HAR of minor to serious.
Cranes	Crane mishaps could possibly occur resulting in serious injury or equipment damage. HAR of minor to serious.
Hoisting Equipment Failure	Failure of hoisting equipment, or rigging could possibly occur resulting in injury or equipment damage. HAR or minor to serious.
Falls from > 6 feet	Falls from elevated work areas (>6 feet above working surface) could possibly result in serious injury or death. HAR of minor to serious.
Fire During Routine Cutting/Burning	Fire hazard(s) associated with routine cutting/burning operations could result in injury. HAR of minor to serious.
Inadequate Illumination	HAR of negligible to minor. See THA-1, section 2.1.2
Lifting and Carrying	HAR of negligible to minor. See THA-1, section 2.1.2
Hazardous Energy	HAR of negligible to minor. See THA-1, section 2.1.2
Skin Puncture/ Wounds (hand and power tools)	HAR of negligible to minor. See THA-1, section 2.1.2
Flying Debris	Struck by flying debris, which would cause irreversible injury, while completing the scope of work is unlikely to occur. HAR of negligible to minor
Lighting or Other Severe Weather	HAR of negligible to minor. See THA-1, section 2.1.2
Heavy Equipment	Struck by or run over by heavy equipment resulting in serious injury or death is possible but unlikely to occur. HAR of minor to serious.
Transportation Accident	HAR of negligible to minor. See THA-1, section 2.1.2
Slips, Trips and Falls	Walking on terrain in/around work site where slips, trips, falls could result in possible reversible injury. HAR of minor.
Energized Equipment	Working with/around electrically energized equipment could possibly result in irreversible injury or death. HAR of minor to serious.
Suspended Power Lines	HAR of minor to serious. See THA-1, section 2.1.2
Fall From Stairs and Ladders	HAR of moderate. See THA-1, section 2.1.2

2.7.1 HAZARD COMMUNICATION

The OSHA Hazard Communication Standard (29 CFR 1910.1200) applies to chemical substances utilized during specific phases of the subject work task(s). Personnel performing these tasks will be informed of the physical, chemical, and toxicological propertities of the chemicals to be used. Personnel will also be informed of the means and methods for preventing, detecting, mitigating, and/or protecting themselves from exposure before they are allowed to access an area or perform a task where exposure might occur. Information will also be reinforced during H&S tailgate sessions throughout the duration of the task. A MSDS for each chemical used on the project will be maintained on site and will be made available to affected personnel upon request. It is anticipated that this task may involve the use of petroleum-based fuels, lubricants or hydraulic fluids.

2.7.2 SITE CONTROL

Radiological work at the site will be controlled by Radiation Work Permits. Workers shall work in groups of at least two people (buddy system) and have a means of direct communication or maintain visual contact at all times. The Radiological Control Areas (RCAs) will be controlled in accordance with 19 CFR 835 and LIR402-700-01.1, Occupational Radiation Protection Requirements.

Radiation Area: A radiation area is any area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent in excess 5 mR in one hour at 30 cm from the radiation source or from any surface that the radiation penetrates.

High Radiation Area: A high radiation area is any area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose-equivalent in excess 100 mR in one hour at 30 cm from the radiation source or from any surface that the radiation penetrates.

AirBorne Radioactivity Area: an airborne radioactivity area in any area where the concentration of airborne radioactivity, above background exceeds or is likely to exceed 10% of the Derived Air Concentration (DAC) values. DAC values are specified in 10 CFR 835

Contamination Area: A surface contamination area is a radiological area where the surface contamination levels are greater than 1000 dmp/100 cm2

2.7.3 ADMINISTRATIVE and ENGINEERING CONTROLS

Applicable LANL LIRs:

LIR 402-702-01.1 Occupational Radiation Protection
LIR 402-10-01-4 Hazard Analysis and Control for Facility Work
LIR 402-820-01.0 Noise and Temperature Stresses
LIR 300-00-01.3 Safe Work Practices
LIR 402-1110-01.1 Forklifts and Powered Industrial Trucks

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Control**
Biological	
Bloodborne Pathogens	See THA-1 section 2.1.5
Hanta Virus	See THA-1 section 2.1.5
Venomous Creatures	See THA-1 section 2.1.5
Radiological	
External Radiation Exposure	Plan radiological work, perform mock up practice runs for high dose activities, use shielding, distance and time constraints to maintain dose ALARA. Comply with RWP requirements
Exposure to loose contamination	Specify respiratory protection when needed, use local exhaust ventilation or construct containment around the work to manage fugitive releases, maintain removable contamination levels in work area at the lowest feasible values. Comply with RWP requirements
Chemical	
Chemical Exposure	The use of hazardous materials shall be avoided whenever possible. Proper storage of chemicals shall be required. Clean up spill as soon as possible. Use proper bonding, as required, when transferring chemicals. Enforce "No Smoking" near flammable/combustible materials. Follow first aid measures, on MSDS, in the event of unprotected contact with chemicals. Material Safety Data Sheets (MSDS) are available for all chemicals used in the project operations. If necessary, protective clothing such as boots, shoe covers, and gloves will be worn to minimize skin contact.
Personnel safety	
Man basket	The personnel platform will be designed and used in accordance with 29 CFR 1926.550. Prior to lifting personnel a test lift will be conducted in accordance with 29 CFR 1926.550. A lift plan and Authorization For Use Of A Suspended Personnel Hoisting Platform documentation will be completed prior to use. Radio communication will be required between the personnel in the man basket and the crane operator/signaler.

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Controls**
Personnel safety	
Excessive Noise	Whenever voice(s) must be raised to communicate between two or more persons located < 3 feet of each other, the noise level is likely exceeding the action level; designate areas requiring hearing protection; conduct noise monitoring in accordance with LIR 402-820-01.0 Noise and Temperature Stresses.
Unstable Loads	Keep unauthorized personnel away for the site while the buildings are being lifted and loaded. No personnel shall be allowed under a raised load. All personnel shall stay away for any item that is under tension that could become a projectile due to sudden release of tension.
Vehicular Traffic	Field team personnel exposed to vehicular traffic shall be provided with and required to wear (as deemed necessary per SSO) warning vests or other suitable garments of reflective or high visibility material. Vests/garments and signaling directions/devices shall be in accordance with 29 CFR 1926.201.
Cranes	• A suitably qualified crane operator shall operate all facility cranes. • The rated load capacity of any lifting device shall not be exceeded at any time. The operator shall inspect lifting devices prior to use. Any deficiencies that would create an unsafe condition shall be corrected prior to use of the equipment. Current load testing documentation is required for all lifting devices and shall be maintained in project files. All cranes shall have a current annual inspections and be inspected daily by a competent person. All facility cranes shall be maintained in accordance with manufacturer requirements.

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Control**
Personnel Safety	
Hoisting Equipment Failure	Hoists, hooks, wires, ropes, slings, and rigging accessories shall be designed, installed, operated, inspected, and tested in accordance with applicable requirements of the DOE Hoisting and Rigging Manual (April 1993, DOE/ID-10500) and with applicable sections of 29 CFR 1926.251 and Subpart N of 29 CFR 1926. · A competent person shall inspect all hoisting and rigging equipment for excessive wear and defects upon arrival at the site and prior to each use. Employees involved in hoisting and rigging activities shall be trained in the limitations and proper use of hoisting equipment. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. Hoisting and rigging equipment shall not be loaded in excess of its safe working load. All synthetic slings shall be marked with the name of the manufacturer, serial number, type of material, and rated load. Use hoisting and rigging equipment that is only designed for use in hoisting and rigging operations. Shackles and hooks shall be constructed of forged alloy steel and shall be marked with its load ratings. · Hooks shall be provided with safety latches. Working beneath a suspended load is prohibited.
Falls from >6 feet	While working on elevated surfaces, workers who are exposed to any other fall hazard >than 6', conventional fall protection will be provided. As a minimum, fall protection shall include, full body harness with attaching lanyard while leading edge work is being performed. Fall protection will be in accordance with 29 CFR 1926, Subpart M.
Fire During Routine Cutting/Burning	Compliance with 29 CFR 1926 Subpart F and 1926.150 and 151, as applicable. Fire extinguishers shall be maintained and readily accessible on site and ready for use at all times. Typical size/type will be 10 lb. ABC multipurpose dry-chemical or equivalent. A LANL spark/flame permit shall be issued prior to using any flame/spark producing equipment. A trained fire watch shall be used at all times during cutting and welding
Inadequate Illumination	See THA-1, section 2.1.5.
Lifting and Carrying	Workers should try to use two (or more) people or use mechanical lifting equipment (i.e., dolly, forklift, etc.) to lift loads in excess of 50 pounds. Prior to lifting load, make sure that path of travel is clear and if manually lifting is performed, position any load to be lifted directly in front of body, bend knees and grasp load underneath with both hands and raise load primarily using legs (not back). To extent possible, carry the load in a manner that does not obstruct vision or intended access to where you step while transporting load.
Hazardous Energy	Equipment shall be locked and tagged out prior to repair activities in accordance with the LANL Lockout/Tag out Program.

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazards	**A&E Controls**
Personnel Safety	
Skin Punctures/ Wounds (hand and Power Tools)	Compliance with 29 CFR 1926.300, 301, and 302 (Subpart I) tools hand and power. All tools shall be kept in a designated storage area, shall be maintained in a safe condition, and shall be inspected for proper working condition prior to use. All defective tools will be removed from the site or tagged "Do Not Use". All electrical tools shall have the grounding plug intact unless the tool is double insulated. Proper personal protective equipment shall be used to provide adequate protection while using tools.
Flying Debris	Keep unauthorized personnel away from demolition area. Demolish buildings in a controlled fashion. An exclusion area of 250 feet around the base of the stack will be established prior to the lift. Access to this area will be restricted to necessary personnel for the task in progress. Wear PPE specified in Sections 2.3.8 of this THA.
Lightning or Other Severe Weather	When electrical storm is visible/audible within 3 miles (15 seconds) begin shutting down outdoor activities. If storm approaches within 2 miles (10 seconds) discontinue outdoor operations, get away form any metal objects and grounding system components (e.g., electrical power substations and large buildings) and take cover in a vehicle or small building. No operations involving work in high contamination areas or with components/materials >1 rem/hr contact dose will be performed during a tornado or storm watch (or warning) as declared by the Laboratory or the National Weather Service.
Heavy Equipment	Only qualified operators shall operate heavy equipment. Equipment operators shall operate the equipment in a controlled fashion at all times. Equipment buckets shall be grounded when not in use. Equipment capacities shall not be exceeded and equipment will only be used for its intended purpose. Ground personnel shall stay out of the hazard radius of equipment at all times until equipment buckets have been grounded and the operator gives permission to approach. Equipment shall be inspected prior to use each day for safe operating condition.
Transportation Accident	The Subcontractor will be expected to abide by posted speed limits. If possible, wide loads should be transported during off-hours. The Subcontractor shall determine the safest route to the site prior to mobilization.
Slips, Trips and Falls	Use good housekeeping on-site and minimize threat of slick surfaces. If necessary, tripping hazards will be marked to make them more visible.
Energized Equipment	Compliance with 29 CFR 1926, Subpart K, and NEC recommendations, as applicable. GFCI or an assured grounding program is required for all electrical equipment used on site

ADMINISTRATIVE and ENGINEERING CONTROLS	
Hazard	**A&E Control**
	Personnel Safety
Suspended Power Lines	A 13 kV power line runs within approx. 100 feet of the stack. Line will be de-energized prior to start of the down ending operation. The energized/de-energized status of the line will be confirmed at the start and completion of the operation. The line will be energized during mobilization and demobilization. As specified in 29 CFR 1926.550(a)(15)(i) and (ii) maintain a minimum distance of 10 ft between live lines and any part of equipment or load. For transit operations with no load and boom lowered, maintain a minimum distance of 4 ft between live lines and any part of equipment or load as specified in 29 CFR 1926.550(a)(15)(iii). Designate a person to observe clearances of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
Falls From Stairs and Ladders	All stairways and ladders shall be kept clear and permit free passage of employees. When work must be performed or equipment must be used to restrict access, a second point of access shall be provided and used. All occupants must be notified in advance of any operation or change, which may affect personnel access. During the use of ladders, ensure that the load limits established for the ladder are not exceeded at any time. Prior to use of the ladder, visually check the ladder to assure proper operation and ensure it is free of damage. Ladders with broken or missing rungs or cracked rails will be removed from service and tagged "DO NOT USE". Only commercially manufactured ladders will be used.

2.8.6 MEDICAL/RADIOLOGICAL SURVEILLANCE

Noise

All workers exposed to noise levels equal to or in excess of an 8 hour TWA of 82decibels shall be enrolled in an audiometric testing program in accordance with LANL LIR 402-820-01

Bloodborne Pathogens

Any worker whose job places them at risk of occupational exposure to bloodborne pathogens or any employee that has been occupationally exposed to a known or a potential source of bloodborne pathogens shall be offered Hepatitis B vaccination and post exposure evaluation and follow up in with 1910.1030 (f).

2.8.8 EXPOSURE MONITORING

Exposure monitoring for noise shall be conducted in accordance with the LIR 402-820-01.0 Noise and Temperature Stresses

Exposure monitoring for dust using a mini ram, to document that the action level of 2.5 mg/m^3 is not exceeded. This will be in accordance with the WD3 Industrial Hygiene Procedures Manual.

Hazardous Condition / Substance	Instrument	Location and frequency of Monitoring	Action Level(s)/Rationale	Response Action(s)
Radiological	See the radiation work permit for this task, when developed.			
Heat Stress	See Section 2.1.7 of THA-1			
Cold Stress	See Section 2.1.7 of THA-1			
Excessive Noise	See Section 2.1.7 of THA-1			

2.8.8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Body/Torso: As required by the RWP

Eyes: Safety glasses with side shields (compliant with ANSI Z87.1-1989).

Feet: Safety-toe work boots (compliant with ANSI Z41-1991).

Hands: Leather or cotton work gloves shall be worn when there is a potential for hand and finger injury. RWP may require additional hand protection

Head: Non-conductive hardhat (compliant with ANSI Z89.1-1986, and 29 CFR 1910.135).

Respiratory: As required by the RWP.

Ears: If necessary, plugs/muffs with sufficient NRR.

2.8.9 DECONTAMINATION

All personnel who come in direct contact with radiological material will follow the instructions for personnel decontamination as directed by Radiological Controls.

27.10 SPILL CONTAINMENT PLANS (task-specific)

See section 1.5 of the SSHASP and the project-specific Spill Prevention, Control, and Countermeasures Implementation Plan.

2.8.11 EMERGENCY PLANS (task-specific)

See section 1.4 of this SSHASP for the Project Emergency Action Response Plan.

2.8.12 ADDITIONAL INSTRUCTIONS/PROCEDURES (task-specific)

Spark/Flame permit shall be obtained prior to using a cutting/welding torch or any other flame producing equipment. An excavation permit will be obtained prior to commencement of excavation. WD3 will verify the LANL has isolated the structures and affected utilities from hazardous energy to the structure before proceeding.

INSPECTION REQUIREMENTS	
Inspections	Inspector
Scaffolding (once erected, daily prior to each use)	Competent Person
Fire extinguisher equipment per 29 CFR 1926.150(a) and (c) (initial – prior to acceptance at the site and at least monthly).	PMs, SSO or designee
First aid and bloodborne pathogens kits (initial – prior to acceptance at the site and at least weekly).	PMs, SSO or designee
General Sanitation (i.e., potable and non-potable water, toilets, washing facilities, eating and drinking areas, vermin control, and/or change rooms; per 29 CFR 1926.51	PMs, SSO or designee
Hand and power tools in accordance with 29 CFR 1926 Subpart I, Subcontractor requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PMs, User, SSO or designee - Initial User - Prior to each use
Incident/emergency response equipment (initial – prior to acceptance at the site and at least monthly)	PMs, SSO or designee
Job Site, Material and Equipment in accordance with 29 CFR 1926.20(b) (2).	PMs, SSO or designee
Material handling equipment (e.g., rubber-tired scraper, loader, dozers, etc.) equipped with rollover protective structures and overhead protection in accordance with 29 CFR 1926, Subpart W (initial – prior to acceptance at the site only).	PMs, Operator, SSO or designee
Motor vehicles and mechanized equipment in accordance with 29 CFR 1926, Subpart O, Subcontractors requirements, manufacturer's recommendations, and any applicable LANL requirements (initial – prior to acceptance at the site and daily).	PM, Operator, SSO or designee - Initial Operator - Daily
PPE (29 CFR 1926 Subpart E)	PMs, User, SSO or designee
Signs, Signals and Barricades (29 CFR 1926.200)	PMs, SSO or designee
Stored materials in accordance with 29 CFR 1926.250.	PMs, SSO or designee
Ladder before first use of the day 29 CFR 1926, Subpart X.	PMs, User, SSO or designee
Forklift in accordance with 29 CFR 1910.178 before first use of the day.	PMs, User, SSO or designee

On-site Records will include the following

Record/Form	Keep On-site
DHASP	X
This SSHASP	X

2.8 TASK HAZARD ANALYSIS (THA)

Record/Form	Keep On-site
Completed SSHASP Modification Forms	X
SSOs Daily Logbook	X
Documentation of Training Requirements	X
Documentation of Medical Surveillance	X
Exposure Monitoring Records	X
H&S Inspection Records	X

2.8.13 TRAINING REQUIREMENTS

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
DHASP	R or C	SSHASP author, SSO, PM, CM
SSHASP (DHASP Section 10.1.1)	R or C	All field personnel
Pre-Job Start HS Briefing (DHASP Section 10.1.1)	F or C	All field personnel
Task HS Briefing	F or C	All task participants
HS Tailgate Meetings (DHASP Section 10.1.2)	F	All on-site personnel
LANL General Employee Training (GET)	C	All field personnel
SSO (DHASP Section 10.1.4)	F	SSO
1st Aid/CPR (DHASP Section 10.1.3)	C	—
WD3 Bloodborne Pathogens Exposure Control Program	C	SSO
WD3 PPE Program	F or C	All field personnel
Postings (29 CFR 1926.200 & ANSI Z535.2 and .3)	F or C	All field personnel
LIR 402-820-01.0 Noise and Temperature Stresses	C	All field personnel
WD3 Hazard Communication Program	C	All field personnel
Sanitation (29 CFR 1926.51 or 65(n))	C	All field personnel
Fire Extinguisher Use [29 CFR 1910.158(g)]	C	All field personnel
Scaffold training per 29 CFR 1910.454		All field personnel who will work from scaffolding
WD3 Confined Space Program	C	All field personnel entering or supervising the entry of a confined space
Fall protection training per 29 CFR 1926.503		All field personnel who could have a 6' free fall while doing their work
LIR 402-10-01.4 -Hazard Analysis and Control for Facility Work	C	All field personnel
LIR 402-860-01.0 - Lockout/Tag out for Personnel Safety	C	All field personnel
Ladder – 29 CFR 2926.1060.	C	All field personnel
Forklift – per 29 CFR 1910.178 Powered Industrial Trucks	C	Forklift operator

Types of training: R = Read training; **C** = Classroom training; **F** = Field training; **AN** = As necessary per the DHASP or applicable (regulatory or employer) requirement.

Training Requirement	Type	Personnel to be Trained
LIR 402-880-01.1 - Excavation/Soil Disturbance Permit Process	C	SSHASP author, SSO, PM, CM

2.8.14 TASK HEALTH & SAFETY BRIEFING FORM

TASK HEALTH & SAFETY BRIEFING FORM

Project Title: OMEGA WEST REACTOR SSHASP No.:

Task: TA-61 Stack Down ending Date: 11-5-02

TA(s)/Location(s): 2

Conducted by:

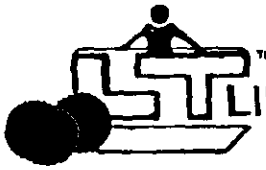
Printed Name	Title	Employer or LANL Group	Z Number
MARK L. PAZDYSKI	SSO	WGI	190412

Signature: _____ Date: 11-5-02

I acknowledge that I understand this Task Hazard Analysis, including the hazards related to performing this task and the ways I can eliminate the hazards or protect myself from injury or illness on the job.

NAME	EMPLOYER/GROUP	Z NUMBER	SIGNATURE/DATE
R. SUMMERS	SSO	191329	
JOHN D STAFFORD	LANL	113519	
ADAM SCOTT	CORONADO WORKING	176767	
DOUGLAS TORIVIO	CORONADO WORKING	170066	
TIM HUGHES	CW	94 1564	
MICHAEL DENNIS	H&K-S/FWO	181554	
JOE WILLIAMS	JAKES		
SHANE MYERS	JAKES		
JERRY R. ROMERO	JAKES CRANE	N/A	
JIM STAEHR	WD 3	190381	
RALPH YOUNG	JAKE'S CRANE	N/A	
GARY IRWIN	JAKES CRANE	N/A	
MARK WILLIAMS	JAKE'S CRANE	191796	
JOSH BURDEN	JAKES CRANE	191792	
RON SWETNAM	WD 3	190160	
J ADWEST	SAT	142056	
SHAWN KROUT	MOTA	192795	
SCOTT MCKEE	MOTA	190389	

Suspended Personnel Platforms
by



LIFTING TECHNOLOGIES INC.

800-234-5507 www.lifttech.com

Certification of Compliance with OSHA 29 CFR Part 1926.550(g), Final Rule

Personnel Platforms

1. Design criteria.
   A. Platform and suspension system designed by a qualified person competent in structural design.
   B. Suspension system designed to minimize tipping of platform due to movement of employees occupying it.
   C. Platform itself, except guardrail system and personal fall arrest system anchorages, capable of supporting, without failure, its own weight and at least five times maximum intended load. Criteria for guardrail systems and personal fall arrest system anchorages are contained in Subpart M of this Part.

2. Platform specifications.
   A. Platform equipped with a guardrail system which meets requirements of Subpart M, and enclosed at least from Toeboard to mid-rail with either solid construction or expanded metal having openings no greater than ½ inch.
   B. Grab rail installed inside entire perimeter of platform.
   C. Access gates, if installed, cannot swing outward during hoisting.
   D. Access gates equipped with a restraining device to prevent accidental opening .
   E. Headroom provided which allows employees to stand upright in platform.
   F. Employees protected by overhead protection on platform when they are exposed to falling objects.
   G. All rough edges exposed to contact by employees surfaced or smoothed to prevent injury.
   H. All welding of platform and its components performed by a qualified welder familiar with weld grades, types and material specified in platform design.
   I. Platform conspicuously posted with a permanent plate which indicates weight of platform and its rated load capacity or maximum intended load.

3. Platform loading.
   A. Platform not to be loaded in excess of its rated load capacity.
   B. Number of employees occupying platform not to exceed number required for work performed.
   C. Platforms used only for employees, their tools and materials necessary to do their work, and not used to hoist only materials or tools when not hoisting personnel.
   D. Materials and tools for use during personnel lift secured to prevent displacement.
   E. Materials and tools for use during personnel lift evenly distributed within confines of platform.

4. Rigging.
   A. When a wire rope bridle is used to connect platform to loadline, each bridle leg to be connected to master link in such a manner to ensure that load is evenly divided among bridle legs.
   B. Hooks on overhaul ball assemblies to be of a type that can be closed and locked, eliminating the hook throat opening.
   C. Wire rope, shackles, rings, master links, etc. to be capable of supporting, without failure, at least five times maximum intended load.
   D. Eyes in wire rope slings to be fabricated with thimbles.
   E. Bridles for attaching platform to hoist line to be used only for platform and necessary employees, their tools and materials, and not for any other purpose when not hoising personnel.

Trial Lift, Inspection and Proof Testing

1. A trial lift with unoccupied platform loaded to at least anticipated lift weight to be made from ground level to each location at which platform is to be hoisted and positioned.
2. Trial lift to be repeated whenever crane is moved and set up in a new location.
3. After trial lift, and just prior to hoisting personnel, platform to be hoisted a few inches and inspected to ensure that it is secure and properly balanced.
4. A visual inspection of crane, rigging, platform, and ground to determine any adverse effect.
5. Correct any defects found.
6. At each job site, prior to hoisting employees, proof test the platform and rigging to 125% of platform's rated capacity by holding it in a suspended position for five minutes with the test load evenly distributed on the platform (this may be done concurrently with the trial lift**). After proof testing, inspect platform and rigging. Correct any deficiencies found and proof test again before hoisting personnel.

P.O. BOX 4167 MISSOULA, MT 59806 FAX: 406-728-7735 e-mail: lifttech@montana.com

*Part 1926.502, Subpart M

Guardrail systems.
Standard specifications:
Top edge height of guardrail to be 42 inches above platform level.
Mid-rail to be midway between top edge of guardrail and platform level.
Guardrail system to be capable of withstanding, without failure, a force of at least 200 lbs. applied within two inches of the top edge in any direction at any point along the guardrail. When test load is applied downward, top edge of guardrail cannot deflect to a height less than 39 inches above platform level.
When pipe is used, posts, top and mid-rails to be at least 1 ½ inches nominal diameter.
Mid-rail to be capable of withstanding, without failure, a force of at least 150 lbs. in any direction at any point along the mid-rail.
Guardrail system to be smooth-surfaced.

Personal fall arrest systems.
Anchorages used for attachment of personal fall arrest equipment to be independent of any anchorage being used to suspend platform and capable of supporting at least 5,000 lbs. per employee attached.***
Personal fall arrest system, when stopping a fall, to limit maximum arresting force on an employee to 1,800 lbs. when used with a body harness.
Personal fall arrest system not to be attached to guardrail system nor to hoist.
Toeboard to be 3½ inches minimum vertical height, with no more than ¼ inch clearance above platform level.

** By use of LTI's patented detachable test weight.

***LTI's inner grab rail provides such personal fall arrest system, and is certified capable of withstanding, without failure, a static load test of 5,000 lbs. Any part of this inner grab rail will sustain this load and, therefore, provide acceptable anchorage points for body harnesses.

(The OSHA Final Rule is published in LTI's Use and Safety Handbook for Suspended Personnel Platforms (Manbaskets)).

OCT-28-2002 MON 02:00 PM JAKES CRANE FAX NO. 7027361562 P. 03

AMERICAN 9490 TRUCK CRANE 360° RATINGS W/180' SGHTR BOOM	
35'	210,560 LBS
40'	179,630 LBS
50'	134,620 LBS
60'	102,950 LBS
70'	81,940 LBS
80'	67,470 LBS
90'	56,420 LBS
100'	47,890 LBS
110'	41,090 LBS
120'	35,860 LBS
130'	31,240 LBS
140'	27,330 LBS
150'	23,980 LBS
160'	21,090 LBS
170'	18,530 LBS
180'	16,270 LBS

ON 100% OUTRIGGERS
COUNTERWEIGHT: 148,600 LBS.

AMERICAN 9490
TRUCK CRANE
WITH 180' HTR BOOM

WORST CASE CRANE
WILL CARRY 100% OF LOAD

PICKWEIGHT:	10,649#
HEADACHE BALL:	440#
LIFT BAR:	N/A
SLINGS & SHACKLES:	260#
WEIGHT OF LOADLINE:	213#
(10%) ALLOWANCE FOR UNACCOUNTED WEIGHT	1,065#
TOTAL WEIGHT:	12,627#

PERCENT CAPACITY: 7%
(AT 40 FT RADIUS)

TEREX RT175
ROUGH -TERRAIN
PICK & CARRY
ON RUBBER CHART
34' BOOM LENGTH

RADIUS	CAPACITY
10	58,410#
12	51,180#
15	42,910#
20	33,380#
25	24,440#

WORST CASE CRANE
WILL CARRY 50% OF LOAD

50% PICKWEIGHT:	5,325#
HEADACHE BALL:	440#
LIFT BAR:	N/A
SLINGS & SHACKLES:	260#
WEIGHT OF LOADLINE:	213#
(10%) ALLOWANCE FOR UNACCOUNTED WEIGHT	1,065#
TOTAL WEIGHT:	7,303#

PERCENT CAPACITY: 21.8%

AMERICAN 9490
WILL REMAIN
STATIONARY
MAINTAINING 40'
RADIUS, VERTICAL
PICK

(2) 1-¼" CHOKERS
WRAPPED AROUND
LOAD AND CAUGHT
BY TOP FLANGE

SMOKE STACK
TOTAL WEIGHT:
10,649#

RT175 WILL TRAVEL
AS TRAIL CRANE
AS LOAD BECOMES
HORIZONTAL

(1) 1-¼" CHOKERS
WRAPPED AROUND
LOAD.

AMERICAN 9490 — 40' — 20' — TEREX RT175

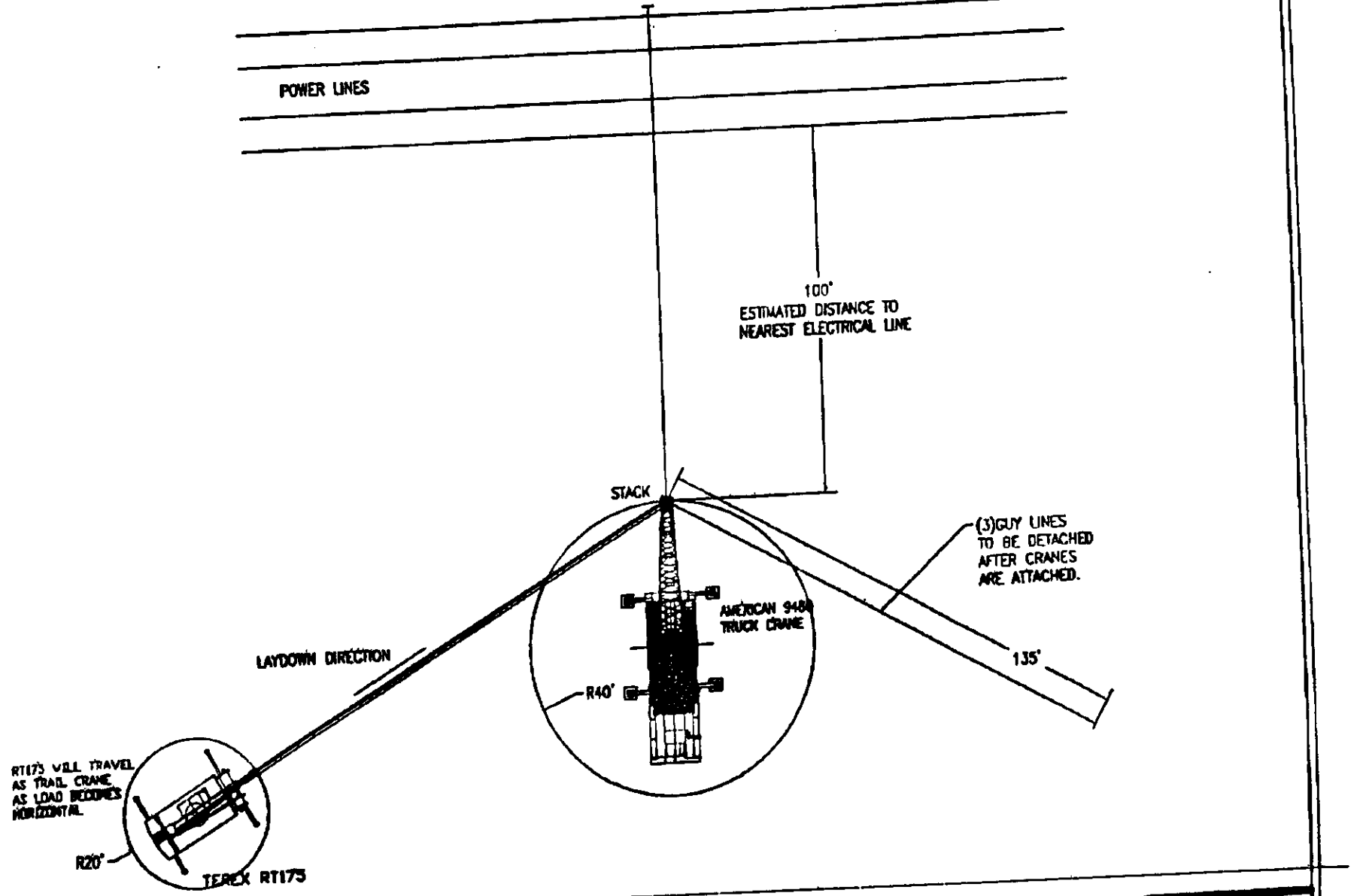
DWG. No.
A55940
SHEET

SMOKESTACK LIFT
9490 TRUCK CRANE
& TEREX RT175

JAKE'S
CRANE, RIGGING & TRANSPORT
6109 INDUSTRIAL
LAS VEGAS,
(702) 736-4082
NEVADA 89118

SCALE:	NTS		REV.
JOB NO.			
ENGR. No.			

01-28-2002 RUN 02:00 PM JAKES CRANE P. 04

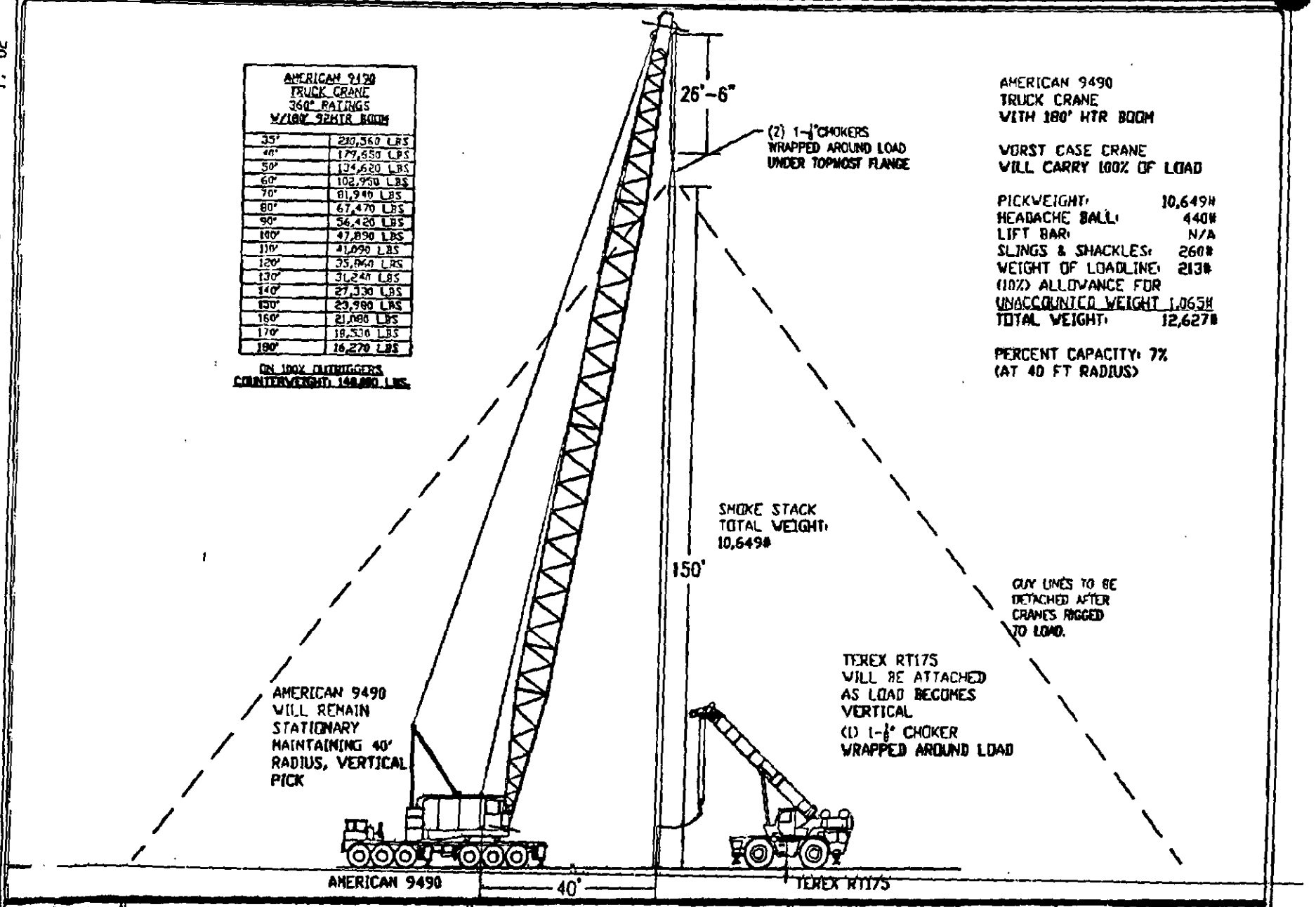


DWG. No.	SMOKESTACK LAYDOWN 9480 TRUCK CRANE	JAKE'S 6109 INDUSTRIAL LAS VEGAS, (702) 736-4082	SCALE: NTS JOB NO.

OCT-28-2002 MON 01:58 PM JAKES CRANE FAX NO. 7027381302 P. 02

AMERICAN 9490 TRUCK CRANE 360° RATINGS W/180' HTR BOOM	
35'	230,360 LBS
40'	179,650 LBS
50'	134,620 LBS
60'	102,950 LBS
70'	81,940 LBS
80'	67,470 LBS
90'	56,420 LBS
100'	47,890 LBS
110'	41,090 LBS
120'	35,840 LBS
130'	31,240 LBS
140'	27,330 LBS
150'	23,980 LBS
160'	21,080 LBS
170'	18,530 LBS
180'	16,270 LBS

ON 100% OUTRIGGERS
COUNTERWEIGHT 148,800 LBS.



AMERICAN 9490
TRUCK CRANE
WITH 180' HTR BOOM

WORST CASE CRANE
WILL CARRY 100% OF LOAD

PICKWEIGHT:	10,649#
HEADACHE BALL:	440#
LIFT BAR:	N/A
SLINGS & SHACKLES:	260#
WEIGHT OF LOADLINE:	213#
(10%) ALLOWANCE FOR UNACCOUNTED WEIGHT	1,065#
TOTAL WEIGHT:	12,627#

PERCENT CAPACITY: 7%
(AT 40 FT RADIUS)

DWG. No. A55940 SHEET

SMOKESTACK LAYDOWN 9490 TRUCK CRANE & TEREX RT175

JAKE'S CRANE, RIGGING & TRANSPORT INTERNATIONAL
6109 INDUSTRIAL
LAS VEGAS,
(702) 736-4262
NEVADA 89118

SCALE:	NTS
JOB NO.	
ENGR. No.	

REVISION	
NUMBER	TEXT
1	REVISED WT. OF LOAD

REV. 1

LIFT EQUIPMENT CERTIFICATION COMPANY, INC.

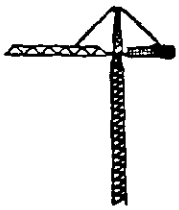
N.C.L. #0037042

Certificate No 99220702

Annual: X

Load Test: X

CERTIFICATE OF TEST
EXAMINATION AND/OR LOAD TEST



Owner: JAKES CRANE AND RIGGING

Address: 6109 S. INDUSTRIAL LAS VEGAS, NV 89118

Type of Device: MOBILE CRANE Capacity: 300 TON

Manufacture: AMERICAN Customer's ID No.: 499

Model No.: 9490 Serial No: OOAC3752

Boom Type (If Applicable): LATTICE

Hoist Manufacturer (If Applicable): N/A

Model No.: N/A Serial No.: NA

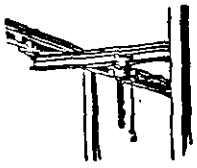
Test Loads applied: Yes X No Rated Load: 58,180LBS Proof Load 72,080LBS

Boom Length: 120' Boom Angle 39.7° Boom Radius 100' Boom Direction: REAR

Description of Proof Load: CERTIFIED TEST WEIGHT

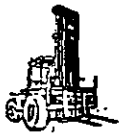
Basis for Assigned Load Rating: MANUFACTURERS LOAD CHART

Remarks and/or Limitations :



I certify on the 27TH day of 07 2002, the above described device was examined ( ), or examined and tested (X), by the undersigned; that said test and/or examination met in all respects with the requirements of the DIVISION OF INDUSTRIAL SAFETY AND/OR ANSI STANDARDS, that any deficiencies considered to constitute any unsatisfactory conditions have been corrected; and that the device has been found to be in compliance in all respects with the governing requirements.

Inspectors Signature: Donald Gray Date: 07-27-2002



Annual Inspection Expires: 07-27-2003

N.C.L. #0037042 Next Load Test Due: 07-27-2006

3365-C W. PATRICK LANE • LAS VEGAS, NV 89118 • 702-798-5540 • FAX 702-798-1603
www.liftequipmentcert.com

BOOM LENGTH (FEET)	RADIUS (FEET)	BOOM ANGLE (DEG.)	ON TIRES OVER SIDE (POUNDS)	ON TIRES OVER REAR (POUNDS)	OUTRIGGERS SET OVER SIDE (POUNDS)	OUTRIGGERS SET OVER REAR (POUNDS)	FROM BOOM POINT TO GROUND (FEET)
180'	70	69.3			81,690	91,230*	176
(54.9M)	80	65.9			67,700	77,520*	172
BOOM	90	62.3			57,000	66,250*	167
	100	58.7			48,740	57,680*	161
	110	54.8			42,170	50,310*	155
	120	50.8			37,120	44,820*	147
	130	46.5			32,660	39,710*	138
	140	41.9			28,890	35,460*	128
	150	36.8			25,660	31,840*	116
	160	31.1			22,860	28,620*	100
	170	24.1			20,420	25,790*	81
	180	14.1			18,260	22,170*	51
190'	33	82.0			200,960*	200,960*	196
(57.9M)	35	81.4			200,960*	200,960*	195
BOOM	40	79.9			180,200*	180,200*	195
	50	76.8			132,240	137,050*	193
	60	73.7			101,550	110,140*	190
	70	70.5			81,170	90,520*	187
	80	67.2			67,180	76,490*	183
	90	63.9			56,480	65,680*	178
	100	60.5			48,200	56,900*	173
	110	56.9			41,610	49,670*	167
	120	53.2			36,590	44,140*	160
	130	49.3			32,120	39,030*	152
	140	45.2			28,360	34,850*	142
	150	40.7			25,120	31,080*	132
	160	35.8			22,320	27,910*	119
	170	30.2			19,880	25,080*	103
	180	23.4			17,720	22,510*	83
	190	13.7			15,820	19,090*	53
200'	35	81.8			183,110*	183,110*	206
(61.0M)	40	80.4			179,310*	179,310*	205
BOOM	50	77.4			131,770	136,510*	203
	60	74.5			101,070	109,510*	200
	70	71.5			80,660	89,860*	197
	80	68.4			66,690	75,880*	194
	90	65.3			55,970	64,780*	189

The ratings in this chart are for planning purposes only. Only those ratings specifically assigned to a crane and mounted in the Operator's Cab or in the Operator's Manual should be used for actual operation.

AMERICAN 9490 TRUCK CRANE 360° RATINGS W/180' SHTR BOOM	
35'	210,560 LBS
40'	179,659 LBS
50'	134,620 LBS
60'	102,350 LBS
70'	81,940 LBS
80'	67,470 LBS
90'	56,420 LBS
100'	47,890 LBS
110'	41,690 LBS
120'	35,860 LBS
130'	31,240 LBS
140'	27,330 LBS
150'	23,990 LBS
160'	21,060 LBS
170'	18,330 LBS
180'	16,270 LBS

ON 100% OUTRIGGERS
COUNTERWEIGHT: 140,000 LBS.

AMERICAN 9490
TRUCK CRANE
WITH 180' HTR BOOM

WORST CASE CRANE
WILL CARRY 100% OF LOAD

PICKWEIGHT:	10,649#
HEADACHE BALL:	440#
LIFT BAR:	N/A
SLINGS & SHACKLES:	260#
WEIGHT OF LOADLINE:	213#
(10%) ALLOWANCE FOR UNACCOUNTED WEIGHT	1,065#
TOTAL WEIGHT:	12,627#

PERCENT CAPACITY: 7%
(AT 40 FT RADIUS)

TEREX RT175
ROUGH -TERRAIN
PICK & CARRY
ON RUBBER CHART
34' BOOM LENGTH

RADIUS	CAPACITY
10	58,410#
12	51,180#
15	42,910#
20	33,380#
25	24,440#

WORST CASE CRANE
WILL CARRY 50% OF LOAD

50% PICKWEIGHT:	5,325#
HEADACHE BALL:	440#
LIFT BAR:	N/A
SLINGS & SHACKLES:	260#
WEIGHT OF LOADLINE:	213#
(10%) ALLOWANCE FOR UNACCOUNTED WEIGHT	1,065#
TOTAL WEIGHT:	7,303#

PERCENT CAPACITY: 21.8%

AMERICAN 9490
WILL REMAIN
STATIONARY
MAINTAINING 40'
RADIUS, VERTICAL
PICK

(2) 1-¼" CHOKERS
WRAPPED AROUND
LOAD AND CAUGHT
BY TOP FLANGE

SMOKE STACK
TOTAL WEIGHT:
10,649#

RT175 WILL TRAVEL
AS TRAIL CRANE
AS LOAD BECOMES
HORIZONTAL

(1) 1-¼" CHOKERS
WRAPPED AROUND
LOAD.

AMERICAN 9490 — 40' — 20' — TEREX RT175

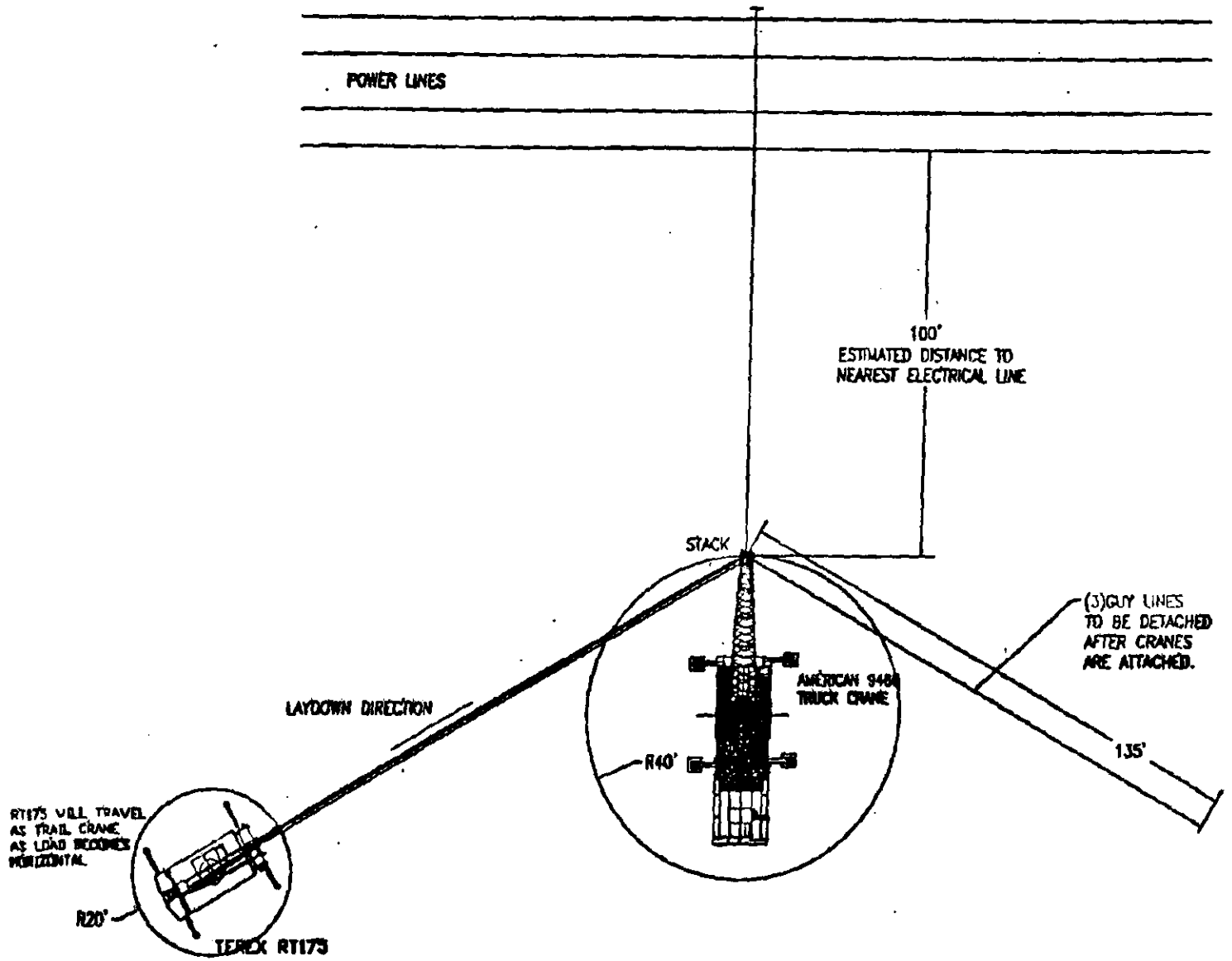
DWG. No.
A55940

SMOKESTACK LIFT
9490 TRUCK CRANE
TEREX RT175

JAKE'S
6109 INDUSTRIAL
LAS VEGAS,
(702) 736-4082
NEVADA 89118

SCALE: NTS
JOB NO.
ENGR. No.

REV.



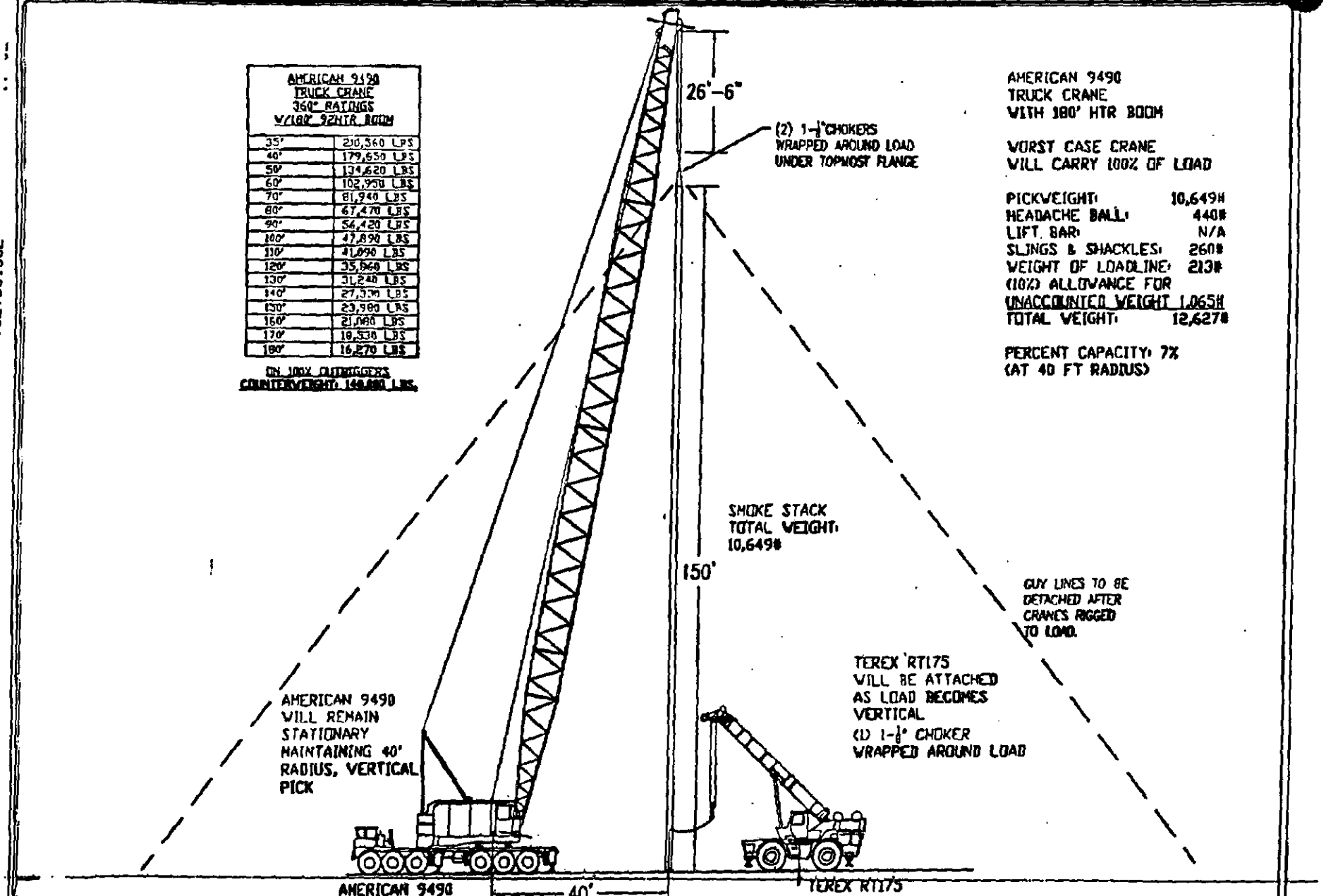
DWG. No.
A55940

SMOKESTACK LAYDOWN
9490 TRUCK CRANE
& TEREX RT175

JAKE'S
CRANE, RIGGING & TRANSPORT
6109 INDUSTRIAL
LAS VEGAS,
(702) 736-4082
NEVADA 89118

SCALE: NTS
JOB NO.
ENGR. No.

REV.



DWG. No. A55940
SHEET

SMOKESTACK LAYDOWN 9490 TRUCK CRANE & TEREX RT175

JAKE'S
CRANE, RIGGING & TRANSPORT INTERNATIONAL
6109 INDUSTRIAL
LAS VEGAS,
(702) 736-4082
NEVADA 89118

SCALE:	NTS		
JOB NO.			
ENGR. No.			

REVISIONS			
NUMBER	PER	DATE	
1	REVISED WT. OF LOAD		

REV. 1

Year 2002

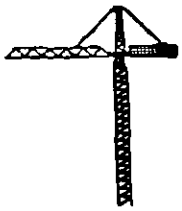
LIFT EQUIPMENT CERTIFICATION COMPANY, INC.

JOB# 96970582

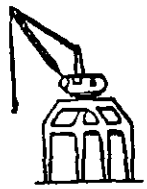
N.C.L. #0037042

Plate V

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
CERTIFICATE OF UNIT TEST AND/OR EXAMINATION OF
CRANES AND DERRICKS USED FOR LIFTING SERVICE
(DOSH Form CCAU 55, 11-01-93)



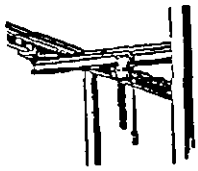
1. Owner: JAKES CRANE & RIGGING
2. Owner's Address: 6109 S. INDUSTRIAL LAS VEGAS, NV 89118
3. Device (check): Crane X Derrick ____ Other ____
   Location: (a) Remains at worksite ____ (b) Changes worksite X (c) On barge ____
4. Description: MOBILE Rated Capacity: 75 TON
5. Manufacturer: TEREX Model No.: RT175 Serial No. 175256
6. Owner's Identification (if any): 457 License Plate No.: N/A
7. Service Status at Time of Survey: Lifting X Other (describe) ____
8. Boom at Time of Survey: Length: 126' Type: TELESCOPING Jib: LATTICE
9. Test Loads Applied, Including Functional (partial) Test Load:



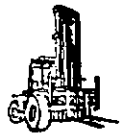
Radius	Proof Load	Rated Load	Outriggers yes/no	Boom Direction (over rear/side)
54'	20,000LBS	17,000LBS	YES	FRONT
FUNCT.	17,000LBS	17,000LBS	YES	FRONT

Description of proof loads: CERTIFIED TEST WEIGHT

10. Basis for assigned load ratings: MANUFACTURERS LOAD CHART
11. The examination shall cover the points listed on reverse as applicable.
12. Remarks and/or limitations imposed: ____



I certify that on the 08TH day of 05, 2002, the above described device was tested and examined by the undersigned; that said test and examination met with the requirements of the Division of Occupational Safety and Health (DOSH); that any deficiencies affecting the safe operation of the crane have been corrected prior to the issuance of this certificate. A copy of such Certificate(s) attesting to the Annual and Quadrennial Certification shall be maintained in the crane or at the work site at all times.



Certificating Agency: LIFT EQUIPMENT CERTIFICATION COMPANY, INC.
This Certificate is: (X) Annual (X) Quadrennial Proof Load. Quad attached: (X) Yes ( ) No
Next Annual Due: 05-08-2003 Last Quadrennial Done: 05-08-2001 By: CA 257
Signature: ____ DOSH License No.: CA 257 BGM&T
Print Name: ROBERT SLATER Expires: 09-2003 Category: M
Title: LICENSED SURVEYOR Date: 05-08-02
Certification No: CA 02-19 Issue Date: 05-08-02 Mailed to DOSH: ____

CAL-OSHA ACCREDITATION

3365-C W. PATRICK LANE • LAS VEGAS, NV 89118 • 702-798-5540 • FAX 702-798-1603
www.liftequipmentcert.com

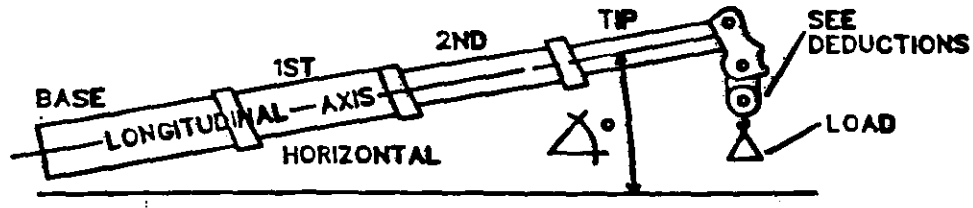
RATED LIFTING CAPACITIES IN POUNDS

LOAD RATINGS ON TIRES - 2 1/2 MPH OVER FRONT

MAXIMUM BOOM LENGTH 85 FT.

15200 POUND TOTAL COUNTERWEIGHT

LOAD MOMENT DEVICE (LMI) CODE # 00



POWERED BOOM LENGTH IN FEET

LOAD RADIUS FT.	40.5 FT. LOADED BOOM ANGLE ∠°	40.5 FT. LOAD, LB FRONT	45 FT. LOADED BOOM ANGLE ∠°	45 FT. LOAD, LB FRONT	55 FT. LOADED BOOM ANGLE ∠°	55 FT. LOAD, LB FRONT	65 FT. LOADED BOOM ANGLE ∠°	65 FT. LOAD, LB FRONT	75 FT. LOADED BOOM ANGLE ∠°	75 FT. LOAD, LB FRONT	85 FT. LOADED BOOM ANGLE ∠°	85 FT. LOAD, LB FRONT	LOAD RADIUS FT.
10	68	51200	71	50700	75	49700							10
12	65	44800	68	44400	72	43700	76	42900					12
15	60	37300	64	37100	69	36700	73	36100	76	35600			15
20	51	28400	56	28400	63	28200	68	28000	71	27600	74	27300	20
25	41	22300	48	22300	57	22300	63	22200	67	22000	71	21900	25
30	28	17800	38	17800	50	17800	58	17800	63	17800	67	17800	30
35					43	14600	52	14600	58	14600	63	14600	35
40					34	11900	46	11900	54	11900	59	11900	40
45							39	9900	48	9900	55	9900	45
50							31	8100	43	8100	50	8100	50
55									37	6700	45	6700	55
60									29	5200	40	5200	60
65											34	4100	65
ZERO DEGREE BOOM ANGLE LOADS (LB) AND RADII (FT.)													
		15500		12200		7500		4600		0		0	
		34.0		38.5		48.5		58.5		68.5		78.5	

MINIMUM BOOM ANGLE (DEGREES) FOR INDICATED BOOM LENGTH (NO LOAD)	-
MAXIMUM BOOM LENGTH (FEET) AT -2 DEGREE BOOM ANGLE (NO LOAD)	7

TIRE INFLATION DATA - PSI		
TIRE SIZE	ROADING	2 1/2 MPH
29.5 X 25 - 28 PR	55	65

Washington

Rigging and Lifting Plan

Location: Los Alamos NM, TA-61 Date of lift: 11-5-02

Load description: Lower OWR Vent Stack

Does this lift involve lifting personnel? ☐ yes ☒ no

Lift description: Downend 150' stack

A. WEIGHT

1.	Weight Empty (load or basket)	5325	lbs
2.	Weight of Headache Ball or block	440	lbs
3.	Weight of Lifting Bar	n/a	lbs
4.	Weight of Slings & Shackles	260	lbs
5.	Weight of Jib	n/a	lbs
6.	Weight of Headache Ball on Jib	n/a	lbs
7.	Weight of Cable (Load Fall)	213	lbs
8.	Allowance for Unaccounted Material in Equipment (10% of weight)	1065	lbs
9.	No. of people lifted x 250	n/a	lbs
10.	Other none		lbs
	Total Weight	7303	lbs

Source of Load Weight:

Calculated by Jake's Crane
(Name Plate, Drawings, Calculated)

Weights Verified By:

B. JIB

Erected ☐ Stored ☐

1. Is Jib to be used? ☐ Yes ☒ No
2. Length of Jib
3. Angle of Jib
4. Rated Capacity of Jib (From Chart)\

C. CRANE PLACEMENT

1. Any Deviation from Smooth Solid Foundation in the Area?
   Area to be leveled
2. Electrical Hazards in Area?
   power line 145' from stack
3. Obstacles or Obstructions to Lift or Swing?
   no
4. Swing Direction and Degree (Boom Swing)?
   none

D. CABLE

1. Number of Parts of Cable 2
2. Size of Cable: 1 1/4"

E. SIZING OF SLINGS

1. Sling Selection
   a. Type of Arrangement choker
   b. Number of Slings in Hook-up 2
   c. Sling Length 20'
   d. Rated Capacity of Sling 20000
2. Shackle Selection
   a. Capacity (tons) 17.5
   b. Shackle attached to load by:
   c. Number of shackles 2

Washington

Rigging and Lifting Plan

F. CRANE

1. Type of Crane Terex
2. Crane Capacity 77 Tons
3. Lift Arrangement
   a. Max Distance-Center of Load to center pin of crane _____ ft.
   b. Length of Boom 34 ft.
   c. Angle of Boom at pick-up _____ degrees
   d. Angle of Boom at set _____ degrees
   e. Rated capacity of crane under most severe lifting conditions (From Chart)
      1. Over Rear _____ lbs
      2. Over Front _____ lbs
      3. Over Side _____ lbs
4. From chart – Rated capacity of the crane for the Lift
5. Max. Load on Crane 7303 lbs.
6. Lift is of Crane's Rated Capacity 21.8

G. PRE-LIFT CHECKLIST

	YES	NO
1. Matting Acceptable	☑	☐
2. Outriggers fully extended	☑	☐
3. Crane in good condition	☑	☐
4. Swing Room	☑	☐
5. Head Room Checked	☑	☐
6. Max. Counterweights used	☑	☐
7. Tag line used	☑	☐
8. Experienced Operator	☑	☐
9. Experienced Flagman (Designated)	☑	☐
10. Experienced Rigger	☑	☐
11. Load Chart in Crane	☑	☐

12. Wind Conditions: _____
13. Crane Inspected By:: _____
14. Functional Test of Crane By: _____

SPECIAL INSTRUCTIONS OR RESTRICTIONS FOR CRANE, RIGGING, LIFT, ETC. _____

DIAGRAM CRANE AND LOAD PLACEMENT	DIAGRAM RIGGINGS CONFIGURE

SIGNATURE OF JOB SUPERVISOR	DATE	SIGNATURE-PLAN CHECKED BY	DATE
[signature]	11/5/02		

Washington

Rigging and Lifting Plan

Location: Los Alamos NM, LANL TA-61 Date of lift: 11-5-02

Load description: Lower OWR Vent Stack

Does this lift involve lifting personnel? ☐ yes ☒ no

Lift description: Lift and downend a 150' vent stack

A. WEIGHT

1.	Weight Empty (load or basket)	10649	lbs
2.	Weight of Headache Ball or block	440	lbs
3.	Weight of Lifting Bar	n/a	lbs
4.	Weight of Slings & Shackles	260	lbs
5.	Weight of Jib	n/a	lbs
6.	Weight of Headache Ball on Jib	n/a	lbs
7.	Weight of Cable (Load Fall)	213	lbs
8.	Allowance for Unaccounted Material in Equipment (10% of weight)	1065	lbs
9.	No. of people lifted x 250	n/a	lbs
10.	Other None		lbs
	Total Weight	12627	lbs

Source of Load Weight:

Calculated by Jake's Crane & rigging

(Name Plate, Drawings, Calculated)

Weights Verified By:

B. JIB

Erected ☐ Stored ☐

1. Is Jib to be used? ☐ Yes ☒ No
2. Length of Jib
3. Angle of Jib
4. Rated Capacity of Jib (From Chart)\

C. CRANE PLACEMENT

1. Any Deviation from Smooth Solid Foundation in the Area?
   No, area will be graded to a level surface
2. Electrical Hazards in Area?
   YES 3 phase power lines approx. 145' away from stack
3. Obstacles or Obstructions to Lift or Swing?
   No
4. Swing Direction and Degree (Boom Swing)?
   Left approx. 7 feet

D. CABLE

1. Number of Parts of Cable 1
2. Size of Cable: 1 1/4 "

E. SIZING OF SLINGS

1. Sling Selection
   a. Type of Arrangement choked w/ 1 1/2" shackle
   b. Number of Slings in Hook-up 2
   c. Sling Length 20'
   d. Rated Capacity of Sling 20,000
2. Shackle Selection
   a. Capacity (tons) 17.5
   b. Shackle attached to load by:
   c. Number of shackles 2

Washington

Rigging and Lifting Plan

F. CRANE

1. Type of Crane American/
2. Crane Capacity 300 Tons
3. Lift Arrangement
   a. Max Distance-Center of Load to center pin of crane 40 ft.
   b. Length of Boom 200 ft.
   c. Angle of Boom at pick-up 72 degrees
   d. Angle of Boom at set 66 degrees
   e. Rated capacity of crane under most severe lifting conditions (From Chart)
      1. Over Rear 179,310 lbs
      2. Over Front 179,310 lbs
      3. Over Side 179,310 lbs
4. From chart – Rated capacity of the crane for the Lift
5. Max. Load on Crane _____ lbs.
6. Lift is of Crane's Rated Capacity 7%

G. PRE-LIFT CHECKLIST

	YES	NO
1. Matting Acceptable	☑	☐
2. Outriggers fully extended	☑	☐
3. Crane in good condition	☑	☐
4. Swing Room	☑	☐
5. Head Room Checked	☑	☐
6. Max. Counterweights used	☑	☐
7. Tag line used	☑	☐
8. Experienced Operator	☑	☐
9. Experienced Flagman (Designated)	☑	☐
10. Experienced Rigger	☑	☐
11. Load Chart in Crane	☑	☐

12. Wind Conditions: _____
13. Crane Inspected By:: _____
14. Functional Test of Crane By: _____

SPECIAL INSTRUCTIONS OR RESTRICTIONS FOR CRANE, RIGGING, LIFT, ETC. _____

DIAGRAM CRANE AND LOAD PLACEMENT	DIAGRAM RIGGINGS CONFIGURE

SIGNATURE OF JOB SUPERVISOR _____ DATE 11/6/20

SIGNATURE-PLAN CHECKED BY _____ DATE _____

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CERRO GRANDE PROJECT
CONTRACT 41968-000-02-CJ

984 18.072 Safety Meeting - Tailgate
Tailgate Safety Meeting 20

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TO: Project File AUTHOR/ORIGINATOR: Marty Przybyski

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Client Meeting Notes
Telecom Reports
Correspondence

[redacted]re Award Subcontract Documents
[redacted]equest for Proposal
Bid Package Review Documents
Bidders Questions
Proposals/Bids

POST-Post Award Subcontract Documents
Subcontract Files
Weekly Activities Performance Report
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TQM-Total Quality Management
Lessons Learned
Environmental Regulations Guidance Manual

PC-Project Controls
Chart of Accounts/Cost Scheduling (Accruals)
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DCE-Design/Construction Engineering
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MA - Management & Administration
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RM - Risk Management
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QAQC-Quality Assurance/Quality Control
Calibration Records
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Lessons Learned

SE-Safety & Environmental
Safety Inspections, Safety Meetings
SSHASP's & Modifications
Training Records
SWPPP, Waste Characterization Strategy Forms
Radiological Data, Field Logbooks

COM-Construction Management
Contractors Daily Reports (Tabulation Reports)
Certified payroll - DAVIS BACON

LPA-Licenses, Permits & Agreements
Facility Tenant Agreement
Permits – Rad. Worker, Excavation, NPDES, ESH ID

AF-Accounting & Finance
Job Condition Statements
Invoices to Client
Bill of Lading
Invoices from Subcontractors

ET - Equipment & Transportation
Inventory

PRO - Procurement
PO Register
Lien Release

WH - Warehouse
Freight Damage Report, Field
Bill of Lading

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 07/03/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Load INTER modal

HAZARDS

Biological:
Heat, Insects, Reptiles

Chemical:
Fuel

Physical:
Lifting Equipment

Radiological:
Per Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[illegible] WILLIAMS	178110	
[illegible]-D. STACTER	141589	
K Knight	190611	
Subcontractor	142324	
D. STOFFORD	113569	

Meeting Conducted By: [illegible] (Print Name) SSC (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 02/02/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Cut & Remove old water line on Hillside
House Keeping

HAZARDS

Biological:
Insects & Reptiles

Chemical:
Fuel, Dust

Physical:
Heavy Equipment

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
B Williams	178110	
liam D Hogan	197531	
ttlew Rodriguez	197530	
K Knifong	190611	
JD STOLTER	141589	
Tim Hogan	141364	
GERALD Schuett	191326	
D. STofford	113569	
SUMMERS	191324	

Meeting Conducted By: (Print Name) (Title) (Signature)

Tailgate Safety Meeting

l Area: TA-2 SSHASP No. Date 07-1103

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

Continue Demo - Remove Asphalt, Move Roll-off

AZARDS

lological:

Insect

hemical:

Fuel

hysical:.

Leaving Equip

adiological:

Rem Pump

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
A WILLIAMS	178110	
T. A HUGHN	195264	
Matthew Rodriguez	197590	
William D Hogan	197531	
K Knight	190611	
M. KLINE	195958	
Delbert Shirley	195288	
EDWARD SCHMIDT	191326	
SUMMERS	191329	
J Coleman	190383	
D. STAFFORD	113569	

Meeting Conducted By: MARTY CZYZYKSKI SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

al Area: TA-2 SSHASP No. Date 06/30/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Coronado Demo

Lead TNT/A models

HAZARDS

Biological:

Insects

Chemical:

Fuel

Physical:

Lifting Equipment

Radiological:

Rad Rags

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
[illegible] Williams	178110	
K Kuntz	190611	
D. Stafford	113569	
Matthew Rodriguez	197530	
Jillian D Hogan	197531	
Delbert Shirley	195288	
M. KLINE	195958	
Ronald Schnell	191326	
J.D. SHELTON	141589	
J Coleman	190383	
M. [illegible]	0.7593	
Summers	91324	

Meeting Conducted By: [illegible] SSA
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 06/27/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Corona Ave Demo

Load Intermodals

HAZARDS

Biological:

Insects

Chemical:

Fuel, Dust

Physical:

Lifting Equipment

Radiological:

Rem Pad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Toffoni	113569	
Dave Williams	178110	
K Knifong	190811	
T & TK espo	141562	
William Hoga	197531	
Matthew Rodriguez	197530	
Delbert Shirley	195288	
GERALD Schuett	191326	
BLACKWELL	193252	

Meeting Conducted By: MARK Chrabaszcz SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted] Area: TA-2 SSHASP No. Date 06/26/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Mercury controlled AREAS

AZARDS

Biological:
INSECTS

Chemical:
Fuel, Hg VAPOR

Physical:
[redacted]ays, Moving Equipment

Radiological:
Pers Rup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[redacted] WILLIAMS	178110	
[redacted] STOCKS	113567	
J D STALTER	141589	
William D Hogan	197531	
Matthew Reisinger	197530	
SBLACKWELL	197552	
K Kistler	150611	
[redacted] Schuett	191326	
Elliott Shirley	195254	
J Owen Carlson	190921	
MKLINE	195958	

Meeting Conducted By: [redacted] SSI
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]l Area: TA-2 SSHASP No. Date 001 25 03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Finish vent line Removal
Tour @ 14:00

AZARDS

Iological:
INSECTS

hemical:
Fuel

hysical:
[redacted] Equip

adiological:
Pen Rep

HAZARD CONTROL MEASURES

ersonal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

ngineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos. DHR

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[redacted] Williams WG11	178110	
Tim Hogan CW.	141561	
John Carlson	190921	
K Knifong	190611	
D. Stafford	113569	
William D Hogan	197531	William D Hogan
Matthew Rodriguez	197530	
Delbert Shipley	195288	
John Conley	182455	
Chuck Schuft	191326	
BLACKWELL	193252	
Debra Gonzales	192296	
[redacted]		
[redacted]		

Meeting Conducted By: [redacted] 550
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]l Area: TA-2 SSHASP No. Date 06/24/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

Ladder SAFETY
Load out of INTACT models
Caravado Demo
Remove West side

AZARDS

iological:
INSECTS

:hemical:
Fuel, DUST

'hysical:.
[redacted]NG Equipment, Flying Debris

Radiological:
Rem Proj

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
[redacted] WILLIAMS	178110	
[redacted] Stafford	113569	
[redacted] B Hight SAI	187060	
John Conley	182455	John Conley
K Knight	190611	
JD STRATTON	141569	
Debra Gonzales	192296	
Andy Crowder	114987	
Delbert Shirley	195288	
Leonard M. Scott	197072	
John Curtis	190921	
Tim Hogan	141544	
William D Hogan	197531	
Matthew Rodriguez	197530	

Meeting Conducted By: MARTY L PRZYBYSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 061231 03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronada Demo
Remove Vent Line

HAZARDS

Biological:
Insects

Chemical:
Fuel

Physical:
Moving Equipment

Radiological:
Pen Prep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DANA WILLIAMS	178110	
N. KLINE	195958	
J. Carlson	190921	
J D STALTER	141589	
S BLACKWELL	193252	
J Coleman	190383	
Delbert Shirley	195284	
John Conkey	182455	
Debra Gonzales	192296	
GERALD Schnell	181324	
Keith Knight	190611	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 06/20/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

VAULT Demo
Cacunado Demo
Weld Trailer Frame
Excavation Boundaries

IAZARDS

Biological:
INSECTS

Chemical:
Fuel, Hg vapors

[redacted]cal:
Flying Debris, Moving Equipment

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2
[redacted]in Pager

MEETING ATTENDEES

[redacted]T NAME / ORGANIZATION	Z #	SIGNATURE
[redacted]NA WILLIAMS	178110	
BLACKWELL	193252	
JD-STALTER	141589	
EC Schuell	191326	
John Copley	K2455	
Debra Gonzales	192296	
Myra Lopez	087898	
John Carlson	190921	
J Coleman	190383	

Meeting Conducted By: MARTY L. PRZYBYSZ SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 06/19/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
EXPOSE CONCRETE VAULT
CORONADO DEMO RX PAD
MERCURY CONTROLLED AREA
VENT LINE EXCAVATION

HAZARDS

Biological:
INSECTS

Chemical:
Hg, FUEL, LIQUID IN VENT. LINE TRENCH

[redacted]ical:
CUTTING, MOVING EQUIPMENT

Radiological:
PIPE RUST

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:
SSHASP MOD. FOR Hg WORK

Monitoring:
Hg AIR SAMPLES

Special Equipment:

EMERGENCY ACTIONS
911 - LOS ALAMOS TA-2
[redacted] JOHN JORDEN

MEETING ATTENDEES

[redacted] NT NAME / ORGANIZATION	Z#	SIGNATURE
Rob Hintle SAI	187160	
Summit RS	191324	
Ana Williams	78160	Ana Will
Debra Gonzales	192296	Debra Gonzales
BLACKwell	193252	[illegible]
[illegible]	82455	[illegible]
[illegible] Schell	191326	[illegible]
J.D. Stalter	141589	J.D. Stalter
Doug	087898	Myra Lyn
M. Kline	195958	M Kline

Meeting Conducted By: [illegible] CSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 06/18/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Remove Hg CONTAMINATED Soil & SAMPLE
CORRUGATED Demo
Expose Vault

HAZARDS

Biological:
INSECTS

Chemical:
Fuel, Hg

Ph[redacted]ical:
[redacted]ING EQUIT.

Radiological:
Pen Rupt

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

[redacted] NT NAME / ORGANIZATION	Z#	SIGNATURE
Dana Williams	178110	Dana Williams
J.D. STALTER	141589	J.D. Stalter
Keith Knight	190611	Keith Knight
J. KLINE	195958	William Kline
T Carlson	190921	
Summers	191321	
Gary Sikkell	191326	
Debra Gonzales	192296	Debra Gonzales
Blackwell	193252	
Lopez, Myra	087898	Myra Lopez
J. Cobuen	190383	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 6/17/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Secondary Demo
Site clean-up
KSL Remove Transformer

IAZARDS

Biological:
Insects

Chemical:
Fuel

Physical:
Moving Equipment

Radiological:
Pan Pup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DANA WILLIAMS	178110	
Keith Knight	190611	
Debra Gonzales	192296	
M. KLINE	195958	
BLACKWELL	193252	
ROB HINKLE SAI	150160	
Myra Lopez	089878	
Sergio Schnell	191326	
SUMMERS	191329	
Coleman	190383	
J.D. STALTER	141589	

Meeting Conducted By: [redacted] SSA

(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 06/13/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo

HAZARDS

Biological:

Insects

Chemical:

Fuel

Ph[redacted]cal:

[redacted]ings Debris

Radiological:

Pen Rup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Knifong	190611	
Summers	19132 d	
DANA WILLIAMS	178110	
J.D. STALTER	141589	
J. Coleman	190383	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]nical Area: TA-2 SSHASP No. Date 06/12/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Finish TA-61 site restoration
Housekeeping

HAZARDS

Biological:
Sun, Insects, Reptiles

Chemical:
Fuel,

[redacted]ical:
[redacted]ving Equipment, Flying Debris

Radiological:
Peir Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
ANA WILLIAMS	178110	
[redacted]	190611	
L Jackson	194174	
J Carlson	190921	
J. Stafford	113569	
[redacted] Schutt	191326	
BLACKWELL	193252	
Debra Gonzales	192296	
J-D. STALTER	171589	
JColeman	190383	
M. KLINE	195958	

Meeting Conducted By: [redacted] SSA

(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 06/11/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Coronado Dena
sample sludge in Poly TANK
site tour DOE

HAZARDS

Biological:
INSECTS & Reptiles

Chemical:
Fuel, Hg vapor, DUST

Physical:
[redacted]ing Equipment, Flying Debris

Radiological:
Per Rwp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
see Pre Job For PPE For sampling

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-3

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ANA WILLIAMS	178110	
[redacted]		
BLACKWELL	193252	
M. KLINE	195958	
J. Carlson	190226	
J.D. STOLTEN	141589	
D. Stafford	113569	
SUMMERS	191329	
Schnell	191386	
Debra Gonzales	192296	
Alan Hinkle SAI	187060	
John Conley	182455	
Sam Scott	176367	
J Coleman	190383	
[redacted]		

Meeting Conducted By: [redacted] (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 6/10/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Canvada Dead
Finish Work @ TA-6

HAZARDS

Biological:
Insects, Reptiles

Chemical:
Fuel Dust

[redacted]ical:
Flying Debris, mowing vehicles

Radiological:
Pen Rup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2 -

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Dana Williams	178160	
John Carlson	190924	
John Jackson	174174	
Keith Kniffen	190611	
J.D. Stafford	141589	
Blackwell	193252	
John Conley	182455	
Dan Scott	176367	
Debra Gonzales	192296	
Adrian Romero	120634	
Ago Whittle SAI	187060	
Coleman	190383	
Myra Lopez	087898	
MARK KLINE	19595B	
J. Stafford	113519	

Meeting Conducted By: Matthew Parzybok SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 06/16/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Trailer Move
Concrete Dems
Power Outage

IAZARDS

Biological:
Insects

Chemical:
Fuel

[redacted]ical:
Moving Equipment

Radiological:
Pen Pad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Dana Williams NGI	178110	
Keith Knife	190611	
Alan Hillie SAI	182000	
TD Stoltzfus	141589	
Summers	191324	
M. KLINE	195950	
John Conley	182455	
Gerald Schnell	191326	
JColeman	190393	

Meeting Conducted By: [illegible] SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 1/30/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Physical setting in core
Secondary Bldg Dema

HAZARDS

Biological:

Chemical:
Fuel

Physical:
[redacted] TRIP & Fall, overhead loads, Lifting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
[redacted] WILLIAMS	178110	
H TONTAINT	191947	
ED WEST	142956	
[redacted]	190399	
DONOVAN TORIVIO	170066	
JOHN CARLSON	190921	
JIM FENNEM	191503	
JOHN SCOTT	176367	
J COLEMAN	190363	
RALPH YOUNG	169743	
D.J DANARD	190586	
JIM STAEHR	190381	
JON LOVATO	142794	
DANIEL ORTIZ	192477	
ELAINE BROWN	190385	
[redacted] WHITLOW	194571	
[redacted] MCDONALD	193753	
[redacted] BALL / MIKE	193024	
HAL RUTLAND	190586	
SHAWN LAWLOR	192795	
DEBRA GONZALES	192296	
[redacted]	141743	
GERALD SCHELL	191326	
JOHN CONLEY	182455	
MONTANA WINCH	114734	

Meeting Conducted By: [redacted] SSO MARTY L. [redacted]
(Print Name) (Title) (Signature)

[redacted] Safety Meeting Part 2

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
CONTRACT 41968-000-02-CJ

956 18.072 Safety Meeting - Toolbox
Tailgate Safety Meeting 27

Provided By Document Controls

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TO: Project File AUTHOR/ORIGINATOR: Safety Officer / Marty P

TITLE/SUBJECT: Tailgate Safety Meeting

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All information must be filled out completely before submittal to Document Controls.

CATEGORIES: USE ONLY THE CATEGORIES LISTED

M-Contract Management
Contract with Client
Contract Change orders
Contract Ceiling
Project Closeout Report

CPC-Client Project Correspondence
IOC's, Faxes & e-mail – Incoming & Outgoing
* Client Meeting Notes
* Telecom Reports
* Correspondence

PRE- Pre Award Subcontract Documents
* Request for Proposal
* Bid Package Review Documents
* Bidders Questions
* Proposals/Bids

POST-Post Award Subcontract Documents
* Subcontract Files
* Weekly Activities Performance Report
* Subcontractor Change Orders

TQM-Total Quality Management
* Lessons Learned
* Environmental Regulations Guidance Manual

PC-Project Controls
* Chart of Accounts/Cost Scheduling (Accruals)
* Progress/Status Report (Project)
* Schedules (overall) Project
* Estimates

DCE-Design/Construction Engineering
* Design Criteria (Design Project) IM, VCA, etc.
* Request for Information
* Ground Water Investigation
* Peer Review
* Readiness Review
* Drawings

MA - Management & Administration
* Corporate Policies
* Authorization for Expenditures

RM - Risk Management
* Insurance Certificates

QAQC-Quality Assurance/Quality Control
* Calibration Records
* Corrective Action Reports
* Assessment Reports
* Nonconformance Reports
* Lessons Learned

SE-Safety & Environmental
* Safety Inspections, Safety Meetings
* SSHASP's & Modifications
* Training Records
* SWPPP, Waste Characterization Strategy Forms
* Radiological Data, Field Logbooks

COM-Construction Management
* Contractors Daily Reports (Tabulation Reports)
* Certified payroll - DAVIS BACON

LPA-Licenses, Permits & Agreements
* Facility Tenant Agreement
* Permits – Rad. Worker, Excavation, NPDES, ESH ID

AF-Accounting & Finance
* Job Condition Statements
* Invoices to Client
* Bill of Lading
* Invoices from Subcontractors

ET - Equipment & Transportation
* Inventory

PRO - Procurement
* PO Register
* Lien Release

WH - Warehouse
* Freight Damage Report, Field
* Bill of Lading

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 06109103

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Coronado Demo

IAZARDS

Biological:
Insects, Reptiles

Chemical:
Fuel

Physical:
Moving equipment, Flying Debris

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
ANA WILLIAMS	178110	
J.D. SLATER	141589	
DAN SCOTT	176369	
Keith Knifer	190611	
T. KLINE	195958	
John Conley	182455	
S BLACKWELL	143252	
E. Schnell	191376	
J. Stafford	113569	
J Jackson	04774	
CADE HINKLE SAE	182060	
Myra Lopez	087898	
L. Coleman	190383	
Debra Gonzales	192296	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 06/06/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo

HAZARDS

Biological:

Insects or Reptiles

Chemical:

Fuel

Physical:

Moving Equipment, Flying Debris

Radiological:

Pu Ray?

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
eith Knifton	190614	Keith Knifton
Dan Seitz	176367	Dan Seitz
D. STALTER	141589	D. P. Stalter
C BLACKWELL	193262	C Blackwell
Debra Carlson	190921	Debra Carlson
Debra Gonzales	192246	Debra Gonzales
L. Stafford	113569	L Stafford
Coleman	190383	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Area: TA-2 SSHASP No. Date 6/5/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
CONTINUE CONCRETE FOUNDATION REMOVAL & DISPOSAL
CONTINUE FENCE REMOVAL & STORM WATER CONTROLS
CONTINUE REGRADING @ TA-61

HAZARDS
EQUIPMENT MOVEMENT

Biological:
INSECTS

Chemical:
MSDS LOCATED IN TRAILER, BARRICADE AROUND TANK FOR MERCURY

Physical:
HEAT STRESS

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 LOS ALAMOS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Keith Knight	190611	Keith Knight
JD Slatick	141589	JD Slatick
John Carlson	190921	John Carlson
L. Stafford	113569	L. Stafford
J Jackson	194174	J Jackson
Debra Gonzales	192296	Debra Gonzales
Adrian Romero	120634	Adrian Romero
Myra Lopez	087898	Myra Lopez
ABB Hiltic SAI	180660	ABB Hiltic SAI
Dan Scott	176367	Dan Scott

Meeting Conducted By: Dana Williams (Print Name) CM (Title) Dana Williams (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No.: Date 6/4/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
CONTINUE FOUNDATION REMOVAL, HAUL CONCRETE, BACKFILL
CONTINUE FENCE REMOVAL
REGRADE TA-61 FOR SEEDING
CONTINUE REACTOR BASE DEMO

HAZARDS
OPEN EXCAVATIONS, STEEP HILL SIDE

Biological:
INSECTS

Chemical:
FUEL, MSDS LOCATED IN TRAILER

Physical:
HEAT STRESS

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:
DUST SUPPRESSION

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - LOS ALAMOS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
J.D. STALTER	141589	J D Stalter
Keith Knifen	192611	Keith Knifen
M. KLINE	195958	M Kline
Gerry Schuett	191374	
J Jackson	174174	
Dan Scott	176369	
D. Stuffard	113569	
Debra Gonzales	192296	Debra Gonzales
Delbert Shirley	195288	
Abd Hiltle SAI	187060	
John Carlson	190921	
Coleman	190383	
Skip Conley	182455	
myna Lee	088892	myna Lee
Jim Stalter	190381	

Meeting Conducted By: Dana Williams CM
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 6/3/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
OFFICE FOUNDATION DEMO
FENCE REMOVAL
BACKFILL TA-61 PIPE HOLE

IAZARDS
SHARP OBJECTS

Biological:
INSECTS

Chemical:
FUEL - MSDS LOCATED IN TRAILER

[redacted]cal:
BACK STRAIN W/SHOVELING, HEAT

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Keith Knifen	190611	Keith Knifen
D-STALTER	141589	
BLACKWELL	193252	
Sabo Conley	K2455	John Conley
D. Stafford	113569	
M. KLINE	195958	
Alan Hinkle SAZ	187060	
J Jackson	K6174	
Debra Gonzales	192916	Debra Gonzales
Adrian Rivera	120634	
Julian Gonzales	190921	
Tom Scott	176367	
Albert Shirley	195288	
Coleman	190383	

Meeting Conducted By: DANA WILLIAMS (Print Name) CM (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 08/02/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Block Bldg. Demo
Remove 4-Unit Trailer
Fence Removal

HAZARDS

Biological:
Insects, Reptiles

Chemical:
Fuel

Physical:
Cutting, Flying Debris

Radiological:
Pu Dust

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
J D STACEK	141589	J.D. Stacek
Keith Kruger	190611	Keith Kruger
Sibra Gonzales	192396	Sibra Gonzales
D. Stafford	113569	D. Stafford
DANA WILLIAMS	178110	Dana Williams
Tobin Carlson	190921	Tobin Carlson
Coleman	190383	Coleman
Tom Scott	176367	Tom Scott
Albert Shirley	195288	Albert Shirley
John Conley	152455	John Conley
		Myra Rios

Meeting Conducted By: / (Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 05/28/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Excavation Work

HAZARDS

Biological:

Insects

Chemical:

Fuel

Physical:

Heavy Equipment

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Use phone - TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
D. Stafford	113569	
AVB Hinkle SAT	182060	
John Clayton	190921	
Dana Williams	178110	
Blackwell	193262	
Debra Gonzales	192296	
Alvin Rowe	176634	
John Jackson	174174	
Adam Scott	176367	
J.D. Slater	141589	
Elbert Shirley	195288	
Jose Lopez	687848	
W Klein	195953	

Meeting Conducted By: Mark Wrzesinski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 05/29/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

PPE use
Fence Removal
Load out Rubble

IAZARDS

Biological:
Insects, Sun, Reptiles

Chemical:
Fuel

[redacted]cal:
[redacted]ting, Flying Debris, Moving Equip

Radiological:
Per Rwp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
BLACKWELL	193252	
Jackson	194174	
Conley	182455	
D. Stafford	113569	
JD STALTER	141589	
Dana Williams	178110	
Adam Scott	176347	
Albert Shirley	195248	
A. KLINE	195958	
AVB Hinkle SAT	18706	
Debra Gonzales	192296	
TAX WEST	142356	
LENARD YORK	260646195	

Meeting Conducted By: MARTY Lipczynski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 05128103

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Remove Fence
Work at Pad
Empty Trailer

HAZARDS

Biological:
Insects & Rodents

Chemical:
Fuel

[redacted]ical:
Trip & Falls

Radiological:
Pen Rup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-3

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Dan Williams	178110	
B Ackwell	193252	
JD Stalter	141589	
John Carlson	190521	
J Coleman	190383	
E Schnell	191325	
Aldo Hintek SAL	187040	
L. KLINE	195958	
D. Stafford	113569	
John Conley	182455	
Jesse		
Victor Cook	118012	
Phil Ley	045236	
Adam Scott	176567	
Kilbert Shirley	195288	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]nical Area: TA-2 SSHASP No. Date 5/22/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

LOADING TRUCKS
REMOVE FENCE
CLEAN TRAILERS

HAZARDS

FALL, SLIPS
MOVING EQUIP.

Biological:
SNAKES, INSECTS

Chemical:
MSDS IN TRAILER

[redacted]ical:

Radiological:
RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Dana Williams	178110	Dana Williams
Adam Scott	176367	Adam Scott
John Carlson	140921	John Carlson
Albert Shirley	195288	Albert Shirley
Andrew Schell	191326	Andrew Schell
Debra Gonzales	192296	Debra Gonzales
J.D. Stalter	141589	J.D. Stalter
John Conroy	182455	John Conroy
David Stafford	113569	David Stafford
John Jackson	M4174	John Jackson
M. KLINE	195958	Thomas M Kline
ALBO-HUNKLE STAT	187060	[illegible]
mcpope	088898	Bruce Lee
Phil Long	095034	Phil Long

Meeting Conducted By: Dana Williams CM Dana Williams
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

Area: TA-2 SSHASP No. Date 5/23/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
BUILDING DEMOLITION
HAUL WASTE CONTAINERS
HAUL DEMOLITION DEBRIS

HAZARDS

Biological:
INSECTS

Chemical:
FUEL

Physical:
MOVING EQUIPMENT

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Dan Scott CW	176367	
[illegible]	190611	
JD Sinclair	141549	
Delbert Shirley	195288	
Debra Gonzales	192946	
Blackwell	193252	
[illegible]	190393	
M. Kline	195958	

Meeting Conducted By: Dana Williams CM
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 05/22/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Block Bldg Demo
Duratek Roof Box

HAZARDS

Biological:
Insects

Chemical:
Dust, Fuel

Physical:
Moving Equipment, Flying Debris

Radiological:
Pers Rwp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DANA WILLIAMS	178110	
J D STALTER	141589	
Debra Gonzales	192296	
Keith Knight	190611	
BLACKWELL	193262	
Schaff	191326	
Adrian Rivera	170534	
R H Tountain	191947	
John Conley	182455	
ABB HINKLE SAL	187010	
LAL RUTLAND	190588	
MATT WINK	114734	
MOUNTAIN	193023	

Meeting Conducted By: MARK WARZYNSKI SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]nical Area: TA-2 SSHASP No. Date 05/21/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Block Bldg Demo
Remove Basement Rubble

HAZARDS

Biological:
Insects

Chemical:
Fuel, Dust

[redacted]ical:
Moving Equpt, Flying Debris

Radiological:
Pen Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TO ntAINT	19147	
ANA WILLIAMS	178110	
J-D. STALTER	141589	
M. KLINE	195958	
Keith Knifton MOUNTAIN	190611	
ALOS HINTLE SXE	193023	
J Jackson	18210	
Debra Gonzales Scha Conlee)	19229	
	182455	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]nical Area: TA-2 SSHASP No. Date 05/19/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Block Bldg Demo
IV slab work

IAZARDS

3iological:
Insects

Chemical:
Fuel

[redacted]cal:
Moving Equipment, Flying Debris

Radiological:
Rem Rays

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
H Tountain	191947	
ANA WILLIAMS	178110	
Jackson	174174	
Zebra Gonzales	192296	
Keith Kuntz	190611	
SUMMERS	191329	
J.D. STALTER	141589	
GERALD SCHOOL	191326	
JIM STAEHLE	190381	
M. KING	195958	
PAT RUTLEDGE	190589	
MOUNTAIN	193023	
Visitor Card	118012	
	120534	
CARB HUMBLE SAT	18366	
ST		
PHIL LOPEZ	095236	

Meeting Conducted By: Marty Pietrykowski SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 05/16/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Tornado Loading Rubble
Prep For Demo Of Bldg.

HAZARDS

Biological:
Insects, Dust

Chemical:
Fuel

[redacted]cal:
Lifting Equipment, Flying debris

Radiological:
Pen Rupt

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

Call Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Debra Cummings	192246	Debra Cummings
J Postell	141589	J-D-Stallard
Ronald Schutt	191326	
SUMMERS	191329	

Meeting Conducted By: Dana Williams CM Dana Williams
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 05/15/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

Clean Mud Eq. Leave
Work on Back Pad

HAZARDS

Biological:
Insect

Chemical:
Fuel

Physical:
Moving Equip

Radiological:
Pen Pump

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H Toutaint	191947	
Ital Rutland	19588	
J-D Stocker	141589	
Dana Williams	178110	
Debra Gonzales	192296	
Keith Jackson	190611	
	194174	
M-KLINE	19598	
Mountain	193023	
P. Lopez	095236	

Meeting Conducted By: Marty Pazdzyski SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 05/14/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Work on Basement slab
Load Boxes For TA-54 shipment
Continue Load out Rubble

HAZARDS

Biological:
Insect

Chemical:
Fuel

P[redacted]cal:
[redacted]ing Equip

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos Fire

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R/OSB Hinkle EAP	187060	
Mountain	193023	Mark Mountain
Jackson	1-74174	
J.D. Stalter	141589	J.D. Stalter
M. Kline	195598	M. Kline
Debra Gonzales	192296	Debra Gonzales
John Conley	182455	John Conley
Victor Crandell	118012	
Hal Rutland	190586	
Dan McDonald	193253	
Summers	191329	
Dana Williams	178110	Dana Williams

Meeting Conducted By: Monty L Jaszlynski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 5/13/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Toutaint	191947	
BLACKWELL	193252	
HINKLE SAT	187660	
McDonald	193253	
OUNTAIN	193023	
Summers	190611 191320	
Ralph Young	169743	
Schuett	191326	
Gonzales	192296 194174	
Jackson		
John Conley	182455	
Williams	178110	
Coleman	190353	
Victor Cantu	118012	
Lopez	095236	
Stinson	141589	
	08774	
Stafford	113269	
Adkins	142816	

Meeting Conducted By: (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 05/12/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Remove RC concrete
Work in Basement

HAZARDS

Biological:
Insects, Sun

Chemical:
Fuel, Dust

[redacted]cal:
Lifting, moving Equipt

Radiological:
Rad Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos Theo

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Boutwell	191947	
Hph Lamb	169743	
Jha Conley	182455	
David Stafford	W3669	
JD Souter	141589	
Mountain	193023	
J Jackson	194174	
Hal Rutland	194588	
Keith Krupa	190111	
Michael Mahaffey Coleman	525-27-0853	
	190383	
Debra Gonzales	192296	

Meeting Conducted By: (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 05/09/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Cut up Tent
Work on Basement
Slab Work
Red Flag Fire Danger

HAZARDS

Biological:
Insects.

Chemical:
Fuel, Dust

Physical:
Flying Debris, Moving Equipment

Radiological:
Pen Emp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
R H TOURMAINE	191947	
MOUNTAIN	193023	
STATE HR	191381	
SUPPLIERS	191324	
RUTLAND	190584	
Derrick Jameson	195424	
Ralph Young	169743	
M. King	19595B	
Sabra Conley	182455	
J.D. STOLTON	141589	
Victor Gardi	11301D	
WARRIOR	194571	
BLACKWELL	193252	
Debra Gonzales	192296	
John Jackson	194174	
J Coleman	190383	
ANDREW DIXON	193339	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 05/08/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Demo Remaining TENT sections
clean Debris From Basement
Red Flag Fire Danger NO HOT WORK.

HAZARDS

Biological:
INSECTS + REPTILES

Chemical:
Fuel,

Physical:
/ Protection, Falling Debris

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOUTANT	191947	
JD STALTER	141589	
MOUNTAIN	193023	
Debra Gonzales	192296	
M. KLINE	195958	
Kelly Kuyken	190611	
SUMMERS	A1324	
WHEELER	194571	
J Jackson	194174	
Alph Young	169743	
McDonald	193253	
BLACKWELL	193252	
Coleman	190393	
Hal Rutland	190588	
Sabra Conley	182455	
Victor Garcia	162018	
Phil Lopez	095236	
MONTY MONSEFREE MPE	529-76-6137	
DORIS	306694496	
Jeerie K Jameson	195424	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 05/07/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Receive + Load Intermodal Boxes
Work on Basement
TA-61 Earth work

HAZARDS

Biological:
Insects + Reptiles

Chemical:
Fuel, Dust

Physical:
Moving Equipment

Radiological:
Pen Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2 TA-61

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
ebra Gonzales	192296	Debra Gonzales
H Touthaint	191947	
Ino Williams	178110	
Jon McDonald	193253	
WHEELER	194521	
Jarrell Jamison	19484	
John Jackson	174174	
[illegible]	169743	
Jim STARR	380191	
JD STALTER	141589	
Keith Knifton	190611	
Etta Cobley	182455	
John Carlson	190921	
Summers	191329	
MOUNTAIN	193023	
myra lopez	087898	
Pat evans	190550	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]al Area: TA-2 SSHASP No. Date 05/06/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Remove TENT Fabric
Dig Ramp INTO Basement
Shipment TO TA 54

HAZARDS

Biological:
INSECTS

Chemical:
Fuel, Dust

Physical:
[redacted]l Protection, Excavation

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
HTOUTAIN	191947	
Jackson	194174	
WHITTIER	194571	
DANA WILLIAMS	178110	
JIM STAGHN	190381	
HAL RUZZAN	190588	
alan Yonts	169743	
Jon McDonald	93253	
Keith Knipp	190611	
Ernest Short	191324	
John Conley	182455	
Debra Gonzales	192916	
John Carlson	190921	
M. KLINE	195958	
Derrick Jameson	195424	
JD SMITH	141589	
Victor Garde	118012	
TRI WEST	192856	
MOUNTAIN	193023	
PHIL LOPEZ	095236	

Meeting Conducted By: _____ CSO _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 05/05/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

WORK IN TENT

HOUSE KEEPING

IAZARDS

Biological:

INSECTS, POTTIC

Chemical:

FUEL, DUST

cal:.

MOVING EQUIPMENT

Radiological:

PRE RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Blackwell	193252	
R H Toutaint	191947	
JIM STAEHR	191380	
Dana Williams	178110	
Ralph Young	169743	
Debra - Gonzales	192296	
John Jackson	174174	
J.D. Stalter	141584	
Summers	191324	
Keith Knight	190611	
John Carlson	190921	
M. KLINE	195958	
Whitaker	194571	
J Coleman	190383	
Derrick Jamerson	1951124	
MOUNTAIN	193023	Mark Mount
GERALD Schnell	141320	
Don McDonald	193253	Daniel McDonald
PHIL LOPEZ	095236	Phil Lopez
Myra Lopez	087848	Myra Lopez

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 05/02/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Lead INTERmodal
Housekeeping
Ship Boxes

HAZARDS

Biological:
INSECTS

Chemical:
Fuel

Physical:
Lifting Equipment

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Dana Williams	178110	✓
Wheeler	194571	
D. Stalter	141589	
J Jackson	194174	
Kearns	194795	
Hal Rutland	190586	
John (Carlo)	182455	
Debra Gonzales	192396	
Ralph Young	169743	
John Carlson	190926	
Wright Jameson	195424	
Taylor Ovard	178612	
J Coleman	190383	
Mountain	195023	Mark Mauro
Rt Tout Mt	191947	
Keith Knight	190611	
Sam The Man McDaniel	193253	
Phil Lopez	095236	
Gerald Schutt	191326	

Meeting Conducted By: (Print Name) (Title) (Signature)

Tailgate Safety Meeting

Area: TA-2 SSHASP No. Date 05/01/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Remove Transite on Conex / Room
Work in Tent
Coordinate Removing Concrete

HAZARDS

Biological:
Insects, Reptiles

Chemical:
Fuel, Dust

Physical:
Moving Equipment, Lifting, Pinch Points

Radiological:
RR Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Rob Hinkle SAE	182060	
H Toutaint	191947	
ebra Gonzales	192296	Debra Gonzales
ohn Jackson	194174	
Josh Young	169743	
Wheeler	194571	
Hal Rutland	190588	
Dana Williams	178110	
J D Slater	141589	
Jon McDonald	193253	
Keith Knight	190611	Keith Knight
Garcia	194795	MG Garcia
J. Carlson	190971	
Coleman	190383	
M. Kline	195958	
Shy Godfrey	182466	
Victor Cordes	118012	
Derrick Jamerson	195424	
Darrel Stafford	113569	
Gerald Schmidt	191329	
Donald Billings	193976	
Mountain	193023	
Phil Lopez	094536	
Rene Gomez	142436	

Meeting Conducted By: [illegible] (Print Name) (Title) (Signature)

Mitigate Safety Meeting Part 2

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
SUBCONTRACT 41968-000-02-CJ

856 18.072 Safety Meetings - Tailgate
Tailgate Safety Meetings for 2003 90

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CATEGORIES: USE ONLY THE CATEGORIES LISTED

Contract Management
ntract with Client
ntract Change orders
ntract Ceiling
oject Closeout Report

C-Client Project Correspondence
)C's, Faxes & e-mail – Incoming & Outgoing
lient Meeting Notes
elecom Reports
:orrespondence

IE- Pre Award Subcontract Documents
Request for Proposal
Bid Package Review Documents
Bidders Questions
Proposals/Bids

OST-Post Award Subcontract Documents
Subcontract Files
Weekly Activities Performance Report
Subcontractor Change Orders

TQM-Total Quality Management
* Lessons Learned
* Environmental Regulations Guidance Manual

PC-Project Controls
* Chart of Accounts/Cost Scheduling (Accruals)
* Progress/Status Report (Project)
* Schedules (overall) Project
* Estimates

DCE-Design/Construction Engineering
* Design Criteria (Design Project) IM, VCA, etc.
* Request for Information
* Ground Water Investigation
* Peer Review
* Readiness Review
* Drawings

MA - Management & Administration
* Corporate Policies
* Authorization for Expenditures

RM - Risk Management
* Insurance Certificates

QAQC-Quality Assurance/Quality Control
* Calibration Records
* Corrective Action Reports
* Assessment Reports
* Nonconformance Reports
* Lessons Learned

SE-Safety & Environmental
* Safety Inspections, Safety Meetings
* SSHASP's & Modifications
* Training Records
* SWPPP, Waste Characterization Strategy Forms
* Radiological Data, Field Logbooks

COM-Construction Management
* Contractors Daily Reports (Tabulation Reports)
* Certified payroll - DAVIS BACON

LPA-Licenses, Permits & Agreements
* Facility Tenant Agreement
* Permits – Rad. Worker, Excavation, NPDES, ESH ID

AF-Accounting & Finance
* Job Condition Statements
* Invoices to Client
* Bill of Lading
* Invoices from Subcontractors

ET - Equipment & Transportation
* Inventory

PRO - Procurement
* PO Register
* Lien Release

WH - Warehouse
* Freight Damage Report, Field
* Bill of Lading

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 09/30/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

CUT TENT SECTIONS
CUT VENT LINE
CLEAN SLAB

HAZARDS

Biological:
INSECTS

Chemical:
FUEL, DUST

Physical:
MOVING EQUIPMENT SHARP EDGES

Radiological:
PAR RUN?

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
H Toutaint	191947	
Garcia	194795	
Ana Williams	178110	
Hal Rutland	190586	
Bob Hinkle	187060	
Alex Young	169743	
Kline	195958	
D. Stalter	141589	
David Stafford	113569	
Mountain	194571	
Debra Gonzales	193023	
John Conley	192946	
Rhi Carter	182452	
McDonald	190921	
Summers	178253	
Keith Griffin	191324	
Ronald Billings	190611	
Phil Lopez	143926	
Derrick Jameson	095236	
	195424	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 04/29/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

FALL PROTECTION AROUND TRENCH
CUTTING VENT PIPE
CONCRETE SLAB REMOVAL

HAZARDS

Biological:
INSECTS, SOIL

Chemical:
FUEL, DUST

Physical:
...NG EQUIPMENT

Radiological:
PER RWP's

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:
MONITOR AREA WITHIN 6' OF TRENCH

Special Equipment:

EMERGENCY ACTIONS
9/1 LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[illegible]	194795	[signature]
H TOMTAINT	191947	[signature]
10B HINKLE	187060	[signature]
DAVID WILLIAMS	178110	[signature]
MOUNTAIN	193023	[signature]
JOHN CONLEY	182455	[signature]
SUMMERS	191329	[signature]
JD STOUFFER	141589	[signature]
J CARLSON	190921	[signature]
[illegible]	194571	[signature]
KEITH KINGSLEY	190611	[signature]
[illegible]	190381	[signature]
[illegible]	190586	[signature]
[illegible]	193253	[signature]
RALPH YOUNG	189743	[signature]
M. KLINE	195958	[signature]
[illegible]	118012	[signature]
DAVID STOUFFER	113560	[signature]
JOHN JACKSON	192172	[signature]
DONALD JAMESON	185124	[signature]
MYRA LOPEZ	089885	[signature]
SPOKESMAN	190383	[signature]
PHIL LOPEZ	095236	[signature]
DEBRA GONZALES	192296	[signature]
RENE GONZALES	LM7476	[signature]
[illegible]	191329	[signature]

Meeting Conducted By: Mark C Pazyniski SSR [signature]
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 4/28/2003

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TENT WORK
VENT PIPE Removal

HAZARDS

Biological:
INSECTS

Chemical:
Fuel, DUST

Physical:
[illegible]S, MOVING EQUIPMENT

Radiological:
PER RWP's

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FALL PROTECTION

Engineering/Administrative Controls:

Monitoring:

Special Equipment:
ROPE HARDWARE

EMERGENCY ACTIONS
911- LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Toutaint	191947	
M Garcia	194795	
Ana Williams	178110	
AIOB Hinkle SAL	182640	
Mountain	193023	Mark Mound
Jim Stacha	190381	
J Coleman	190383	
Dora Gonzales	192246	
JD Stalter	141589	
Ralph Young	169743	
Darrell Stafford	113569	
Marty Klwe	195958	
Keith Knight	190611	
Dan Mylund	193253	
Dennick Jameson	195424	
Hal Rutland	190563	
Gerad Shivel	191326	
John Jackson	194716	
Donald Billings	193260	
J Wheeler	194511	
Phil Lopez	095236	
John Curtis	190921	
John Conley	182455	

Meeting Conducted By: Marty L. Przybylski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/26/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

120.215 ON TENT

HAZARDS

Biological:
INSECTS

Chemical:
Fuel

Physical:
FALL PROTECTION

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FALL PROTECTION

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H Toutaint	191947	
DANA WILLIAMS	178110	
I Garcia	194785	
JIM STAGGS	190380	
EDWARD SCHELL	191326	

Meeting Conducted By: MARTY L PRZYBYSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/25/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

CUT VENT PIPE

REMOVE CONCRETE IN TENT

HAZARDS

Biological:

INSECTS

Chemical:

FUEL

Ph[redacted]cal:

TENT, MOVING EQUIPMENT

Radiological:

PIPE PULP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
:IAM P. KING / SEC	195450	
H TOUTAINT	191947	
:/OP HINKLE SAT	187060	
ebra Gonzales	192296	Debra Gonzales
WHEELER	194571	
BLACKWELL	193253	
Devil Stafford	113569	
ERAD Schaef	191326	
N Garcia	194795	
ANA WILLIAMS	178110	
TD SADLER	141589	
Dan McDavid	193753	
Ralph Young	169743	
ohn Jackson	194174	
KLINE	195958	
J. Corlso	140921	
Derrick Jemison	194521	
Summers	191329	
ON BILLINGS	193526	
Victor Cook	118012	
ene Gomez	147436	
PHIL LOPEZ	095234	
Myra LOPEZ	047896	

Meeting Conducted By: Mary L Pawlowski SSD
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 041241 03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Vent Line Removal
Vent slab concrete Removal

HAZARDS

Biological:
Insects

Chemical:
Fuel

Physical:
Slips, Trips, Falls, Moving Equipment ...

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:
Rope System

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
P. KING	195450	
V Garner	194195	
John Jackson	194176	
E H TOUTANT	191947	
P WHERRY	194571	
D. Stafford	113569	
Debra Gonzales	192296	Debra Gonzales
ALB HUNKIE	187586	
DANA WILLIAMS	178110	
John Compton	190921	
JD SOUTHER	141589	
Victor Carde	113010	
Randy Barnes	192576	
M. KLINE	195958	
[illegible]	193253	
[illegible]	169743	
Summers/ Schnell	191324	
[illegible]	191326	
J Coleman	190383	
HAL RUTLAND	196588	
PHIL LOPEZ	095236	
JIM STAUFFER	350191	

Meeting Conducted By: [illegible] SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/23/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Vent Pipe Removal
Load Slab concrete
Remove Underground HEPA Line

HAZARDS

Biological:
Insects

Chemical:
Fuel

Physical:
Slip & Fall, Moving Equipment

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Positioning Equipment on hill

Engineering/Administrative Controls:

Monitoring:

Special Equipment:
Ropes & Hardware

EMERGENCY ACTIONS
911 - Los Alamos TA-2 - TA-61

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
WILLIAM KING	195450	
HACKWELL	193252	
GARCIA	194795	
H TOOLPUSHER	191947	
CHRIS HICKS	187060	
ANA WILLIAMS	178110	
INTERPRETER	194571	
Alph Young	169743	
JIM STAELIN	190381	
SUMMERS	191329	
SUETHANA	190160	
T. Carlson	190921	
J-D. STAELIN	141589	
Derrick Jameson	195424	
M. KLINE	195958	
[illegible]	193263	
EDWARD SCHMIDT	191324	
RONALD BILLINGS	193976	
Zebra Gonzales	192296	
[illegible]	182466	
MOUNTAIN	193023	
PHIL LOPEZ	095236	
RENE GOMEZ	147436	
MAL BUTLER	190586	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 4/22/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Vent Line Removal
Concrete Line Removal

HAZARDS

Biological:
Insects

Chemical:
Fuel

[redacted]al:.
Slips & Falls

Radiological:
Rad Resp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Fall Protection

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
oD Hinkle III	18640	
H Tontaint	191947	
AL RUTLAND	190566	
ANA Williams	178160	
Lozano	194785	
.P.King	195450	
Jackson	174174	
D STACER	141569	
JIM STAEHR	190381	
SWETNAM	190100	
J. Carlson	190921	
DonMcDonald	193253	
SUMMERS	191324	
John Copley	182455	
NRK MOUNTAIN	193023	
NALD BILLINGS	193926	
errick Jameson	195424	
ENE GOMEZ	147436	
AD WEST	142852	
elva Gonzales	192296	
Hyh Young	189743	
BLACKWELL	193252	
PHIL LOPEZ	095236	
Myra Lyn	087898	

Meeting Conducted By: Marty L Pazdalski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/21/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

SWR - Removal

VENT Line Removal

HAZARDS

Biological:

Dust, Insect

Chemical:

Fuel

[redacted]cal:.

[redacted] + Falls, Moving Equip

Radiological:

Rad Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Fall Protection on Scaffolds

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

Ropes + Hand Walk

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H Toughfaint	191947	
John Conley	182455	
[illegible] Jamieson	195424	
Jim Stagner	38 190381	
Mark Mountain	193023	
Jacob Hinkle	187060	
Hal Rutland	190588	
[illegible]	173-53	
[illegible]	141589	
[illegible]	190160	
J. Jackson	194174	
[illegible]	194745	
Victor Cowboy	118012	
Jack Rust	191044	
Ralph Yauty	169743	
William King	195450	
[illegible]	[illegible]	
Orril Stopard	113569	
[illegible]	190521	
[illegible]	194324	
Dana Williams	178110	
[illegible]	193976	
[illegible]	192316	
Phil Lopez	095236	

Meeting Conducted By: [illegible] SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/01/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Fall Unit Line
Load Slab

HAZARDS

Biological:
Insects

Chemical:
Fuel

Ph[redacted]cal:
[redacted] equip

Radiological:
Pen Pup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911-

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ebra Gonzales	192296	Debra Gonzales
vil Stafford	113569	
NALD BILLINGS	193976	
ID HINKLE	187060	
J.D. STALTER	141589	
Jackson	194174	
BLACKWELL	193252	
Carrie	194795	
ictor Garcia	118012	
an McDonald	193253	
om Benson	153767	
eith Knifton	190611	
HIL Lopez	095236	
MaryJane Winch	114734	

eting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 04/17/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Clean Slab
Remove vent line on bulkie

HAZARDS

Biological:
Insects

Chemical:
Fuel.

[redacted]cal:.
Working on slope, Heavy Equipment

Radiological:
Per Rup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Rope system For Hillside

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2
[redacted]N Pagers

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[illegible]	194795	[illegible]
Elena Gonzales	192940	[illegible]
Dan Jackson	194174	[illegible]
BLACKWELL	193252	[illegible]
CH TOUTAINT	191947	[illegible]
SUMMERS	191321	[illegible]
ABB Hinkle	187060	[illegible]
JAL RUTLAND	190588	[illegible]
WHITELER	194571	[illegible]
MOUNTAIN	193023	[illegible]
[illegible] WILLIAMS	178110	[illegible]
[illegible]	182160	[illegible]
[illegible]	182458	[illegible]
JD SMITH	141589	[illegible]
[illegible]	190921	[illegible]
[illegible]	169743	[illegible]
[illegible]	195424	[illegible]
[illegible] P. KING	195450	[illegible]
[illegible]	193253	[illegible]
[illegible]	11R012	[illegible]
[illegible]	F13977	[illegible]
[illegible]	193926	[illegible]
[illegible]	163133	[illegible]
KEITH TUKER	174862	[illegible]
TOM BENSON	153767	[illegible]

Meeting Conducted By: [illegible] SSD [illegible]
(Print Name) (Title) (Signature)

Gate Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]nical Area: TA-2 SSHASP No. Date 04/17/03

SAFETY TOPICS PRESENTED

OBJECTS DISCUSSED (Including Change Orders)

Pull vent line
Load slab

HAZARDS

Biological:
INSECTS

Chemical:
Fuel

[redacted]al:
[redacted]

Radiological:
Pre Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

[redacted]ll

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Debra Gonzales	192296	Debra Gonzales
[illegible]	R24455	[illegible]
H Tourtaint	191947	[illegible]
Alan Hinkle	187040	[illegible]
Coleman	190383	[illegible]
Dana Williams	178110	[illegible]
Mark Mountain	193023	Mark Mountain
Jim Carlson	F09521	[illegible]
N Cogan	191795	[illegible]
Steph Young	169747	[illegible]
[illegible] Wheeler	194571	[illegible]
Dan McDonald	193253	[illegible]
Keith Knight	190611	[illegible]
Tab West	192956	[illegible]
Donald Billings	193976	[illegible]
Hil Lopez	195236	[illegible]
Hal Butlan	190585	[illegible]
Victor Cash	118012	[illegible]
Jan Tan	381140	[illegible]
J Jackson	194174	[illegible]
Debra Schell	191326	[illegible]

Meeting Conducted By: [illegible] ESC [illegible]
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/16/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

TENT clean-up
Pad clean-up
Load & Ship Boxes

HAZARDS

cold

Biological:

Chemical:

Fuel, Dust

[redacted]cal:

Tires, Vehicle Traffic

Radiological:

Pac Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

[redacted]ain Page

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOWTAINT	191947	
ILLIAM KING	195450	
AVB HINKIE	187060	
Garcia	194745	
AVB WILLIAMS	178110	
Swingers	192324	
Keith Kinder	190611	
John Cridlebaugh	182455	
J D STOCKER	141589	
HAL RUTLAND	190585	
	193253	
Ralph Young	169743	
John Carlson	190921	
	192160	
Villar Sanchez	118012	
Debra Gonzales	192296	
John Jackson	194174	
RONALD BILLINGS	193576	
Raylond Bahe	193977	
MARK MOUNTAIN	193023	
AD WEEL	192852	

Meeting Conducted By: MARTY L PRZYBYSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 09/15/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Floor clean-up
Slab clean-up
Load + Ship Boxes

HAZARDS

Biological:

Chemical:
Fuel,

[redacted]al:.
Lifting, moving Equip

Radiological:
Pro RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-3

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Summers	191324	
H Tountain	191947	
TOUNTAIN	193023	Mark W Mound
Debra Gonzales	192296	Debra Gonzales
JIM STAEHR	190381	
DANA WILLIAMS	178110	
Garcia	194795	
J Jackson	194174	
ID STOLTEN	141589	
ETHAN	190160	
Keith Kuiper	190611	
John Yohey	169743	
Donald	0323	
LAD WEST	142856	
RONALD BILLINGS	193976	
WARREN	194571	
BLACKWELL	143252	
HAL RUTLAND	190568	
GERALD SCHELL	191326	
WILLIAM KING	195450	
Jack Reust	191044	
Vicki Crowell	178012	
PHIL LOPEZ	095236	Phil Lopez
John Curtis	190921	
Dayland Bahe	193927	Wayland Bahe
John Cothrop	182413	
J Cohen	190385	

Meeting Conducted By: Mark Pachynski SO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted] Area: TA-2 SSHASP No. Date 04/14/05

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Receive Liners & Load
Receive Flat beds
Back Fill TA-61
Demo concrete

HAZARDS

Biological:
Dust

Chemical:
Fuel

[redacted]cal:
Flying Debris, Noise, Overhead loads, moving Equipment

Radiological:
Poss Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection

Engineering/Administrative Controls:
HEPA ventilation in Tent

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
OE MORGAN	195457	Joe Morgan
STEVE BLACKWELL	193252	Steve Blackwell
[illegible]	194795	[illegible]
ANA WILLIAMS	178110	[illegible]
ebra Gonzales	197296	Debra Gonzales
ILLIAM P KING	195450	[illegible]
ha Jackson	194174	[illegible]
L SWEETNAM	190160	[illegible]
JD STALTER	141589	[illegible]
JIM STAEWR	581990	[illegible]
Dovvil Stafford	113569	[illegible]
Jeff. dis Jemerson	195434	[illegible]
GERALD Schnell	191326	[illegible]
Keith Knifen	190611	[illegible]
LAD WEST	192056	[illegible]
WHEELER	194571	[illegible]
Dan McDonald	193253	[illegible]
Ralph Young	169743	[illegible]
John Conley	182455	[illegible]
L. Coleman	190383	[illegible]
R Gamble	194945	[illegible]
Bob Livingston	192794	[illegible]
SUMMERS	191324	[illegible]
CHOB HINKLE	187065	[illegible]
HAL RUTLAND	190588	[illegible]
[illegible]	114734	[illegible]
[illegible]	190921	[illegible]
PHIL LOPEZ	195236	[illegible]
MARK MOUNTAIN	193023	[illegible]

Meeting Conducted By: Margaret Pazdyszki SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]nical Area: TA-2 SSHASP No. Date 04/11/07

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

TENT CLEAN-UP
VENT LINE REMOVAL

IAZARDS

Biological:
INSECTS

Chemical:
Fuel

[redacted]cal:
Trenching, Heavy Equipment

Radiological:
Pen Rup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
LLIAM KING	195450	
AL RUTLAND	190588	
GE MORGAN	195457	
MOUNTAIN	193023	Mark W Mauldin
JIM STALLAN	190381	
A.NA WILLIAMS	178110	
John Conley	R2455	John Conley
JD STOLTER	141589	
eith Kinter	190611	
WHEELER	194571	
Ethell	191326	
ebra Gonzales	192246	
Summers	191321	
T. CALLISON	194174	
ACOB HINKLE	18360	
AD WEST	142856	
John Conley	190924	
	193253	
SUE TN HAM	180160	
oseph Young	169743	
ecil Jamesan	195424	
arril Stafford	113569	
BLACKWELL	193252	
MIL Lopez	095236	

eting Conducted By: Marty L Przybylski SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cinical Area: TA-2 SSHASP No. Date 04/10/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Shipment to TA-54
Clean out tent
Start Vent Line Removal

IAZARDS

Biological:

Chemical:
Dust

[redacted]cal:
Working on slope

Radiological:
Pen Rwp2

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

[redacted]/L Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Lora Gonzales	192296	Debra Gonzales
LIAM P. KING	195450	
E MORGAN	195457	
BOB TWITTLE	189060	
TINA WILLIAMS	178110	
J WHEELER	194571	
J Jackson	194174	
MOUNTAIN	M3023	
Keith Kraft	190611	
D. Stafford	113569	
SUMMERS	M1324	
[illegible]	M3253	
HAL RUTLAND	M4588	
JAKE (Vacation)		
Ralph Young	169743	
JD [illegible]	141589	
[illegible] Jameson	195474	
John Carlson	M0921	
PHIL Lopez	095236	
ABBEY	193854	
S WETNAM	190160	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/09/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Receive Liner & Load
Demo Concrete & Load Super Sacks
Prep For Vent Line Removal

HAZARDS

Biological:
Dust

Chemical:
Fuel

Physical:
Debris, Noise, Overhead Loads

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DE MORGAN	195457	
DANA WILLIAMS	178110	
JD STALTER	141589	
WHEELER	194571	
[illegible]	90160	
[illegible]	19328	
John Jackson	174174	
-LIAM KING	195450	
ABS HINKIO	187060	
[illegible]	190383	
J Carlson	190921	
[illegible]	82455	
[illegible]	192296	
[illegible]	190611	
[illegible]	194795	
SUMMERS	191329	
[illegible]	169743	
[illegible]	193253	
[illegible]	142856	
MRK MOUNTAIN	193023	
[illegible]	194949	
JIM STAGNER	331190	
PHIL LOPEZ	095236	
STAFF		

Meeting Conducted By: MARTA I PIERZYNSKA ESA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 04/08/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT clean up

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
ANA WILLIAMS	178110	
Summers. SEC	191324	
HTBUTAM	191947	
W B King	195450	
Garcia	194795	
DE MORGAN	195457	
Stafford	113569	
mrie Stafford	110010	
John (Conley)	182455	
ID STATLER	141589	
BLACKwell	193252	
Ralph Young	169743	
Debra Gonzales	192296	
John Cerda	190921	
Victor Garde	118010	
Jenny Schell	191329	
WHEELER	194591	
MOUNTAIN	193023	
PHIL LOPEZ	095226	
Scatterer	190399	
[illegible]	193253	
Derrick Jameson	195424	
MAL RUTLAND	120588	
JIM STAGER	190381	
DAVE	192856	
Helen Adamson	191799	
Mary Jane Wind	114739	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 04/07/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Size Reduce Core Barrel
Remove Concrete Pad 172
Load Liners

HAZARDS

Biological:

Chemical:
Fuel, Dust

Physical:
Lifting, Cutting

Radiological:
Rem Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Shaded Eye protection for cutting

Engineering/Administrative Controls:
HEPA Ventilation

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

4-7-03

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Garcia	194745	
Jon Conley	182455	
BLACKWELL	193252	
Jackson	194174	
SUMMERS	191321	
Keith Knight	190611	
Joe McKinnon	195457	
HAL RUTLAND	190508	
WILLIAM P. KING	145450	
Bob Livingston	192791	
Clyde Jameson	195474	
SWEETMAN	190160	
EDMUND Schell	191328	
WHITAKER	194571	
Dana WILLIAMS	178110	
Bloomer	190383	
Victor Gaddy	118012	
CARLOS HINEIE	187060	
John Carlson	190921	
Don McDonald	193253	
Ralph Young	169743	
R.D.	194945	
Debra Gonzales	192246	
J.D. STOCKER	141589	
MARK MOUNTAIN	193023	
D. Stafford	113569	
Randy James Winn	111734	
PHIL LOPEZ	095236	
TIM STAGGS	380391	
CHAD WEST	142356	

Meeting Conducted By: Mark Przybyski CSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/04/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Tent clean-up
Pad Demo
Load Boxes

HAZARDS

Biological:

Dust

Chemical:

Fuel

Ph[redacted]ical:

[redacted]

Radiological:

Pen Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

9/1- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JE MORGAN	195457	
ANA WILLIAMS	178110	
[illegible]	194571	
[illegible] Knight	190611	
D STALTER	141589	
[illegible]	194795	
[illegible] Jameson	195424	
[illegible] Jackson	190474	
JIM STHELK	190381	
[illegible]	190160	
J Carlson	190921	
[illegible]	191322	
[illegible]	191326	
[illegible]	118012	
[illegible]	120634	
[illegible]	93253	
[illegible]	169743	
[illegible]	182455	
[illegible]	194944	
[illegible]	190588	
MARK MOUNTAIN	193023	
Debra Gonzales	192296	
[illegible]	192794	
[illegible]	095236	
[illegible]	190383	

Meeting Conducted By: [illegible] Pizzykowski 550
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Area: TA-2 SSHASP No. Date 04/02/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TA-61 Soil Removal
B.U. - Shield Demo
TRAT clean-up

HAZARDS

Biological:

Chemical:
Fuel, Dust

Physical:
Heavy moving equipment

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection

Engineering/Administrative Controls:

Monitoring:
CO

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2 - TA-61

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Summers	191329	
MARK MOUNTAIN	193023	Mark Mountain
JOE MORGAN	195457	Joe Morgan
Bob LIVINGSTON	192794	
DAVID WILLIAMS	178110	
BLACKWELL	143252	
J JACKSON	194174	
CALEB HINKLE	187060	
M Garcia	194795	M Garcia
SCOTT ICERA	190386	
Debra Gonzales	192296	
TAD WEST	142956	
Keith Knifer	190611	
John Carlson	190926	
	193253	
	190160	
	194326	
J Glover	190383	
	195424	
	169743	
	170446	
John Conley	182458	
	118012	
WHEELER	194571	
HAL RUTLAND	190565	
	170659	
PHIL LOPEZ	095286	
MJ	114234	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 04/01/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Bio shield Demo
TA-61 set-up

HAZARDS

Biological:

Chemical:
Fuel Dust

Physical:
Lifting

Radiological:
Pen Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection,

Engineering/Administrative Controls:
HEPA ventilation

Monitoring:
Co, Si, Dust

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
JE MORGAN	195457	Joe Morgan
Alod White	182060	
John Conley	182455	
AD West	182856	
Dave Williams	178110	
Rob Young	169243	
WHEELER	194571	
MARK MOUNTAIN	193023	
Summers	191324	
N Garcia	194795	
Jim STEELE	190381	
L Scott Mays	180160	
Gerald Schaef	191326	
Debra Gonzales	192296	
PHIL Lopez	095236	
Derrick Jamerson	195424	
	193253	
Keith Knight	190611	
Victor Garcia	118012	
John Jackson	174174	
Scott KERR	190395	
BLACKwell	143251	
Mary Jane Winter	114734	
Rob Gamble	194945	
Helen Robinson	191799	

Meeting Conducted By: Mary L Jezyzski SSe
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 3/31/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Moving Boxes
Handling Lead Bricks
Demolition of Bio-Shield

IAZARDS
Moving Equipment - Stand Clear

Biological:
Blood Born Kit Located in Trailer

Chemical:
Fuel

Physical:
Lifting Techniques

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection As Required

Engineering/Administrative Controls:
HEPA Ventilation, Dust Control w/water

Monitoring:
CO

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos - TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Ralph Young G	169743	
JOE MORGAN	195457	
WHEELER	194571	
MARK MOUNTAIN	193023	
Scott KERR	190389	
Keith Kuefner	190611	
JIM STREET	380191	
WILLIAM KING	195450	
GERARD SCHMIT	191376	
Marcia	194795	
Debra Gonsales	192296	
Joe McDonald	07253	
John Jackson	194794	
John Conley	82465	
Derek Jameson	185424	
Robert Gamble	194942	
BLACKWELL	193252	
Victor Conte	118012	
Phil Lopez	095236	
Mary Jane Wind	114736	
SUMMERS	191324	
Darrel Stafford	113569	
J Coleman	190383	
D. SCRATNAM	190160	

Meeting Conducted By: DINA WILLIAMS (Print Name) CM (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 03/28/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Bio-Shield Demo

HAZARDS

Biological:
Cold Snow

Chemical:
Fuel, Dust

Ph[redacted]cal:
[redacted]ETING

Radiological:
Per Rwp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection, Resp when Demo with ZnC

Engineering/Administrative Controls:
HEPA

Monitoring:
CO, SI, Total dust

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos- TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Touthaint	191947	
Dana Williams	178110	
Bob Livingston	192744	
John Conley	82455	
JOE MORGAN	195457	
R WHEELER	194571	
W.P. Kirk	195450	
MARK MOUNTAIN	193023	
N Garcia	194795	
Leslie Jameson	195424	
SUMMERS	191324	
Don McDonald	193253	
Victor Cardy	118012	
GERALD SCHELL	191326	
T. Jackson	194174	
Ralph Young	169743	
DAVID BALL	193024	
Phil Lopez	095236	
Scott Kerr	190389	
Rob Gamble	194949	
Jim STAGGS	190381	
Debra Gonzales	192396	
HAL RUTLAND	190586	
Coleman	190383	
Montrew Wing	114734	

Meeting Conducted By: Mark L Przybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 05/07/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
310 - Shield Demo
Receive B-10 Boxes
Locate + Move Graphite Boxes

IAZARDS

Biological:

Chemical:
Fuel, Dust, Si, CO

Physical:
Overhead loads, Lifting, Pinch Points

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FF Resp when 245 Running, Hearing Protection

Engineering/Administrative Controls:
HEPA Ventilation

Monitoring:
CO, Si, Total dust

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
SUMMERS	191324	
Jackson	194174	
JOE MORGAN	195457	
ANA WILLIAMS	178110	
DAVID BALL	193024	
J.D. STOCKER	141589	
Tom Conley	182455	
Bob Livingston	192794	
Scott Kelly	190389	
Keith Knipp	190611	
T. Carlton	190921	
Zebra Coonrad	192296	
Tom McDonald	193293	
Victor Gentle	118012	
Ralph Yanty	169743	
DWAYNE THOMAS	190160	
GERALD Schuck	191326	
WILLIAM KING	195450	
MARK MOUNTAIN	193023	
M Garcia	194795	
BLACKWELL	193252	
J WATERLER	194571	
Rob Gamble	194949	
MIKE Lopez	095226	
Helen Robinson	191799	
Grant Farm Work	116736	
J Coleman	190383	

Meeting Conducted By: MARTY [illegible] ESD
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 03/26/04

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Be Load
Bio shield Demo

IAZARDS

Biological:

Chemical:
Fuel Dust

Physical:
Arm Head Load, Pinch Point

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:
Full Face Resp when cut Rinsing, Hearing Prot

Monitoring:
Dust, Silica, CO,

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
OE MORGAN	195457	
DANA WILLIAMS	178110	
RALPH YOUNG	169743	
WILLIAM KING	195450	
JIM STAEHR	190381	
John Copley	X62455	
Rob Gamble	194949	
John Clinton	190921	
[illegible]	190160	
[illegible]	1100:0	
SUMMERS	141324	
Debra Gonzales	192916	
IAN RUTLAND	190588	
Dan McDonald	193253	
PAUL WHERRIER	194571	
MARK MOUNTAIN	193023	
M Garcia	194795	
M Twining	114734	
R H TOUTAINT	191947	
DAVID BALL	193024	
ID STALTON	141589	

Meeting Conducted By: Jeanette Pazynski CSU
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Area: TA-2 SSHASP No. Date 03/24/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Bio-shield Demo
Load Boxes with Rubble

HAZARDS

Biological:

Chemical:
Dust, Hydraulic Fluid

Physical:
Noise

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection

Engineering/Administrative Controls:
Ventilation

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Summers SEC	191329	
BLACKwell SEC	193252	
M Gaveja	194795	
Edgar Gonzales	193196	
P. King	195495	
P H Toutant	191947	
DANA WILLIAMS	178110	
JOE MORGAN	195457	
MARK MOUNTAIN	193023	
John Conley	182453	
Ralph Young	169743	
[illegible]	194571	
[illegible] STACHA	190387	
[illegible] Carlson	190921	
[illegible] Jackson	174174	
[illegible] Schell	191326	
[illegible] SWETNAM	190160	
Daniel [illegible]	193253	
PHIL LOPEZ	08<233	
Victor Gaede	118018	
Alvin Rivera	170634	
ROB ERICK	194949	
Scott KERR	190389	
JD STALTER	141589	
HAL RUTLAND	190586	
Derrick Jamison	195424	
Mary Jane Wind	114734	

Meeting Conducted By: [signature] SSE
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 03/21/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)
Bio-shield Demo
Lead Block

HAZARDS
Rain

Biological:

Chemical:
Fuel, Hydraulic Fluid

[redacted]cal:
[redacted]Tiny, Noise

Radiological:
Pen Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
K H Toutain	191947	
Darril Gifford	113569	
John Jackson	194174	
Summers	191324	
Land Williams	178110	
Blackwell	193252	
Joe, Morgan	195457	
Ralph Young	169743	
J B Stroud	141589	
Conrad Schiell	191326	
Mcarvin	194795	
Debra Cowles	192946	
John Conley	182455	
Bob Livingston	192794	
Wheeler	194571	
Mark Mountain	193023	
Hal Rutland	190588	
Don McDonald	[illegible]	
Jack Reed	151044	
[illegible] Jameson	195424	
Victor Conde	[illegible]012	
T. Carlson	[illegible]921	
Jim Stabler	380791	
Phil Lopez	095236	
M Nan [illegible]	114731	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 03/20/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Bio-shield Demo

IAZARDS

Biological:
Cold, Noise

Chemical:
Fuel, Dust, Hydraulic oil

Physical:
Cutting, Flying Debris

Radiological:
Pen RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos - TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ILLIAM P. KING	195450	
SUMMERS	191329	
H TOUTAINT	191947	
BLACKWELL	143251	
MARK MOUNTAIN	193023	
DAVID BALL	193024	
ROB GAMBLE	194549	
ab LIVINGSTON	192794	
John Conley	182455	
ANA WILLIAMS	178110	
N Garcia	194795	
J Jackson	194174	
Alph Young	169743	
Jan McDonald	193253	
ebra Gonzales	192296	
aurie Stafford	113569	
Carlson	190921	
HAL RUTLAND	190588	
J Coleman	190383	
PHIL LOPEZ	095236	
Jack Reed	191014	
Mary Jean Wind	114734	
JIM STARLIN	190381	

Meeting Conducted By: Marty L. Pszybylski SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 03/19/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)
3ROCK Bio-Shield
Slip-Trip Falls Snow-ice

AZARDS
Cold, snow

Biological:
Dust

Chemical:
Fuel, Hydraulic oil

[redacted]al:
Flying Debris

Radiological:
Per Rwp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Hearing Protection

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Tountain	191947	
JOE MORGAN	195457	
ebra Gonzales	192296	
KING	195450	
ARIC MOUNTAIN	193023	
AVID BALL	193024	
ohn Young	169743	
R[illegible] ETHAM	180160	
T. Carlson	190921	
J Jackson	194174	
Dan McDonald	193253	
Eric Barron	193025	
SUMMERS	191324	
Jennell Jameson	195426	
Victor Gordy	118012	
True BLACKWELL	193252	
Mavis Jamison	114734	
PHIL LOPEZ	095236	
TIM STAEHR	880381	
Helen Robinson	191999	
Scott KERR	190389	
GERALD SCHMIDT	191326	
J. Coleman	190383	
Jake Rust	151044	

Meeting Conducted By: DANA WILLIAMS (Print Name) CM (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 03/18/05

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Bio shield Demo
Cask unload TA-54
Housekeeping

HAZARDS

Biological:
cold

Chemical:
Dust

[redacted]cal:
[redacted], overhead loads

Radiological:
Pen Pkg

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FF

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
E MORGAN	195457	
ha Conley	182455	
Coleman	190383	
Tim STACHYR	~~38~~ 190381	
AVID BALL	192021	
IC Barron	193025	
Georgia Summers	194075	
	191324	
T. Carlson	190921	
SWEETMAN	190160	
Stafford	113569	
WHEELER	194571	
Bob Livingston	192794	
EMMO Schaeg	19324	
...n ICER	190389	
HAL RUTLAND	R0588	
PHIL LOPEZ	095236	
Helen Robinson	19799	
Jackson	174174	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 03/17/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Bio Shield demo
Lead Brick Removal
Load CONCRETE Blocks

HAZARDS

Biological:

Chemical:
Fuel, dust, exhaust

Physical:
Trip, overhead loads

Radiological:
Rem Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:
Lead, CO

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
SUMMERS	191324	
BLACKWELL	193252	
K H TOUTAINT	191947	
Debra Gonzales	192986	
J. HERRERA	194571	
JOE MORGAN	195457	
DANA WILLIAMS	178110	
JIM STAEHR	190381	
John Conley	R2465	
Eric Barron	193025	
RALPH YANEZ	169743	
ERNEST SCHMIDT	181326	
HAL RUTLAND	190588	
Bury Chandler	194730	
N Garcia	194795	
J. Curtis	190521	
Don McDonald	193253	
MARK MOUNTAIN	193023	
Darrell Stafford / LANL	113569	
DAVID BALL / MOTA	193024	
[illegible]	190389	
[illegible]	910488	
J Coleman	190383	
MIKE LOPEZ	095236	
WILLIAM P. KING	195450	
Victor Garcia	118012	

Meeting Conducted By: [illegible] (Print Name) [illegible] (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 03/14/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Tent Clean-up
Roof Repair Seal on Eagle
House Keeping

HAZARDS

Biological:

Chemical:
Fuel, Dust

Physical:
[redacted]ting, Fall Protection

Radiological:
Pen RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
obert H Toutaint	191947	
Cleaver	190583	
HAL RUTLAND	190588	
J.D. STALCUP	141589	
JOE MORGAN	195457	
WHEELER	194571	
	194730	
AND WILLIAMS	178110	
John Conley	182455	
ARIC MOUNTAIN	193023	
Debra Gonzales	192296	
Jack L Reed	191044	
Steve BLACKwell	193257	
John Carlson	190921	
Edmund Schaaf	191325	
M Carrie SUMMERS	194795	
	191324	
Derrick Jameson	195424	
Ralph Young	169743	
John Jackson	194174	
Eric Barron	193025	
Rob Gamble	194949	
DAVID BALL	193024	
Bill Hatcher	194798	
Tom Ponsold	193253	
D SLOTMAN	190160	
D. Stafford	113569	
Scott Carr	190389	
Victor Conde	118012	
Ed West	142812	

Meeting Conducted By: Monty C Pettyjohn SS (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 03/13/05

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

Bio-Shield Demo
Task off load TA-54
House Keeping

IAZARDS

Biological:
Noise

Chemical:
Dust

[redacted]cal:
[redacted], overhead loads

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FF Reqd

Engineering/Administrative Controls:
Ventilation

Monitoring:
CO, SI, Total dust, Nox, SO2

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Summers	191324	
H Tortamp	191947	
ILLIAM King	195450	
ob Livingston	192794	
ana Williams	178110	
Barry Robinson	194730	
of Morgan	195457	
Hoh Young	169743	
Sweetnam	190160	
ED-Stoller	141589	
Jack Rous Li	191044	
M Coarse	144745	
Dan McDonald	193253	
David Ball	193024	
Fred Schneg	191325	
Debra Gonzales	192946	Debra Gonzales
ennieb K Jameson	195424	
John Jackson	194174	
MARK MOUNTAIN	193023	Mark Mo
John Carlson	190921	
Phil Lopez	095236	
Steve Blackwell	193262	
R.D.	194945	
Jim Stanton	190381	
Scott Kerr	190389	
J Coleman	190383	

Meeting Conducted By: Mark L Pazbyszki SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 03/12/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Bio Shield Demo
Overhead loads
Pre - Job Briefing

HAZARDS

Biological:

Chemical:
Dust, Fuel

Physical:
Tools, overhead loads, Moving Equip.

Radiological:
Pen Resp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FF Resp.

Engineering/Administrative Controls:
Ventilation

Monitoring:
CO, SI, Dust

Special Equipment:

EMERGENCY ACTIONS

911 - TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Bob Livingston	192794	
HAL RUTLAND	190588	
JOE MORGAN	195457	
E H TOUTAINT	191947	
DAVID BALL	193024	
[illegible]	194770	
JIM STREETER	190381	
MARK MOUNTAIN	193023	
GINA WILLIAMS	178110	
Zora Gonzales	192296	
J.D. STALTER	141589	
T.A. Carlson	190921	
John Tacker	194174	
RALPH YOUNG	189743	
M Garcia	194795	
DANNY DAVIS	193253	
WILLIAM KING	195450	
Derrick Jamieson	145424	
J WHEELER	194571	
J. Coleman	190383	
SCOTT KERR	190389	
STEVE BLACKWELL	193252	
SUMMERS	191324	
John Conley	182455	
PHIL LOPEZ	095236	
D. Stafford LANI	113569	
Tim Hogan	141564	
Manpower Inc	114734	

Meeting Conducted By: [illegible] SSE
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Local Area: TA-2 SSHASP No. Date 03/11/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Bio shield Demo
PPE
Unload cask @ TA54

HAZARDS

Biological:

Chemical:
Dust, Co, Fuel

Physical:
Tiny, Falling Debris

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H Tontaint	191947	
Summers	191329	
Joe Morgan	195457	
John Jackson	194174	
J.D. Stalter	141589	
Dana Williams	178110	
Wheeler	194571	
R Swetnam	R0160	
D. Stoffel LANE	113569	
Debra Gonzales	192296	
[illegible]	194730	
[illegible] Schnell	191326	
William P. King	195450	
Dan McDonald	193253	
[illegible] Barron	193025	
Mark Mountain	193023	
David Ball	193024	
Bob Livingston	192794	
Ralph Young	169743	
Adrian Romero	120634	
Hal Rutland	190588	
Phil Lopez	095236	
Tad West	192856	
Rob Gamble	194949	
[illegible]	190383	
Jack Rest	191044	
Myra Lopez	087898	
Marty Wink	114734	
Jim Stagner	190381	

Meeting Conducted By: Monty C Jazbinski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 03/10/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Bio Shield Demo
CASK UNload TA-54
House Keeping

HAZARDS

Biological:

Chemical:
SI, DUST, CO

Physical:
Noise, Flying Debris, Equipment movement, overhead Hazards

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FF Resp W P100 - ovm

Engineering/Administrative Controls:
Ventilation

Monitoring:
CO, SI, DUST

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
John Copley	182455	John Copley
Steve BLACKWELL	193252	
H Toufaint	191947	
Rick Jameson	585-61-4676	
Debra Gonzales	192296	Debra Gonzales
Jane Williams	178110	
John Jackson	194174	
WHEELER	194571	
Ralph Young	169743	
Lwei MAIN	190160	
Stafford CANL	113564	
Summers	191329	
JColeman	190383	
Jim STAHLER	190381	
Eric Barron	193025	
Douglas Lawson	194730	
Dan MCDaniel	193253	
JD STALTER	141584	
Adrian Romero	120634	
MGarcia	194795	
DONALD Schnell	191326	
WILLIAM Kinch		
FOB GmbH	191949	
PHIL Lopez	095236	
DAVID Bard	193024	
Mary Jane Wintle	114734	

Meeting Conducted By: MARK L Przybylski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 3/8/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
RELOCATE LINERS TO IN-GROUND STORAGE

HAZARDS
OVERHEAD,

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Dana Williams / IWG1	178110	
Gary Rawlins / SSO	A4720	
Neil Stafford / LANL	113569	
Steve Bitterwell	193252	
[illegible] Jackson	194174	
V Garcia	194795	
WHEELER	194371	
SWEETNAM	190160	
[illegible] Schnell	191324	
[illegible] McDonald	D3253	
[illegible] Young	169743	
TIM STAGGS	380191	
Jack Rast	191044	
HAL RUTLAND	190588	

Meeting Conducted By: Mark A Pietrykowski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 03/07/03

SAFETY TOPICS PRESENTED

IBJECTS DISCUSSED (Including Change Orders)

Finish Bio Shield Demo
Load CASK
Load CONCRETE Blocks

AZARDS

Iological:

Noise,

:hemical:

Silica Dust, Fuel

[redacted]al:

Debris, Overhead Hazard, Listed load

Radiological:

Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

FF RWP

Engineering/Administrative Controls:

Monitoring

Monitoring:

Si, Dust, CO, Noise, SOZ

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
H TOUTAINT	191947	
SCHAMEL'S	R132C	
BLACKWELL	193252	
J. Garcia	194795	
J.D. STALTER COLORADO	141589	
D LIVINGSTON	192794	
HAL RUTLAND	190586	
Bully Sorensen	191730	
LANA WILLIAMS	178110	
John Jackson	194176	
JIM STAEHR	190381	
Scott Lerr	190789	
ADAM SCOTT	176367	
Donovan Torivio	1700106	
Jack Young	169743	
Keith Knight	190611	
Ronald Edmond	191326	
WEST NAM	190160	
Selso Gonzales	192296	Debra Mengarelli
[illegible]	193253	
John Conley	182455	John Conley
Jack Rose	191044	
Eric Barron	193025	
DAVID BALL	193024	
Rob Gamble	194949	
J Coleman	190583	
PHIL LOPEZ	CR5236	
Mary Jane Wink	114734	

Meeting Conducted By: MARTY L Pressley SSO
(Print Name) (Title) (Signature)

Pre-Job Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 05/06/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
RWP's, STOP WORK, WORK INSTRUCTIONS, Pre-Tol. Inspections
Set-up for Bio Shield Demo

HAZARDS

Biological:

Chemical:
DUST, EQUIPMENT EXHAUST,

Physical:
[redacted], Lifting, Flying Debris

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Full Face Resp w/ P100 cartridges when Doing ot Bio Shield, Hearing Protection

Engineering/Administrative Controls:
VENTILATION

Monitoring:
Si, CO, Nox, SO_2

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H Toutaint	191947	
M Garcia	194795	
BLACKWELL	193252	
John Conley	182455	
John Jackson	174174	
Keith Knight	190611	
Debra Gonzales	192296	
Ralph Young	169743	
[illegible]	162794	
JD STALLCUP	141589	
SCOTT KERR	190369	
Rob Gamble	194949	
JIM STAGNER	190381	
DAVID WILLIAMS	178110	
SWEARINGEN	190160	
GERALD SCHNELL	191326	
[illegible]	194571	
HAL RUTLAND	190588	
SUMMERS	191324	
Dan McDonald	193253	
Adrian Rivera	120634	
Coleman	190363	
ADAM SCOTT	F-6367	
Jodi Reed	191044	
Billy Compton	194730	
John Carlson	190921	
Billy Hatcher	194798	
DAVID BALL	193024	
MARK MOUNTAIN	193023	
[illegible]	113569	
Phil Lopez	095236	
[illegible]	114734	
Helen Robinson	191799	

Meeting Conducted By: [illegible] SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 03/05/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Coronado Demo intent
Fall protection
Tool decon

IAZARDS

Biological:
cold

Chemical:
Lead dust, Fuel, Decon solutions (Simple soap)

Ph[redacted]ical:
[redacted]ing, overhead loads

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Resp Protection

Engineering/Administrative Controls:
Ventilation

Monitoring:
CO

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
H TOUTAINT	191947	
BLACKWELL	193252	
DAVE WILLIAMS	178110	
BRUCE FOUNTAIN	194730	
TAD WEST	192856	
SCOTT ICER	190389	
DONOVAN TORIVIO	170064	
SUE THRUM	190160	
ADAM SCOTT	176367	
DEBRA GONZALES	192896	
CHARLIE	194795	
DON MCDONALD	193253	
MARK MOUNTAIN	193023	
ROB GAMBLE	194945	
DAVID BALL	193024	
RALPH YOUNG	169743	
WHEELER	194571	
JIM SOMERVILLE	190381	
[illegible] HOGAN	141564	
KEITH KNIGHT	190611	
HAL RUTLAND	190588	
JOHN CONLEY	182455	
	194734	
PHIL LOPEZ	095236	

Meeting Conducted By: MARK PRZYBYSKI (Print Name) SSO (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]al Area: TA-2 SSHASP No. Date 03/09/05

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Coring Demo
Core Drilling
Tool Decon

IAZARDS

Biological:

Chemical:
Fuel, Dust

Physical:
[redacted]ing, overhead loads

Radiological:
Dose Resp

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Resp For cutting

Engineering/Administrative Controls:
Ventilation

Monitoring:
Co monitoring

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-3

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Fountain	191947	
BLACKwell	193252	
n Garcia	194795	
John Conley	182455	
Dan Scott	176367	
anovan Torivio	170066	
D. Stalter Coronado	141589	
Dana Williams	178110	
Kerr	190389	
JIM STACHA	191381	
Ed West	142356	
Keith Knifen	190611	
Jerry Schell	191326	
Judy Gouveia	194730	
Ralph Young	169743	
Sweetman	190160	
dora Gonzales	192286	
Hal Rutland	190588	
Dan McDonald	173253	
J Jackson	194170	
MARK MOUNTAIN	193023	
Summerr	191324	
AVID BALL	193024	
Ros Gamble	194949	
John Carter	190921	
Summers	191324	
J Coleman	190383	
Ellen Robinson	191799	

Meeting Conducted By: MARTY L PIETRYKOWSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 03/03/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Bottles

HAZARDS

Biological:

Chemical:
Fuel, Lead, CO

[redacted]cal:
[redacted], overhead load

Radiological:
Person Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
FF Resp

Engineering/Administrative Controls:
VENT

Monitoring:
CO

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
H Toutaint	191947	
John Copley	182455	John Copley
Garcia	194795	
Jim Stacey	380191	
John Jackson	194174	
Billy Fawaz	194720	
DAVID BALL	193024	David W. Ball
Delva Gonzales	192296	
Sweetwater	190106	
DANA WILLIAMS	178110	
Scott Kerr	190389	
OS Living Stn	192794	
Wheeler	194571	
J. Carlson	190921	
TD Stagor	141589	
Jim Nugent	141564	
ADAM Scott	176367	
Donovan Torivio	170066	
Keith Knifer	190611	Keith Knifer
Chet Nash	191044	
Ralph Young	169743	
GERALD Schnell	191326	
HAL RUTLAND	190588	
Rob Gamble	194949	R D
MARK MOUNTAIN	193023	Mark Mountain
Coleman	190383	
Summers	191329	
[illegible]	114734	
WES	192356	

Meeting Conducted By: MARK Pszybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/28/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Cutting in Tent
Decon of Tank

HAZARDS

Biological:

Chemical:
Fuel, smoke, Products of combustion

[redacted]ical:
[redacted]ting, cutting

Radiological:
Rad RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Full Face Resp For cutting & CO monitoring

Engineering/Administrative Controls:
HEPA

Monitoring:
CO Monitoring

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[illegible]	194730	
[illegible] Scott	176367	
[illegible]	170066	
[illegible]	141589	
[illegible]	194795	
[illegible] Conley	182455	
[illegible] Jackson	194617	
[illegible] Gonzales	192296	
[illegible]	190589	
[illegible]	191326	
[illegible]	190586	
Ralph Young	169743	
[illegible]	178110	
[illegible]	191503	
[illegible]	191044	
[illegible]	380191	
[illegible]	193025	
[illegible]	193253	
[illegible]	193023	
[illegible]	525-33-0859	
[illegible]	362-70-2283	
[illegible]	141523	
[illegible]	192714	
[illegible]	193024	
[illegible]	191797	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 2/27/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

1) Slip Trip Fall on Ice
2) PPE Requirement when working outside

HAZARDS

Biological:
Cold

Chemical:
Fuel

P[redacted]cal:
[redacted]ing, slips

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
J Toutaint	191947	
Jim Fennema	191503	
Dana Williams	178110	
Coleman	190383	
D. Stalter Colorado	141589	
Hal Rutland	190586	
Kerr	190389	
Swenson	90160	
Ralph Young	169743	
Jim Stacha	190381	
Steve Blackwell	193252	
Schell	191326	
Mike Fournier	194730	
John Jackson	194174	
Sam Hunt	161324	
Don McDonald	193253	
Debra Gonzales	192916	
John Conley	182455	
D. Wheeler	194571	
Adam Scott	176364	
Bullington	162704	
Ad West	142856	
Jeff Robinson	191799	
NJCW	114734	

Meeting Conducted By: Mark L Przybylski SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/26/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

TENT clean-up
HEPA set-up. - Daily Test
SNow, SNow, SNow

HAZARDS

Biological:
Cold, SNow

Chemical:
Fuel, Dust

Ph[redacted]cal:
[redacted]s, Lifting

Radiological:
Rad Rad?

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME/ORGANIZATION	Z #	SIGNATURE
R H TOUTAINT	191947	
Steve BLACKWELL	193752	
D. DANSARD	190586	
Jim FENNEMA	191503	
N Garcia	194795	
Scott KERR	190389	
ANA WILLIAMS	178110	
SUE TATUM	190160	
Rob Gamble	194949	
D STATON Coronado	141589	
- Jackson	174174	
ADAM SCOTT	176367	
GERALD Schnell	191326	
ASWELL	192856	
WHEELER	194571	
Foguson	194730	
T.L Hogan	141514	
John Cimlson	190921	
Jack Reust	191044	
Don McDonald	93253	
Ralph Young	169743	
Adrian Ramirez	120834	
Nicolena	190383	
Eric Barron	193025	
Donovan Torivio	170066	
MARK MOUNTAIN	193023	
John Conley	182455	
John STAEHLE	190382	
Montana Wind	114728	
SERVICES	191326	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 02/25/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo

Tool Decon

HAZARDS

Biological:

Cold

Chemical:

Fuel, Lead Dust

Physical:

Lifting, overhead loads

Radiological:

Resp Req?

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Resp For cutting

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOUTAIN	191947	
IM FENNEMA	191503	
EVE BLACKWELL	193252	
D. STATEN COLORADO	141589	
MWEST	192852	
Garcia	194795	
Tim Hogan	141744	
DAN SCOTT	176367	
onovan Torivio	170044	
NA WILLIAMS	178110	
ohn Cooley	182465	
DANFORD	190560	
ICERA	190389	
LIVINGSTON	192744	
SUE TANNA	190160	
Jackson	194174	
Debra Gonzales	192296	
Ralph Young	169743	
Dan McDonald	173253	
ERNARD Schell	191326	
Billy Duarte	194770	
TIM STAEHLE	190381	
DAVID BALL	193024	
MARK MOUNTAIN	193023	
eith Knight	190611	
ric Barron	193025	
	111734	
HEILER	194571	

Meeting Conducted By: MARTY Rezabek SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 02/24/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Coronado Demo

IAZARDS

Biological:

Chemical:
Lead, Dust, Fuel

Ph[redacted]cal:
Overhead Loads, Lifting

Radiological:
Per Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - TA-2 Los Alamos N.M.

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Steve BLACKwell	193252	
John Conley	182455	
H Tontain	191947	
[illegible] Livingston	192794	
[illegible] Garcia	194795	
Debra Gonzales	192296	
HAL RUTLAND	190588	
DANA WILLIAMS	178110	
[illegible] Fonseca	194720	
[illegible] KEAR	190389	
Adrian Rodriguez	176534	
John Carlson	190921	
JD STARCK Contractor	141589	
Jim STREET	380191	
Keith Rutter	190611	
[illegible] SCHERER	194571	
[illegible] SWEETMAN	190160	
[illegible] McDonald	193253	
Ralph Young	169743	
Adam Scott	176367	
Donovan Torivio	17XXX60	
[illegible] Schell	191326	
John Jackson	194174	
DAVID BALL / MOTA	193024	
Billy Hatcher	194798	
Tim Hogan	141611	
Eric Barrow	193025	
D. HANSARD	190586	
Mary Jane Wood	141736	
Kevin Robinson SUMMERS	191749 / 191324	
MARK MOUNTAIN	193023	

Meeting Conducted By: _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/21/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
Coronado Cutting steel in TENT. Lead work
Lead cask

HAZARDS
Lead, overhead loads

Biological:
cold

Chemical:
Fuel, Lead dust

Physical:
[redacted]ing, Fall Protection

Radiological:
Rad Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Resp. Protection while cutting

Engineering/Administrative Controls:
HEPA

Monitoring:
RZ

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
H Fountaint	191947	
D DANSARD	190586	
Bob Livingston	192794	
Garcia	194795	
Swenson	190160	
Summers, SFC	61324	
Grand Junction	191326	
Jim Staelin	381190	
Debra Gonzales	192916	Debra Haugle
Jonathan Gould	193253	
John Carlson	190921	
Bruce Fournier	194730	
JD Stotler	141569	
Eric Barron	193025	Douglas E Brown
Steve Blackwell	193252	
Whitaker	194571	
John Jackson	194174	
Adam Scott	176367	
John Conley	182456	
Donovan Trivio	170066	
Alan Young	169743	
Eric Mountain	193023	
David Ball	193024	
Helen Robinson	191799	
Ana Williams	178110	

Meeting Conducted By: Marcy L Przybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]al Area: TA-2 SSHASP No. Date 02/20/03

SAFETY TOPICS PRESENTED

JBJECTS DISCUSSED (Including Change Orders)

Fall Protection
House Keeping

IAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
Trip

Radiological:
Poss Rad

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
R H Tout [illegible]	191947	
Steve Blackwell	193257	
John Conley	182455	
[illegible] Ortiz	192477	
Dana Williams	178110	
D. Sanford	190566	
John Jackson	194174	
Raul [illegible]	194571	
JD Stocker	141589	
Ralph Young	169743	
[illegible] Eidman	190160	
Jim Staehr	38119a	
Debra Gonzales	192296	
Gerald Schnell	191326	
Adrian Romero	120634	
David Ball	193024	
Billy Fournier	194790	
M Garcia	194795	
Mark Mountain	193023	
Dan McDonald	193253	
Bob Livingston	192794	
Eric Barron	193025	
Hal Rutland	190568	
Scott Kerr	190389	
Mon Tobo Wind	114734	

Meeting Conducted By: [illegible] (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 2/19/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Housekeeping
Fall Protection on Top Heads

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JIEL ORTIZ	192477	
4Tout4int	FL1947	
th Knifer	190611	
Tlph XBurly	169743	
TAD WEST	142856	
DAVID BALL	193024	
EoYKERR	190389	
WHEELER	194571	
J Jackson	194174	
J. Stafford	113569	
John Conley	182455	
Siwetwam	190160	
En McDonald	F73253	
ARK MOUNTAIN	193023	Mark Mountain
drian Ramirez	120634	
Garcia	194795	
Livingston	192744	
elora Gonzales	192296	Debra Gonzales
Hugh	141T66	
Coleman	196363	
WILLIAMS	178110	

eting Conducted By: MARTY PIECZYNSKI SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]al Area: TA-2 SSHASP No. Date 02/14/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
CASK Movement
Coronado Demo
SLD Disp + Fuel on ice

HAZARDS
Ice on Road

Biological:
Cold

Chemical:
Fuel, Dust

Ph[redacted]cal:
Lifting, overhead loads

Radiological:
Rad Rad?

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
PH Tuttainy	191947	
ARK MOUNTAIN	193023	
Coleman	190383	
D. Williams	178110	
J.D. Stratton Colorado	141589	
Ralph Young	169743	
Eric Barron	193025	
D. DANSARD	190586	
Bob Livingston	192794	
JIM STEELE	190381	
Billy Fontenot	194730	
Jon McDonald	P3257	
DANIEL ORTIZ	192477	
John Jackson	194176	
Mary Garcia	194795	
Debra Gonzales	192296	
Scott Kerr	190399	
HAL RUTLAND	190588	
Jack Deuel	191044	
Lewis Law	190160	
Elaine Brown	190385	
Mary Jane Winch	114734	
Helen R Robinson	191799	
Ted West	192352	

Meeting Conducted By: (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 02/13/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Cut Aluminum
Ice Ice Ice

HAZARDS

Biological:
Ice

Chemical:
Fuel

[redacted]ical:.
Trip Fall

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ob Livingston	142744	
NIEL OETER	192477	
m FENNEMA	191503	
H TOUTAINT	191947	
HICERR	190389	
	194730	
CAD HARKIE	18260	
dra Gonzales	190296	
Elaine Brown	190385	
John Jackson	194176	
DANIARD	190586	
Coleman	190383	
ANA WILLIAMS	178110	
John Conley	182455	
WHEELER	194571	
Mc Donald	193253	
ohn Young	169743	
April Stafford	113569	
	190160	
John Carlson	190921	
JD STALTER CONOCO	141581	
GERALD SCHAAF	191326	
Garcia	194795	
JIM STAEHR	190381	
Jude Roast	151044	
Adrian Remeka	120634	

Meeting Conducted By: Mario Lapczynski SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]al Area: TA-2 SSHASP No. Date 02/12/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

CORONADO Demo
Aluminum shield cut

HAZARDS

Biological:
Cold,

Chemical:
Fuel, Dust

Physical:
[redacted]ing, overhead load, moving equipment

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos - TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
John Conley	182455	John Conley
DANIEL ORTIZ	192477	
H Toutaint	191947	
Garcia	194795	
JAC RUTLAND	190588	
WHEELER	294571	
Elaine Brown	192385	
Eve Blackwell	193252	
Bill Fournier	194720	
D. ANSARD	190586	
Scott KERA	190389	
Debora Gonzales	192296	Debra Gonzales
John Jackson	194174	
Tim Nugen	141564	
Darril Stafford	113569	
JR STALTER CONTRACT	141587	
D L HUSTMAN	190160	
Ralph Young	169743	
DAVID BALL/METRA	193024	
JAD WEST	192956	
Jim FONNEMA	191503	
Dan MCDonald	A3253	
CALEB HINKLE	187660	
John Carlson	190921	
J Coleman	190383	
JIM STAEHL	190381	
GERALD SCHELL	1926	
MARK MOUNTAIN	193023	Mark Mountain
Melvin WOSTENSEN	191799	

Meeting Conducted By: Mario L Pazos Sr SSI (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/11/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Housekeeping
Plasma cutting

HAZARDS

Biological:
Cold

Chemical:
Fuel, Dust, compressed gasses

Physical:
[redacted]Trip, Noise,

Radiological:
RR-RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
NIEL ORTIZ	192477	
lico Carrasco	194164	
HTOWTAUT	191947	
Billy Fourier	19400	
T. Hogan	141564	
John Conley	182455	
Adam Scott	176567	
D. Daniels	190586	
O'Herrin	194571	
Garcia	194795	
D State Comanche	141589	
Jim Fennema	191503	
Eric Barron	193025	
Cabb Hinkle	187040	
Dana Williams	178110	
Ralph Young	169743	
Hal Rutland	190588	
D. Swetnam	190160	
Jack Reust	191046	
Ron McDonald	193253	
Elaine Brown	190385	
Gene Schell	191326	
David Stafford	113569	
John D Jackson	194174	
Debra Gonzales	192296	Debra Gonzales
Coleman	190363	
Mark Mountain	193023	Mark Mountain
David Ball/Mesa	193024	David W Ball
John Carlson	190721	
Jim Stagner	190381	
Jeb West	142856	
Mary Jane Wimberly	114734	
Kenneth Gallegos	174477	

Meeting Conducted By: Monty Pizzuto Sr. CSR
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 02/01/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

SLIPS, TRIPS & FALLS
SMALL TENT CLEAN-UP

HAZARDS

Biological:
cold

Chemical:
DUST, FUEL

Physical:
TRIPS

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - TA-2 - LOS ALAMOS.

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
JUE RAYMOND CE	194164	
ANA WILLIAMS	178110	
AVID BALL / MWDH	193024	
D. HANSARD	190586	
H TOUTAINT	191947	
SCOTT KERR	190389	
John Conley	82455	
M. WHEELER	194571	
Debra Gonzales	193296	
John Curran	190921	
John Jackson	194174	
Jim FENNEMA	191503	
Bill FOUGNIER SEC	194730	
HAL RIVLAND	190588	
Mary Garcia SEC	194795	
Ralph Young	169743	
[illegible]	190160	
JP STOLTER COLORADO	141589	
ADAM SCOTT	176347	
Tim Auger	141766	
David Stafford	113569	
GERALD [illegible]	181326	
Steve BLACKwell	193262	
[illegible]	193253	
DANIEL ORTIZ	192477	
MARK MOUNTAIN	193023	
[illegible] Barron / FMP	193025	
[illegible]	190363	
SHAWN CALLANT	192795	
TIM STAEHR	190381	
BOB LIVINGSTON	192794	
Adrian Romero	120634	
Kenneth Gillespie	177477	

Meeting Conducted By: Monty Lyszczynski 550
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 02/05/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Load & move Crane
Work on Plasma Torch

HAZARDS

Biological:
cold, FO

Chemical:
Fuel

[redacted]sical:
[redacted]nbend loads

Radiological:
Pan Rad?

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
m FENNEMA	191503	
H TOUTAINT	191947	
[illegible]	191164	
Ron Conley	182455	
SHAWN LAUGHT	192795	
eve BLACKWELL	193252	
AVA WILLIAMS	178110	
SCOTT KERR	190389	
Alph YOUNG	169743	
LATCH MOUNTAIN	193023	
AVID BALL / MOTT	193024	
ERALD SHOLL	191326	
[illegible]	194730	
E. Brown	190385	

eeting Conducted By: MARTY Lazalowski SSA
(Print Name) (Title) (Signature)

Igate Safety Meeting Part 2

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/07/05

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
HEPA FILTER CHANGE OUT & DAP TEST
CLEAN-UP AROUND ALUMINUM SHIELD

HAZARDS

Biological:
cold

Chemical:
Fuel, Dust

Physical:
[redacted]TING

Radiological:
PER RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 — LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
SHAWN LAURENT	192795	
RHTOUTANT	191947	
DANIEL ORTIZ	192427	
JIM FENNEMA	191503	
SCOTT KERR	190389	
DANA WILLIAMS	178110	
BUCK RAYMOND	194164	
D. DANSARD	190586	
WHITELER	194571	
S BLACKWELL	193252	
Livingston	192796	
SUMMERS	191324	
Cackson	190924	
[illegible]	190760	
John Conley	182455	John Conley
Mary Garcia ISEC		
JIM STAELIN	190381	
Ralph Young	169743	
HAL RUTLAND	190588	
DAVID BALL / INOTA	193024	
E. Brown	190385	
Adrian Honore	190254	
GERALD Schnell	191326	
John D Jackson	194176	
MARK MOUNTAIN	193023	Mark Mountain
Eric Barron	193025	Douglas E. Barron
Coleman	190363	
Debra Gonzales	193296	
HADWEST	192856	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 02/06/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Aluminum shield cut
Flange cut
House Keeping

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
[illegible]

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-3

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
ANA WILLIAMS	178110	
[illegible] Raymond	184164	
H Loutaint	191947	
D. LANSARD	190586	
Jim Fennema	191503	
Elaine Brown	190385	
NIEL ORTIZ	192477	
John Carlson	190921	
[illegible] Living [illegible]	192794	
Alph YOUNG	169743	
DN SWEITHAM	190160	
[redacted]	[redacted]	
[illegible] Barron	193025	
[illegible]dora Gonzales	192296	
[illegible]avid STUFFORD	113569	
[illegible]ERALD SCHMEH	191320	
SUMMERS	191324	
MARK MOUNTAIN	193023	
Daniel McDonald	193253	
SCOTT KERR	190389	
Jack L Roust	191044	
SHAWN LAURENT	192795	
JIM STAEHR	190381	
PAUL WARRINER	194571	
DAVID BALL / MWTP	193024	
John Jackson	194174	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/05/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Rock Soft-up

New Listing Guidelines

HAZARDS

Biological:

Chemical:

Dust, Hydraulic oil, Fuel

Physical:

Tires, overhead Loads

Radiological:

Pan Rup

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
P H Jourdain	191947	
D DANSARD	190586	
D. Williams	178110	
John Conley	182455	
R Schreiber	194571	
J Tennison	191503	
Jim Stacey	190381	
Ralph Young	169743	
John Carlson	190921	
Daniel Ortiz	192477	
Mary Garcia		
Dan McDonald	193253	
Debra Gonzales	192296	
E Brown	190345	
S Lauges	192795	
Santa Rosa	190389	
Hal Rutland	190588	
Mad West	142852	
Tim Hogan	141546	
	190363	

Meeting Conducted By: Maggie Fitzgerald SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 02/04/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Coronado Demo at bldg
GAS bottles & Hose Lines
Thermo cellulose waste

HAZARDS

Biological:

Chemical:
Fuel dust

Physical:
Pinch Points, Flash From Plasma, overhead loads

Radiological:
Per RWP's

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos - TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
MIKE ORTIZ	192477	
H TOUTAINT	191947	
D. WILLIAMS	178110	
J WHERLRA	194571	
BOB LIVINGSTON	192764	
Debra Gonzales	192296	Debra Gonzales
Jim FENNEMA	191503	
JIM STAEGAL	190581	
John Carson	190926	
TIM WEST	192356	
HAL RUTLAND	190586	
Jack L Rust	191044	
SHAWN LAURENT	192795	
Patrick Kennedy	194163	
Tim Hogan	141346	
RALPH YOUNG	169743	
Elaine Brown	190385	
Donovan Torivio	170066	
Don McDonald	193253	
Ronald Johnson		
John Conley	182455	

Meeting Conducted By: Mark J Pierzynski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/03/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Cuevado Demo
Flange cut
Power cords

HAZARDS

Biological:
Cold

Chemical:
Dust, Fuel

Physical:
Pinch Points, Foot Hazards overhead loads

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Elaine Brown	190385	
R.H. Lovelace	191947	
D. DANCARD	190586	
D. Williams	178110	
Ralph Young	169743	
Debra Gonzales	192296	
Jim Tenema	191503	
John Conley	182455	
Paul Witherell	194571	
Dan McDonald	193253	
Loration Stanley	148146	
Jack Rash	191044	
Shawn Lacy	192755	
Mary Jane Wood	114734	
Daniel Ortiz	192477	
Scott Ickes	190389	
Tim Sterling	190381	

Meeting Conducted By: Peter Przybylski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 02/01/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
HABITATS Removal
CUTTING Flows

HAZARDS
Noise, Unstable Work Area
Flows, Smoke.

Biological:

Chemical:
Fuel smoke.

Physical:
Tree Hazards Pinch Points. Lifting

Radiological:
For Rep

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Shades For Plasma

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
TANA WILLIAMS	178110	
HAL RUTLAND	190588	
BOB LIVINGSTON	192794	
John Conley	824556	
D. DANSARD	190586	
CARLOS HINKLE	187060	
Ralph Young	149743	
JIM FENNEMA	191503	
John Jackson	191174	
RENE GOMEZ	147436	
Patrick Kennicky	194163	
Teve BLACKWELL	193252	
JIM STAEHR	190381	
Elaine Brown	190385	

Meeting Conducted By: Monty Przybylski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 01/31/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Hoses & Reels
Plasma Cutting
Lead (Pb)/dust control for demo east side bldg.

HAZARDS

Biological:

Chemical: Bldg demo. Pb hygiene & personal/area monitoring & area control.

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Pb work respir. for visible dust pending sampling; tyvek

Engineering/Administrative Controls:

Monitoring:
Pb air xfer, personal & area sampling

Special Equipment:

EMERGENCY ACTIONS

911-

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
ANIEL ORTIZ	192477	
Elaine Brown	190385	
Bob Livingston	192794	
Tim Hogan	141564	
DANA WILLIAMS	178110	
HAL RUTLAND	190588	
RH JOUTAUT	191947	
D. HANCARD	190586	
John Conley	K2455	
Debra Gonzales	192296	
Donovan Torivio	170066	
Ralph Young	169743	
Scott KERR	190319	
Jim FENNEMA	191503	
Dan McDonald	193253	
GERALD Schuell	191324	
Jack Reist	191044	
J Jackson	194174	
JP STALTER	141589	
Patrick Kennedy	194164	
DAVID BALL	193014	
Shawn Laurant	192795	
JIM STAEHR	~~390~~ 190381	
John Carlson	190921	
Michael Jones	18554	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Physical Area: TA-2 SSHASP No. Date 01/29/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Finish B. cut
Move & Load core material
Gas bottle storage

HAZARDS

Biological:

Chemical:
Fuel

Physical:
Tips, overhead Loads, Flash From Plasma

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
m Fennema	191503	
eve Blackwell	193252	
H Toutant	191947	
Hank Laurent	192795	
D. Hansard	190586	
HAL RUTLAND	190588	
Zach Livingston	192794	
DANA WILLIAMS	178110	
Jim STAHL	190381	
Elaine Brown	190385	
Joe Loreto	192724	
Jack Reist	190444	
Scorekeep	190389	
Ralph Young	169743	
J Glenn	190363	
WHEELER	194571	
Eric Barron	193025	
John Conley	1824115	
J. Tucker	194174	
Tad West	182856	
John Clarkson	190921	
Donovan Trevino	1700616	
DANIEL ORTIZ	192477	
Dan McDonald	193253	
Patrick Kennedy	194163	
DAVID BALL/MHA	193024	
ADAM Scott	176362	
Many Fine Wind	111734	
Debra Gonzales	192946	Debra Gonzales

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 01/28/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Bismuth Shield cut
Fuel Pool work
Concrete Demo

HAZARDS

Biological:
Smoke, Dust

Chemical:
Fuel

Physical:
Fall, Pinch Points, overhead Hazards

Radiological:
Fire RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Shaded Lens For cutting

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
R H TOUTAINT	191947	
E. Brown	190385	
S. LAURENT	192795	
DANIEL ORTIZ	192477	
Blake Raymond	194164	
Bob Livingston	192764	
DANA WILLIAMS	178110	
HAL RUTLAND	190588	
D. DANGARD	190506	
John Conley	182455	
JIM STAFFN	190381	
Debra Gonzales	192296	
JIM FENNEM	191503	
Ralph Young	169743	
John Jackson	194174	
Jongvan Torivio	170066	
Adrian Romero	120634	
Patrick Kennedy	194163	
Paul WHEELER		
DanMDanA	193253	
DAVID BALL/MOTR	193024	
Scott KERR	190389	
MARK MOUNTAIN	193023	
STEVE BLACKWELL	193252	
GERALD Schnell	191326	
MarkJamesWinn	114734	
Tim Hogan	141566	

Meeting Conducted By: Marty L Przybylski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 1/28/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Remain Shield Area
Cardiac Arrest
Respiratory Protection

HAZARDS

Biological:
Cold

Chemical:
Fuel, dust

Physical:
Lifting, overhead Hazards

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TONTAINT	191947	
L LIVINGSTON	192744	
D. WILLIAMS	178110	
E. BROWN	190385	
[illegible]	190389	
D. DANSARD	190586	
Debra Gonzales	192296	
JIM STAUGH	190381	
DAVID BALL / MOTO	193024	
R/L YOUNG	169743	
JOHN CARLSON	190921	
[illegible]	193253	
[illegible]	190588	
SHAWN LAURENT	192755	
DONOVAN TORIVIO	1700666	
JOHN CONLEY	82455	
MARK MOUNTAIN	193023	
NANTUCKET WIRELINE	114734	
STEVE RAYMOND	194164	
PATRICK KENNEDY	194163	
DANIEL ORTIZ	192477	

Meeting Conducted By: MARTY PRZYBYLSKI SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 2/12/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Aluminum Shield cutting
Coronado Demo

HAZARDS

Biological:
Cold

Chemical:
Fuel, Dust

Physical:
[redacted]ting, Overhead Hazards

Radiological:
Rem Req'd

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ANA WILLIAMS	178110	
JIM STAEHR	190381	
laine Brown	190385	
H Toutaint	191947	
7/ph Young	169734	
Cott. KERR	190389	
D. DANSARD	190586	
Tor Lovato	192744	
John Conley	182455	
Tim Hogan	141566	
an McDonald	193253	
Jack Reist	191044	
KEITH RUSSELL	086121	
MARK MOUNTAIN	193023	
Donovan Torivio	170066	
DAN Scott	176367	
ebra Gonzales	192296	
ylor Ortiz	192477	
Coleman	190363	
Steve Kingsbury	194164	
rick Kennedy	194163	
an/James W. JR	114734	
VID BALL	193024	
ONALD SCHAEFER	191326	
SHAWN LAURENT	192795	

Meeting Conducted By: Monty Przybylski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

al Area: TA-2 SSHASP No. Date 01/23/03

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

Coronado Demo

115 Demo

HAZARDS

Biological:

Chemical:

Dust Fuel

Physical:

Head Hazards Listing

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
D Maynard	190586	
S. Laurent	192795	
R H Toutaint	191947	
Daniel Ortiz	192477	
Jim Staehr	190381	
Scott Kerr	190389	
Bob Livingston	192790	
E. Brown	190385	
Jon Lovitt	192794	
Debra Gonzales	192916	
Dan McDonald	193023	
Hal Rutland	190585	
J Coleman	190363	
Ralph Young	169743	
John Conley	182455	
Mark Mountain	193023	
David Ball / mara	193024	
Sonora Torivio	170066	
Adam Scott	176367	
Danny Varela	154092	
D. Williams	178110	
Tim Hogan	141764	
Mary Rene Wood	144732	

Meeting Conducted By: Marty Przybylski SSO
(Print Name) (Title) (Signature)

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOUCHANT	191947	
NIEL ORTIZ	192477	
G LIVINGSTON	192794	
Trick Kennedy	194163	
Elaine Brown	190385	
Alph Young	169743	
Dana Williams	178110	
JIM STAEHR	190381	
Kohen	190363	
HAL RUTLAND	190568	
Debra Gonzales	192296	Debra Gonzales
Dan McDonald	193253	
Sara Conley	182455	Sara Conley
[illegible]	192394	
Jack Rusty	191044	
[illegible]	191326	
[illegible] Winch	114734	
ADAM SCOTT	176567	
Donovan Torivio	170866	
MARK MOUNTAIN	193023	Mark Mountain
DAVID BALL	193024	David Ball
JIM FENNEMA	191503	
Danny Varela	159298	
SHAWN LAUGHT	192795	
BRUCE RAYMOND	174164	
TODD Jim Hughes	141544	

Meeting Conducted By: Mark Jezyk SSA
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

echnical Area: TA-2 SSHASP No. Date 01/22/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Coronado Demo
Safety glasses
Rad stand down

HAZARDS

Biological:
Dust

Chemical:
Fuel

Physical:
Lifting, overhead Work, Pinch Points

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 1/27/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Review Task
Load Limit
Excavate Dome

HAZARDS

Biological:
Sand

Chemical:
Fuel Dust

Physical:
[redacted] Overhead work Lubricant Traffic

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Tuttamii	191947	
JAMES LAWSON	192795	
DAVID BALL / MOTA	193024	
ARK MOUNTAIN	193023	
alph Young	169743	
b Livingston	192794	
. WILLIAMS	178110	
TAL RUTLAND	190588	
ebra Gonzales	192796	
NIEL ORTIZ	192477	
	192794	
ohn Conley	182455	
E. Brown	190385	
	193253	
Jim Stueck	190381	
Donovan Torivio	1700166	
OAM Scott	176367	
ary Varela	159298	
Hugler	141514	
Ron Johnson		
im Fennema	191503	
Keith Kuntzii	0461141	
Manjunath	166734	

Meeting Conducted By: Mary Jo Przybyski SSR
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 1/30/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN CORE WORK
START DEMO OF OLD BLDG

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- LOS ALAMOS TMT

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JIM STRAHN	190381	
NIEL ORTIZ	192477	
Elaine Brown	190385	
Shawn M. Laurent	192995	
Jim Fontana	191503	
R H Tountain	191947	
ob Livingston	192794	
HAL RUTLAND	190588	
J Coleman	190363	
D. Williams	178110	
COTTLER	190389	
Debra Gonzales	192296	
Ralph Young	167743	
Jack L. Reist	191044	
on McDonald	193253	
Lisa Murphy	14,511	
Gary Varela		
IRK MOUNTAIN	193023	
V. MALL GRANDS	190,158	
AVID BALL/mona	193024	
John Conley	182455	
Donovan Trivis	1700166	
ADAM SCOTT	176367	
Mary Jane Winch	114734	

Meeting Conducted By: _____ SSO _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 1/18/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Block Pinch

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Alex Young	169743	
D. Dansard	190586	
D. Williams	178110	
Jim Fennema	191503	
E. Braun	190385	
L Livingston	192794	
Neal Rutland	190589	
[illegible] Kerr	190385	
Niel Ortiz	192477	
Jack Reist	191044	
Ark Mountain	193023	
M Evans	190158	

Meeting Conducted By: Marty L Przybylski SSA
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 01/17/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN-CORE SHUFF
HOUSEKEEPING

HAZARDS

Biological:
Covid

Chemical:
Fuel, Dust

Physical:
Trip, overhead loads slips + Fall

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[illegible] MOUNTAIN	19947	
JIM FENNEMA	19503	
[illegible]	192X4	
[illegible]	192394	
[illegible]	169743	
[illegible]	190588	
[illegible]	190446	
[illegible]	190385	
[illegible]	193253	
[illegible] MOUNTAIN	193023	
DAVID BALL / MOTA	193024	
[illegible] / MOTA	192795	
[illegible] STAEHLE	190381	
John Conley	18245	
[illegible] ORTIZ	192477	
[illegible]	178110	
[illegible]	190389	
[illegible]	190586	
[illegible]	14734	

Meeting Conducted By: [illegible] (Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 01/16/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN Core work
105 Lead Removal

HAZARDS

Biological:
Cold

Chemical:
Lead, Dust, Fuel

Physical:
Slips, overhead Loads

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Jim Fonseca / Mosa	A1503	
[illegible] ORTIZ	192477	
[illegible] Contractor	191947	
D. DANSARD	190586	
[illegible] Lozado	192394	
Dana Williams	178110	
Alph Young	169743	
Hh Conley	182455	
Hal Rutland	190589	
[illegible]kine Brown	190385	
[illegible]	A3253	
[illegible] Mountain	193023	
David Ball	193024	
[illegible] Livingston	192794	
[illegible]	194164	
[illegible] Patrick Kennedy	194168	
Shawn M. Laurent	192795	
Mark Grams	190158	

Meeting Conducted By: Mark J. Przybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 01/15/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN core work
SET manhole
Run 115 Decon

HAZARDS

Biological:
cold

Chemical:
Fuel, Dust

Physical:
Trip, Pinch Points Overhead Loads, Fall Protection

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
NIEL ORTIZ	192477	Daniel Ortiz
IM FONNUM / MOTA	191503	
H TAUTAINT	191947	
D DANSARD	190586	
John Conley	182455	
Elaine Brown	190385	
[illegible] LIVINGSTON	192794	
LAURENT	192795	
Joe Lovato	192974	
JOEL RUTZARD	190588	
RALPH YOUNG	169743	
[illegible]	193253	
Jack Rost	191044	
DANA WILLIAMS	178110	
JIM STAGHR	190381	
MARK MOUNTAIN	193023	
DAVID BALL / MOTA	193024	

Meeting Conducted By: Matt Lipczynski SES
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 01/19/05

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN CORE WORK
RM 115 DECON

HAZARDS

Biological:
Cold,

Chemical:
Fuel, DUST

Physical:
[redacted] TRIP, FALL PROTECTION

Radiological:
PER RWP's

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Jon Fennema / MOTA	191503	
R H Tountaint	191947	
Daniel Ortiz	192477	
[illegible]	192714	
Debra Gonzales	192296	
D Williams	178110	
Jim Staehr	190381	
Bruce Raymond	194164	
[illegible] West	142856	
D. Hansard	190586	
T. Carlson	190921	
J Coleman	190363	
Jack Knight	191044	
Jon Lovitz	192774	
Gerald Schell	191326	
Ralph Young	169743	
Adrian Romero	120634	
Shawn M. Lamont	192795	
John Conley	182455	
David Ball / MOTA	193024	
Mark Mountain	193023	
John Jackson	194174	
Don McDonald	193253	
E. Brown	190385	
Hal Rutland	190588	
Scott Kerr	190389	

Meeting Conducted By: [illegible] (Print Name) [illegible] (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 01/13/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN-cote Liner
Bottles-

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
D. WILLIAMS	178110	
LAURENT	192795	
B LIVINGSTN	192794	
HEC ORTIZ	192477	
[illegible]	190383	
H TOUTAINT	191947	
JAL RUTLAND	190588	
JOHN CONLEY	182455	
B KANSARD	190566	
JIM FENNEMA	191503	
JIM STACHR	390381	
RALPH YOUNG	169743	
JR	192794	
DAN MCDONALD	193255	
JACK REUST	191044	
MARK MOUNTAIN	193023	
DAVID BALL/MOTA	193024	
SCHAFFER	190369	

Meeting Conducted By: MARTY J PRZYBYSKI (Print Name) SSO (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 1/11/05

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN-CORE WORK

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Jack Young	169743	
JIM STAEHR	190381	
Scott KERR	190389	
Debra Gonzales	192296	Debra Gonzales
SHAUNM LAURENT	192795	
Bob Livingston	192794	
Mark Mountain	193023	Mark Ma
E Brown	190385	
Dan McDonald	193253	
John Jackson	194174	
John Conley	182455	John Conley
Helena	190363	
David Ball/mont	193024	Ball
D. Williams	178110	
Mac Rutland	190588	
Jim Fennema	191503	

Meeting Conducted By: (Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 1/10/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

SAFETY STAND-DOWN
INCLEMENT WEATHER

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOUTAINT	191947	
b LIVINGSTON	192794	
DAVID BANARD	190580	
Elaine Brown	190385	
D. WILLIAMS	178110	
S. LAURENT	192795	
JR	192394	
Debra Gonzales	192296	Debra Gonzales
John Corbin	190921	
HAL RUTLAND	190588	
Kilgore	190583	
RALPH OMS	169743	
Jack Bruce	191044	
Mary Sue Walsh	114734	
DAN MCDONALD	193253	
DAVID W BALL / MOTA	193024	
JIM STAEHR	190381	
SCOTT KERR	190385	
John Conley	82455	
MARK MOUNTAIN	193023	Mark Mountain

Meeting Conducted By: (Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 1/10/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

SAFETY STAND DOWN MEETING

HAZARDS

Biological:

Chemical:

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
WILLIAMS	178110	
SWETNAM	190160	
S. DANGARD	190586	
B LIVINGSTON	192794	
[illegible] TAYLOR	194174	
JOHN CONLEY	182455	
DAVID BALL	193024	
BRUCE RAYMOND	194164	
RALPH YOUNG	169743	
DORA GONZALES	192296	
PATRICK KENNEDY	194163	
ANITA K BURKHEIMER	194175	
LAURA LOPEZ	087898	
TODD RUST	191044	
TAE LAUREL	192794	
ERIC BARRON	193025	
ELAINE BROWN	190385	
[illegible] SIDWELL	191306	
KIRK SUMMERS	191324	
JOHN T [illegible]	120634	
MARK MOUNTAIN	193023	
STEVE BLACKWELL	193252	
SHAWN LAURENT	192795	
SCOTT KERR	190389	
HAL RUTLAND	190588	
R H TUTTLE	191947	
[illegible] McDONALD	193253	
JIM TENNEMA	191503	
HELEN ROBINSON	1919799	
JIM STREHM	190381	

Meeting Conducted By: MARTY L PRZYBYSKI SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 1/15/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN Case Work
Survey 115

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
[redacted]xtiv, overhead loads

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
AWH Laurent Mota	192795	
[illegible] Fonnema	191503	
D. Dangard	190586	
H Toutaint	191947	
Joe	192794	
D. Williams	178110	
[illegible] Livingston	192794	
[illegible] Conley	182455	
Ralph Young	119743	
Debra Gonzales	192296	
Jack Roust	191044	
E. Brown	190385	
Don McDonald	193753	
David Ball / MOA	193024	
Mark Mountain	193023	
Hal Rutland	190588	
IAD West	142856	
Mary Jane Winch	114734	
Scott Kerr	190389	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 01/09/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN CORE WORK
Rig clean out
WATER Today?
?

HAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
TIN

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Jourdain IMT	191947	
S. Lavoie	192795	
Fenema	191503	
Brown	190385	
D. Williams	178110	
Jim Straehl	190381	
[illegible]	192794	
D. Dansard	190586	
John Conley	182455	
Scott Kerr	190389	
John Carlson	190521	
J Coleman	190383	
Ralph Young	169743	
Jay Rick Reish	192946	
Dan McDonald	151046	
David Ball MOTA	193254	
Mark Mountain	193004	
Debra Gonzales	193023	
Montana Wind	192916	
	114734	

Meeting Conducted By: Marty L Pierzynski (Print Name) 550 (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 01/07/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IH cold work
Survey Rm 115
Plasma cutting

HAZARDS

Biological:
cold Flash (Plasma)

Chemical:
Fuel

Physical:
Noise - Lifting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DANA WILLIAMS	178110	
D. DANSARD	190580	
R H TOUHAINT	191547	
SHAWN Laurent	192795	
[illegible] ORTIZ	192477	
JIM FENNEMA	91503	
Ralph Young	169743	
John Carlson	190721	
Bob Lindsth	192714	
DAVID BALL / MOTA	193038	
MARK MOUNTAIN	193023	Mark Mountain
Debra Gonzales	192296	
Dan McDonald	193253	
MAK RUZZANO	90588	
SCOTT KERR	190389	
JIM STABLAM	190381	
Elaine Brown	190385	
Jack Rust	191044	
M		
[illegible] WEST	192956	
John Conley	182455	
ELVIN Chow	192817	
SCOTT PLATT	5251236 97	

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. - Date 02/06/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

BOR Removal
Final survey Rm 115
Work on water line

HAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
Overhead loads, Lifting, Pinch Points

Radiological:
BOR Hot spots

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R.H TOUTAIM	191947	
S. LAUCENT	192795	
E. BROWN	190385	
ANIEL ORTIZ	192477	
D. DANIELS	190586	
John Conley	182455	John Conley
HAL RUTLAND	190588	
JIM STACHR	188881	
Debra Gonzales	192916	Debra Gonzales
Jerry Curtis	190921	
Ralph Young	189743	
MARK [illegible]	190158	
Jack Royst	191044	
GENNO Schuh	191326	
Jel Jackson		
Bob Livingston	192794	
MARK MOUNTAIN	193023	Mark Mountain
Jim Fennemo	191503	
DANA WILLIAMS	178110	
DAVID BALL / MWA	192024	
Scott Kerr	190389	
Joe Lucero	192394	

Meeting Conducted By: MARK L PRZYGOCKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 01/04/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Pick Bar + Gamma Shield

HAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
Overhead loads, Lifting

Radiological:
Hot Picks

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
D. DANIARD	190586	
Elaine Brown	190385	
JIM TENNOMA	191503	
HAL RUTLAND	190588	
SCOTT ICERA	190389	
DANIEL ORTIZ	192477	
Don MacDonald	193253	
Ralph Young	169743	
TIM STAERK	380391	
MARK MOUNTAIN	193023	
Bob Livingston	192794	
Debra Gonzales	192296	
Bob Hinkle	187060	
Shawn Laurent	192795	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 01/03/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Set-up For Be2 Pick
Plasma cutting

HAZARDS

Biological:
Foot cold

Chemical:

Physical:
, Flash From Plasma cutter

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
PH TOUTAINT	191947	
S. LAURENT	192795	
D. DUNFORD	190586	
J. Coleman	190383	
DL LINDSTROM	192794	
TADWEST	192856	
HAL RUTLAND	190588	
SCOTT KEICK	190389	
Ian	192473	
Ralph Young	169743	
John Carlson	190761	
Don McDonald	193253	
MARK MOUNTAIN	193023	Mark Mountain
Elaine Brown	190385	
Adrian Rancid	120634	
JIM FERNENA	191503	
TIM STAGGS	381350	
DANIEL ORTIZ	192477	
Debra Gonzales	192296	
John Conley	182455	

Meeting Conducted By: _____ CSO _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 01/02/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IH core work

HAZARDS

Biological:

cold

Chemical:

Fuel

Physical:

Tiny

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOUTAINT	191947	
LN TENNEMA	191503	
Elaine Brown	190385	
[illegible]	192294	
[illegible] WEST	142856	
[illegible]	169743	
[illegible]	190586	
[illegible]	192794	
[illegible] MOUNTAIN	193023	
[illegible]	192296	
[illegible]	192477	
[illegible]	192795	
JIM STAEHR	381390	
[illegible]	93253	
[illegible]	147436	
[illegible]	148146	
[illegible]	K82455	
[illegible]	190389	
[illegible]	190055	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
SUBCONTRACT 41968-000-02-CJ

855 18.072 Safety Meetings - Tailgate
Tailgate Safety Meetings for 2002 119

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Project Code: 26300 00

DOCUMENT DATE: 8/1/02 - 12/31/02 CATEGORY: SE

TO: File AUTHOR/ORIGINATOR: Marty Przybyski

TITLE/SUBJECT: Tailgate Safety Meeting for 2002

KEY WORD:

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CATEGORIES: USE ONLY THE CATEGORIES LISTED

CM-Contract Management
* Contract with Client
* Contract Change orders
* Contract Ceiling
* Project Closeout Report

CPC-Client Project Correspondence
* IOC's, Faxes & e-mail – Incoming & Outgoing
* Client Meeting Notes
* Telecom Reports
* Correspondence

PRE- Pre Award Subcontract Documents
* Request for Proposal
* Bid Package Review Documents
* Bidders Questions
* Proposals/Bids

POST-Post Award Subcontract Documents
* Subcontract Files
* Weekly Activities Performance Report
* Subcontractor Change Orders

TQM-Total Quality Management
* Lessons Learned
* Environmental Regulations Guidance Manual

PC-Project Controls
* Chart of Accounts/Cost Scheduling (Accruals)
* Progress/Status Report (Project)
* Schedules (overall) Project
* Estimates

DCE-Design/Construction Engineering
* Design Criteria (Design Project) IM, VCA, etc.
* Request for Information
* Ground Water Investigation
* Peer Review
* Readiness Review
* Drawings

MA - Management & Administration
* Corporate Policies
* Authorization for Expenditures

RM - Risk Management
* Insurance Certificates

QAQC-Quality Assurance/Quality Control
* Calibration Records
* Corrective Action Reports
* Assessment Reports
* Nonconformance Reports
* Lessons Learned

SE-Safety & Environmental
* Safety Inspections, Safety Meetings
* SSHASP's & Modifications
* Training Records
* SWPPP, Waste Characterization Strategy Forms
* Radiological Data, Field Logbooks

COM-Construction Management
* Contractors Daily Reports (Tabulation Reports)
* Certified payroll - DAVIS BACON

LPA-Licenses, Permits & Agreements
* Facility Tenant Agreement
* Permits – Rad. Worker, Excavation, NPDES, ESH ID

AF-Accounting & Finance
* Job Condition Statements
* Invoices to Client
* Bill of Lading
* Invoices from Subcontractors

ET - Equipment & Transportation
* Inventory

PRO - Procurement
* PO Register
* Lien Release

WH - Warehouse
* Freight Damage Report, Field
* Bill of Lading

OMEGA WEST REACTOR

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 12/31/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN CORE WORK

PLASMA CUTTING

HAZARDS

HEAT - FLASH FROM PLASMA

Biological:

COLD

Chemical:

FUEL

Physical:

CUTTING

Radiological:

RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
HTownt Sim	191947	
[illegible] Sec	193252	
Alvis Hinkle	182060	
Elaine Brown	190385	
Dan Lansard	190586	
Bob Livingston	192794	
Jim Fennema	191503	
Rene Gomez	147436	
Daniel Ortiz	192477	
Mark Mountain	193023	
Jim Steiner	380391	
Debra Gonzales	192296	
Tad West	192856	
John Carlson	190921	
Dale Caudle	190055	
Don McDonald	193253	
Ralph Young	169743	
Harold Rutter	190588	
Florentin Stanley	148146	
Scott Kerr	190389	

Meeting Conducted By: Mark Peterson SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[e]ical Area: TA-2 SSHASP No. Date 12/30/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN cover Work

HAZARDS

Biological:

Cold

Chemical:

Fuel oil

Physical:

Tiny

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H Tontaint	191947	
Mac Rutland	190566	
Mark Mountain	193023	
Scott Kerr	190389	
Caleb Hinkle	187060	
Ralph Yourley	169743	
Jim Fenwick	191503	
D. Maupin	190586	
Adrian Rivera	120634	
John Carlson	190921	
Don McDonald	93253	
Paul	380391	
Daniel Ortiz	192477	
Rene Gomez	147436	
Floraline Stanley	148146	
John Conley	182455	
Building 5 Tw	192794	

Meeting Conducted By: Mark Jaczynski CSR
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 12/20/12

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

IN-COLD WORK
SLIP TRIP AND FALL

HAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
Icing, Pinch Point

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
HAL RUTLAND	190586	
BOB LIVINGSTON	192794	
DANA WILLIAMS	178110	
John Conley	182455	
RH Fountain	191947	
DANIEL ORTIZ	192477	
Jack Reust	191044	
Ralph Young	169743	
Debra Gonzales	192291e	
Jim Lowe	192394	
Dick Couch	190055	
Mark Mountain	193023	
Gerald Schell	191326	
Steve Blackwell	193252	
Jim Fenner	191503	
David Ball/MOTA	193024	
Mark Cain	190158	
Tony Kirk	190389	
Ted West	192856	
D Davis		

Meeting Conducted By: Mark L Pazdyszki SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 12/19/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Beam Port Removal
Room Demo
Focus on Safety

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
Lifting, Pinch Points

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Toutaint	191947	
Dana Williams	178110	
D. Danisard	190586	
Ralph Young	169743	
Joe Lewis	192394	
~~Ben Conley~~	192744	
John Conley	182465	
Debra Cazedes	192296	
Mark Mountain	193023	
David Ball / MOTA	193044	
Scott Keal	190389	
~~Jack Ross~~	191144	
Adrian Romero	120634	

Meeting Conducted By: Mario L Perez SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. - Date 12/18/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TOP HEAD CUTTING
SAI EQUIPMENT REMOVAL
BEAM PORT SET-UP

HAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
CUTTING, HEAT (TORCH)

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:
SHIELDED FIELD SHOVEL - RAD P.

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
[illegible]	192704	
RH TOUPAINT	191947	
SHAWN M. LAURENT	192795	
HAL RUTLAND	190586	
RALPH YOUNG	169743	
DANIEL ORTIZ	192477	
MARK MOUNTAIN	193023	
SONIA GONZALES	192946	
JOHN CONLEY	R2455	
DANA WILLIAMS	178110	
M W GRAVES	190552	
[illegible]	192794	
DAN DANSARD	190580	
DAVID BALL INCOTA	193024	

Meeting Conducted By: [illegible] SSA
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 02/18/05

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Wall Demo

Tent clean-up

HAZARDS

Biological:

Chemical:

Dust

Physical:

Overhead Load, Lifting

Radiological:

Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H Toutaint	191947	
J.D. Stalter Coronado	141589	
John Conley	282455	
Daniel Ortiz	192477	
D. Dansard	190586	
M Garcia	194795	
B. Fournier	194730	
Jon McDonald	FB253	
Scott Kerr	190389	
Jim Staehr	181190	
Jas Weel	142856	
Hal Rutland	190588	
Bob Langston	192704	
Dana Williams	178110	
Jim Fontana	191503	
Debra Gonzales	192296	
Darril Stafford	113569	
J. Sweetman	190160	
Ralph Young	169743	
Mark Mountain	193023	
David Ball / MOTA	193024	
P. Wheeler	194571	
Jack Rood	181044	
Tj Hogan	141514	
Adrian Romero	120634	
John Jackson	194174	
J Coleman	190383	
Mary Tom Wink	114734	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 12/17/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
HEARING PROTECTION WHEN CRANE IS RUNNING
GASOLINE CANS IN FLAMMABLE STORAGE CABINET
TOP HEAD WORK

HAZARDS
Noise Above 82 dBA

Biological:
Cold

Chemical:
Fuel

Physical:
n head loads

Radiological:
RWP For TOP HEAD WORK

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
EAR Plugs when crane in operation

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JAY FENNEMA	191503	
DANA WILLIAMS	178110	
RALPH YOUNG	169743	
H TOU HAIRT	191947	
DU LANSARD	190586	
SHAWN LAURENT	192795	
Scott Kerr	190389	
DANIEL ORTIZ	192477	
Blaine Brou	190385	
Jon Lovato	142394	
Debra Gonzales	192916	
John Conley	182455	

Meeting Conducted By: MARTY LUCERO SR. SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 02/17/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Coronado Demo
Tent clean-up
Fuel Hazards

HAZARDS

Biological:

Chemical:
Fuel, Dust

Physical:
Struck

Radiological:
Pen Rad?

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Steve BLACKWELL	193252	
Jim FENNEMA	191503	
D. DANSARD	190586	
R H TOUTAINT	191947	
DANA WILLIAMS	178110	
Mary Garcia	194795	
John Jackson	194178	
Debra Gonzales	192296	
JOEL RUTLAND	190568	
Bob Livingston	192794	
Billy Faucheux	94730	
D. DeTINA	190100	
DANIEL ORTIZ	192477	
Dan McDonald	193253	
Alfred Young	169743	
J D STALEY COLORADO	141589	
Darrell Stuffle	113569	
MARK MOUNTAIN	193023	
Todd Reed	191044	
John Cooley	182456	
JIM STACEY	38190	
Scott Coleman	190383	
Eric Burrow	193025	
Scott A. KERR	190389	
DAVID BOLL	193029	
IAN WEST	192856	

Meeting Conducted By: Mark Przybyski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. - Date 12/16/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TOP HEAD Work
INT Door Work
SUT clean-up / Demo walls

HAZARDS

Biological:
Cold,

Chemical:
Fuel, Dust

Physical:
[redacted]ting, overhead Hazard

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Dana Williams	178110	
Alod Hinkle	187060	
Bob Livingston	192794	
Dan Doncard	190586	
H Toutaint	191947	
John Conley	182455	
Rene Gomez	147436	
Ralph Young	169743	
Elaine Brown	190385	
Hal Rutland	190588	
Dave Ball / Mota	193024	
Terrast Craft	191325	
Tad West	192356	
Joe Loucto	192394	
Mark Mountain	193023	
Shawn Laurent	192795	
Jim Fenner	191503	
Mcmann	190158	
Daniel Ortiz	192477	
Delora Gonzales	192296	
Horatio Stately	148148	
Maryjane Winch	114734	

Meeting Conducted By: Mark Przybylski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 12/13/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TOP Head Prep Work
Asbestos Abatement
Injury Reporting

HAZARDS
Crush Head Loads

Biological:
cold

Chemical:
Fuel, Asbestos

Physical:
[redacted]ting, Falling Objects, Pinch Points

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Shawn Laurent	192795	
Caleb Hinkle	187060	
R H Toutaint	191947	
Rob Livingston	192794	
Dan Danford	190586	
Elaine Brown	190385	
David Ball / MOTA	193024	
Dana Williams / WGII	178110	
Jim Staehle	188381	
Daniel Ortiz	192477	
Ernest Craft	191325	
John Conley	182455	
Rene Gomez	147436	
Gradon Stark	M6146	
Jim Fenuma	191503	
John Carlson	190921	
Ralph Young	169743	
Tad West	142356	
Del Caudle	190055	
Jon Lucero	192394	
Mark Mountain	193023	
Debra Gonzales	192296	
Mary Jane Wind	114731	

Meeting Conducted By: Monty Rzepecki SH
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 12/12/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TA-2 Work
0900 walk down
Asbestos Abatement

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
Lifting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANA WILLIAMS	178110	
H TOUTAINT	191947	
PAUL LAURENT	192795	
DAN DANIARD	190580	
Bob Livingston	192794	
Tom McDonald	193253	
Laine Brown	190385	
J. Livaudais	192374	
Alan Hinkle	187060	
Jim Fenner	191503	
Forest Craft	191325	
Jay West	192356	
Debra Gonzales	192296	
Jay D'Angel	193022	
Mark Mountain	193023	
David Ball / Metra	193024	
Hampton Stanley	148146	
Daniel Ortiz	192477	
Rene Gomez	147436	
Mary Jane Winch	114734	

Meeting Conducted By: _____ SSC _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 12/11/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TA-2 work
Equipment Inspection
Asbestos abatement

HAZARDS

Biological:
cold ice & snow

Chemical:
Fuel, asbestos

Physical:
[redacted]ctive,

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
HAL RUTLAND	A0588	
DAN DANARD	190586	
Jay D'Angelo	193022	
JIM SPOERL	190381	
CRAIG HARRIS	191800	
[illegible]	191325	
Jack L. Reist	151644	
Ralph Young	169743	
Elaine Brown	190385	
DAVID BALL	193021	
MARK MOUNTAIN	193023	
SHAWN LAWLER	192795	
[illegible]	173253	
JIM FONNEMA	191503	
Bob Livingston	192794	
DANIEL ORTIZ	192477	
Joe Loreto	192394	
CALOD HIGHFIL	187060	
SCOTT KERR	190389	
Debra Gonzales	192296	
TAD WEST	192556	
RENE GOMEZ	147436	
Flocation Stanley	148146	
Del Gould	190055	
KH TOUTAINT	191947	

Meeting Conducted By: Dan Will CM Dan Will
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 12/10/02

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)

TA-2 Work
Project Based
Asbestos Abatement

HAZARDS

Biological:
Cold Snow & Ice

Chemical:
Asbestos Fuel, Propane

Physical:
Tires

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

1-TA-2- Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
ANA WILLIAMS	178110	
LH Tontaint	191947	
Jay D'Angelo	193022	
LW LANDERS	190526	
Rene Gomez	147436	RENE GOMEZ
RN Conley	182488	
CALEB HINKLE	187660	
SCOTT KERR	190389	
JIM FENNEMA	191503	
JIM STAGHN	191382	
Joe Lopez	192394	
CRAIG HARRIS	19180	
ERNEST CRAFT	191325	
MARK MOUNTAIN	193023	
DAVID W. BALL	193024	
DANIEL ORTIZ	192477	
SHAWN LAURENT	192795	
BOB LIVINGSTON	192794	
Floratino Stanley	148146	
Del Condl	190055	
Elaine Brown	190385	
HAL RUTLAND	190588	
TAD WEST	192356	
Dan McDonald	193253	
Manfred Winch	111734	

Meeting Conducted By: (Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 12/09/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Limited ICE START

Asbestos ABATEMENT

HAZARDS

Biological:

Cold SNOW & ICE

Chemical:

Asbestos, Fuel oil

Physical:

[redacted]TING Slip & Fall

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANA WILLIAMS	178110	
Bob Livingston	192794	
Jim STARR	190381	
Alob Hinkle	187060	
PH Tourmt	191947	
Scott KERR	190388	
ERRY ROMERO, JAKES	193677	
Jim Fennema	191503	
DAN DANSARD	190586	
DANIEL ORTIZ	192477	
RALPH YOUNTS	169743	
John Carlson	190921	
CRAIG HARRIS	191800	
FORREST CRAFT	191325	
Jon Pavletto	192394	
John Conley	182455	
Jack Rouse	191044	
Elaine Brown	190385	
MARK MOUNTAIN	193023	
DAVID BALL/MOTA	193024	
S. Coleman	190383	
Jay D Angelo	193022	
Dan McDonald	193253	
SHAWN LAUGHT	192795	
Mary Jane Winch	114734	
Florentini Stanley	148146	
Dd Cavdl	190057	
HAL RUTLAND	190586	

Meeting Conducted By: JOHN PRZYBYSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 12/06/05

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TA-2 WORK

Asbestos ABATEMENT

HAZARDS

Biological:

ICE & SNOW

Chemical:

ASBESTOS

Physical:

[redacted]TIES

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

9/1- Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOUTAINT	191947	
S. LAURENT	192995	
B LIVINGSTON	192794	
ALAN HINKLE	187062	
DANA WILLIAMS	178110	
TAD WEST	192856	
Del Caudl	190055	
HAL RICHLAND	190588	
DAN DANIELS	190586	
DAVID BALL/MGMT	193024	
Lorain Staley	148146	
Elaine Brown	190385	
Jack Reust	191044	
John Carlson	190521	
JIM STAEHLE	190387	
QUEST CRAFT SEC.	191325	
Joe Levitt	192374	
MARK MOUNTAIN	193023	Mark Mountain
Jim FAUNCE	191503	
Scott KERR	190789	
Debra Gonzales	192296	Debra Gonzales
CRAIG HARRIS	191800	
ROBERT E. MONTOYA/HSE-4	184322	
Mel Jennings/HSE-4	184951	
John Conley	RR455	John Conley

Meeting Conducted By: Manny Lopez SSA
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 12/05/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Air lock construction
RM 115 Demo
Asbestos Abatement

HAZARDS

Biological:
cold

Chemical:
Asbestos,

Physical:
[redacted]Tent

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ANA WILLIAMS	178110	
HTOUTAINT	191947	
SHAWN LAURENT	192785	
SubLivingsTon	192794	
JM FENNEMA	191503	
HADWECI	192856	
TO Nogon	41561	
ENE GONEZ	1457436	
Instrm Supply	178144	
Coleman	190383	
Ralph Young Jakeland	169743	
John Carlson	190921	
Scott KRGR	190361	
DAN EDWARD	190526	
FIRMEST CRAFT SEC	191325	
CRAIG HARRIS	19180	
DAVID BALL / MOTA	193024	
MARK MAINTAIN	193023	
Debra Gonzales	192296	
CALEB HINKLE	187068	
Elaine Brown	190385	
Mary Jane Winch	114734	

Meeting Conducted By: Marty L Pizzuto SSV
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: TA-2 SSHASP No. Date 12/04/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Snow & Ice
TA-2 Rm 115 Work
Asbestos Abatement

HAZARDS

Snow Falling off Tent.

Biological:

Cold

Chemical:

Asbestos

Physical:

Tripping, Slips & Falls

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
JACOB HINKIE	187060	
H TOUTAINT	191947	
BOB LANGSTON	192794	
HAL RUTLAND	190558	
[illegible]	148146	
DAN [illegible]	190586	
SHAWN LAWSON	192795	
Elaine Brown	190385	
JIM FENNEMA	191503	
JIM STACHR	190381	
Jay D'Angelo	193022	
Joe Lovato	142394	
John Cooley	[illegible]	
[illegible]	[illegible]	
CRAIG HARRIS	191800	
Debra Gonzales	192796	
John Burson	190921	
MARK MOUNTAIN	193023	
DANA WILLIAMS	178140	
DAVID BALL	193024	
Scott KERR	190389	
Tim Chad	115701	
Jack Reed	191044	
Mary Jane Wing	114734	

Meeting Conducted By: [illegible] 556
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 12/03/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Asbestos Abatement
TA-2 Work
Snow - Slip Trip & Fall

HAZARDS

Snow & Ice

Biological:

Cold

Chemical:

Asbestos

Physical:

[redacted]p on ice

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JACOB HINKLE	187060	
Jim Fennema	191503	
Bob Livingston	192794	
Shawn Lauer	192795	
Elaine Brown	190385	
Jon Lowe	192794	
DANIEL ORTIZ	192477	
Debra Gonzales	192296	
Jay D'Angelo	193022	
Steve BLACKWELL	193252	
Vern Gonez	147436	
TAD WEST	142856	
PAT HOGAN	192478	
Quest Craft Sec	191825	
MARK MOUNTAIN	193023	
DAVID BALL	193024	
Florentino Stalin	148146	
R H TOUPAIN	191947	
DANA WILLIAMS	179110	
JIM STAEHR	190381	
Scott KERR	190389	
HAL RUTLAND	190586	
CRAIG HARRIS	191800	
Mary Jane Winch	114734	
DAN DAVENPORT	190582	
John Conley	182455	

Meeting Conducted By: _____ SSO _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 12/2/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Eye Protection
TA-2 Work
Asbestos Abatement

HAZARDS

Biological:
Cold

Chemical:
Fuel, Asbestos

Physical:
[redacted]Tag

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DANA WILLIAMS	178110	
Debra Gonzales	192296	
Joe Loya	192394	
BOB WHITE	187060	
DAN DANSARD	190586	
Elaine Brown	190385	
Jack Reust	191046	
Del Caudle	190055	
[illegible]	192477	
CRAIG HARRIS	191800	
NAL RUTLAND	190588	
JIM STAEHR	190381	
Daniel McDonald	193253	
PATRICK HOGAN	192478	
TAB WEST	142856	
GENE GOMEZ	147456	
Florentino Stanley	148146	
DAVID BALL/MWH	193024	
Mantawind	114734	
SHAWN LAURENT	192795	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 11/26/07

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

ASBESTOS ABATEMENT

HAZARDS

Biological:

cold

Chemical:

Asbestos

Physical:

Tins

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 Loop Alarms

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Alan Hinkle	187060	
Steve Blackwell	193252	
Chad West	142856	
Daniel Ortiz	192477	
Horatio Stanley	148146	
Zach Cooke	521455	
Jon Lovett	142374	
Debra Gonzales	192296	

Meeting Conducted By: Manny Perez, Sr. (Print Name) SSO (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/25/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TA-2 - Misc Work
Asbestos Abatement

HAZARDS

Biological:
Cold

Chemical:
Asbestos, Fuel

Physical:
[redacted]ting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DAN J DANSIED	190586	
SHAWN LAURENT	192795	
JIM FENNEMA	191503	
R H TOUTANT	191947	
[illegible]	192394	
Debra Gonzales	192296	Debra Gonzales
ALOB HIKELE	187060	
[illegible]	192478	Patrick Hogan
[illegible]	190388	
John Conley	182455	
Elaine Brown	190385	
DAVID BALL / MOTA	193024	
MARK MOUNTAIN	193023	Mark Mountain
Scott Kerr	No 389	
ERNEST CRAFT	191325	
Daniel McDonald	193253	
DANIEL ORTIZ	192477	
[illegible]	192856	
MaryJane Winn	114734	
Horatio Stanley	148146	Horatio Stanley

Meeting Conducted By: Mark Przybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/22/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT PREP
H&S BOOTS, H&T CLIMATE

HAZARDS

Biological:
Cold

Chemical:
ASBESTOS, FUEL

Physical:
[redacted]TIRE

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 LOS ALAMOS

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
MARK MOUNTAIN	193023	Mark M
AVID BALL / MOTA	K93024	
Elaine Brown	190385	
Bob Livingston	197894	
ALAN HINKLE	L87D60	
Jan Loconto	M 2794	
John Corker	B52455	
John Carter	190921	
DANIEL ORTIZ	192477	
ERNEST CRAFT	191325	
DAN DANGER	190586	
SHAWN LAUGHT	192795	
Debbie Gonzales	192296	
CRAIG HARRIS	191800	
SCOTT KERR	190389	

Meeting Conducted By: _____ SSC _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/12/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Air lock Work
Storm Water Controls - Sandbags
Asbestos Abatement

HAZARDS

Biological:
Cold

Chemical:
Fuel, Asbestos

Physical:
[redacted]Trip, Overhead objects

Radiological:
RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Jim Fonseca	191503	
Ted West	142856	
Alan White	187060	
Adria Gonzales	192296	
Bob Livingston	192744	
Joe Loveto	192574	
Scott Keefer	190786	
Daniel Durand	190586	
Hal Rutland	190588	
Elaine Brown	190385	
John Cudgen	190521	
Coleman	190383	
Daniel Ortiz	192477	
Craig Harris	191800	
Jack Rust	191044	
R Hurtado	191947	
Shawn M. Laurel		
David W. Ball/Motta	193024	
Mark Mountain	193023	

Meeting Conducted By: Monty L Przybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/20/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Asbestos Abatement
TA-61 Work

HAZARDS

Biological:
Cold

Chemical:
Fuel, Asbestos

Physical:
Trip, Slip Trip & Fall

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2 or TA-61

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ANA WILLIAMS	178110	
Jim FENNEMA	191503	
Jaime Brown	190385	
DAN DANSARD	190586	
D H TOUTAIN	191947	
ERNEST COATS	191325	
John Carlson	190921	
Jay D'Angelo	193022	
CRAIG HARRIS	191860	
Kevin R Milliken	191502	
GERALD L Sinnett	191328	
Scott KERR	190309	
DAVID BALL / MOTA	193024	
SHAWN M. Lavoie mota	192795	
MARK MOUNTAIN	193023	
Jim STAGLIN	190381	
M. GRAHUS	[illegible]	
Roy J.		
Jonathan Coleman	190383	
Tim Hoppe	141544	
HAL RUTHARD	190588	
TADWEST	192856	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 11/19/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

NO WORK TODAY

HAZARDS
OFFICE SAFETY

Biological: BLOOD BORN KIT IN TRAILER

Chemical: MSDS IN TRAILER

Physical: COLD STRESS

Radiological: N/A

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
LAD West	172856	

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/8/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

No Work Today

HAZARDS

Office Hazards

Biological:
Blood Born Kit in Trailer

Chemical:
MSDS Located in Trailer

Physical:
Cold Stress

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANIEL ORTIZ	192477	
John Conley	182455	
Shawn Laurent	192795	
Jerry Romero JAKES CRANE	-	
Mark Mountain	193023	
Jon Loreto	192374	
Hal Rutland	190588	
Dan Dansard	190580	
Bob Livingston	192794	
Debra Gonzales	192296	
Caleb Hinkie	187060	
David Ball / MOFA	193024	
Jack Roush	191044	
Adrian Romero	120634	
Clif Caudle	190055	

Meeting Conducted By: Dana Williams CM
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 11/15/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

RX TOP HEAD WORK
TA-61 WORK
ASBESTOS ABATEMENT

HAZARDS

Biological:
Cold

Chemical:
Fuel, ASBESTOS

Physical:
Tiny, OVER HEAD WORK

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

1/ TA-2 — LOS ALAMOS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H TOUNTAIN	191947	
ELAINE BROWN	190385	
DAN DANIARD	190586	
TIM HOGAN -	141446	
KEVIN KNIFFE		
JAMES WEST	142956	
SHAWN LAUGHT	192795	
HAL RUTLAND	190588	
DANA WILLIAMS	178110	
JOE LOFLIN	192394	
DEBRA GONZALES	192916	
CARLOS HUERTA	187660	
RALPH YOUNG		
BOB LIVINGSTON	192794	
ERNEST CRAFT	191325	
DANIEL ORTIZ	192477	
JACK RICE	510409	
JOHN CONLEY	182457	
ADAM SCOTT	176367	
DONOVAN TORIVIO	170066	
MARK MOUNTAIN	193023	
SOLEMAN	190383	
KR MILLICAN	191502	
SCOTT HAVEMAN	161277	

Meeting Conducted By: JAMES L PRZYBYSZEWSKI SSM
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/4/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Electrical systems
Equipment inspections
TA-61 tanks
Crane / lift work

HAZARDS

Biological:
cold

Chemical:
Fuel, exhaust, asbestos

Physical:
[redacted]Trip

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - TA-2 Los Alamos

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DANA WILLIAMS	178110	
DANIEL ORTIZ	192477	
Tim Hogan	141776	
T Bowers	182856	
R H Tolliant	181947	
High Country Oilfield Const	—	
Jerry R. Rowden JOBS	—	
DAN DANIELS	190586	
Donovan Tortorich	170066	
Adam Scott	171307	
Jim Fennell	191503	
Chad Hinkle	187060	
Jon Lowe	192944	
Debra Gonzales	192916	
CRAIG HARRIS	191800	
Ernest Craft	191325	
MARK MOUNTAIN	193023	
DAVID W. BALL	193024	
Elaine Brown	190385	
Shawn Laurent	192795	
Kevin R Milliken	191502	
Keith Kinder	190611	
John Conley	182455	
Scott Kerr	190389	
Mary Jane Winch	114734	
Dale Carr	190055	
HAL RUTLAND	190588	
David McDonald	193253	
JIM STAGNER	191381	
~~Kelly Hubbard~~		

Meeting Conducted By: MARTIN PRZYBYLSKI (Print Name) SSA (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/13/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TA-61 work
HEPA installation
Asbestos abatement

HAZARDS

Biological:
cold

Chemical:
Fuel, Asbestos

Physical:
[redacted]ting, Fall protection Trenching

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2 or TA-61

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
HAWKLaurent MOVA	192975	
DANIEL DIETZ	192477	
Tim Hogan	141544	
AlOB Hinkle	187060	
Jon Loncito	192374	
John Copley	182455	
H Tourant	191947	
Coleman	190383	
Mark Gann	190157	
TIM STAELIN	190381	
John Carlson	190521	
ADAM SCOTT	176367	
Donovan Trivio	170066	
Kevin R Milliken	191502	
HAL RUTLAND	190588	
Bob Livingston	192794	
CRAIG HARRIS	191800	
Jack Reed	191044	
ERNEST CRAFT	191325	
IAD West	182856	
Keith Snyder	190611	
DAVE NILLIAMS	178110	
Dal Cavell	190055	
Elaine Brown	190385	

Meeting Conducted By: Mark Laszynski (Print Name) SSO (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/12/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TA-61 STACK CUT
RX PREP WORK
ASBESTOS ABATEMENT

HAZARDS

Biological:
cold

Chemical:
Fuel, Asbestos

Physical:
[redacted]l HAZard, OVER HEAD WORK

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- TA-2(61) Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H TOUTAINT	191947	
Jonathan Coleman	190383	
DANA WILLIAMS	178110	
ALOB WHITE	187060	
TIM AUGER	141564	
ADAM SCOTT	176367	
DANIEL ORTIZ	192477	
SHAWN LAURENT	192795	
DAN DANARD	190586	
DONOVAN TORIVIO	170066	
JERRY R. EDWARD JAKES	192394	
Scott KERR	—	
Kevin R Millikan	190389	
John Carlton	191507	
Travis Grant	190921	
Jack Beust	191325	
CRAIG HARRIS	191044	
DAVID BALL/MGTA	191800	
MARK MOUNTAIN	193024	
John Conley	193023	
Del Clark	182458	
Dan McDonald	190054	
TIM STAISHR	193253	
Maryann Winch	190381	
Leon Gleason	114734	
Elaine Brown	182467	
NAL RUTLAND	190388	
JIM FENNEMA	190588	
JAN WEST	191503	
	192856	

Meeting Conducted By: Mary Przybylski SSU
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/11/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TA-61 STACK CUT
TENT PREP

HAZARDS

Biological:
cold weather

Chemical:
Fuel

Physical:
[redacted]TING, OVER HEAD WORK, FALL HAZARDS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - TA-2 - Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
R H TOUTAINT	191947	
ANA WILLIAMS	178110	
DAN DANIARD	190586	
[illegible]	192794	
Donovan Torivio	170056a	
JIM STAEHR	190381	
TOM SMITH	176367	
[illegible] ICR	190389	
Jaime Brown	190385	
NAL RUTLAND	190588	
JIM FENNEMA	191503	
GERARD [illegible]	191326	
ERNEST CRAFT	91325	
John Cardoza	190921	
DAVID ISAAC	193024	
Dan Jones Wash	114734	
MARK MOUNTAIN	193023	
DANIEL ORTIZ	192477	
John Conley	182455	
Tim Hogan	141564	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 11/01/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TENT ERECTION
DOOR INSTALLATION

HAZARDS
OVERHEAD, SLIP, TRIPS & FALLS

Biological: BLOOD BORN KIT IN TRAILER

Chemical: MSDS LOCATED IN TRAILER

Physical:. ELECTRICAL CORD SAFETY

Radiological: MONITORED AS NEEDED

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
AS NEEDED

Engineering/Administrative Controls:

Monitoring: AS NEEDED

Special Equipment:
AIRIAL LIFTS

EMERGENCY ACTIONS
911 TA-2 LOS ALAMOS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Elaine Brown	190385	Elaine Brown
John Conley	182455	John Conley

Meeting Conducted By: Dana Williams CM (Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 11/9/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TENT INSTALLATION
DOOR INSTALLATION
CONTROL ROOM ADDITION
WELDING TENT FABRIC

HAZARDS
OVERHEAD, SLIP TRIPS & FALLS
ELECTRICAL

Biological: BLOOD BORN KIT LOCATED BY FIRST AID KIT

Chemical: MSDS LOCATED IN TRAILER

Physical: USE PROPER LIFTING TECH

Radiological: SIGN IN ON RWP 19 FOR TOP OF REACTOR

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
AS NEEDED

Engineering/Administrative Controls:
AS NEEDED

Monitoring:
AS NEEDED

Special Equipment:
POWER TOOLS MAN LIFTS

EMERGENCY ACTIONS
911 TA-2 LOS ALAMOS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
J H TOUTAIN	191947	
Rick Hawley	89091	
FLOYD Hibble	187060	
Bob Livingston	192941	
Steve Blackwell	193252	
HAL RUTLAND	190588	
Jim Fenuema	191503	
Elaine Bryant	190385	
John Conley	182455	
Torutino Stanley	148146	
DANIEL ORTIZ	192477	
Manuel Vargas	191351	
MARK MOUNTAIN	193023	

Meeting Conducted By: DANA WILLIAMS CM
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/08/03

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TENT ERECTION
TA-61 STACK CUTTING
OPEN DOOR POLICY AND STOP WORK AUTHORITY

HAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
[redacted]s & Falls, Overhead Hazards. Electrical cords

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 TA-2 Los Alamos
911 TA-61 Los Alamos- (Stack cutting

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Jim Fontenot	191503	
Joe Lewis	192394	
David Vargas	184351	
Daniel Ortiz	192477	
Tobin Parrish	190921	
Lisa Hogan	141566	
Kevin D Milliken	191502	
Daniel McDonald	193253	
Shawn Laurent	192795	
Bob Livingston	192704	
Carl Scott	176367	
Donovan Tolivia	170066	
Elaine Brown	140385	
Jim Stagg	190381	
Bruce D. Craft	191375	
David Ball	193024	
Jonathan Stanley	148146	
Mark Mountain	193023	
Jack Roust	191044	
Mark Przybylski	190412	
John Conley	182455	
Kary Jack Wiull	114784	

Meeting Conducted By: Dana Williams CM
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 11/7/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Tent Erection
Asbestos Abatement
61 Pizza Cut

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
Trip & Fall, Overhead Loads, Fall protection

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
SHAWN LAURENT	197925	
R H JOHNSTON	191947	
D. DANSARD	190586	
Bob Livingston	192794	
Elaine Brown	190385	
Jonathan Coleman	190383	
JIM STREAR	190381	
Kevin R Milliken	191502	
Scott KERR	190369	
ERNEST CRAFT	191325	
John Carlson	190921	
John Conley	182455	
M. GRAVES	191118	
Jon Lovuto	192394	
DANIEL ORTIZ	192477	
Mario Vargas	181351	
ADAM Scott	176367	
Donovan Torivio	170066	
Jack Reust	191041	
Daniel McDonald	193253	
JIM FERNANDEZ	191503	
MARK MOUNTAIN	193023	
DAVID BALL	193024	
Tim Hogan	141566	
Helen Robinson	191799	
Martin Pazbyson	190462	

Meeting Conducted By: Dan Williams CM
(Print Name) (Title) (Signature)

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OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 11/06/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TA-61 S-T-UP & STOP Work Order

HAZARDS

Biological:

Chemical:
Fuel

Physical:
Trip & Fall, Overhead Loads, Foot Protection

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- TA-61 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Lee Williams		
GARY IRWIN		
Shawn Williams		
Matt Williams		
Jack Bueler		

Meeting Conducted By: [illegible] 550 _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/06/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

61 - STACK
TENT ERECTION

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
[redacted] Trip Fall, Overhead Struck, Fall Protection

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - TA-2 - Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Scott KERR	190309	
R H Toutaint	191947	
J Laurent	192795	
Jim STAEHR	190381	
J Coleman	190383	
Kevin RM. Milliken	191502	
JAVIER ORTIZ	192477	
Jo Lovato	192794	
Jim FOWLER	191503	
Bob Livingston	192794	
Tim Nigh	141564	
ERNEST CONLEY	191325	
CRAIG HARRIS	191800	
Tom Curtis	190921	
IAN WEST	142856	
STEVE BLACKWELL	193252	
DAN JANSEN	190586	
DAVID WILLIAMS	178110	
Florating Stanley	148146	
Elaine Brown	190385	
Marco Vargas	181351	
ADAM SCOTT	174367	
Donovan Torrio	170066	

Meeting Conducted By: Marty L Przybylski SSD
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 11/05/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
TA-61 STACK DOWN ENDING
TENT ERECTION
Asbestos Abatement

HAZARDS

Biological:
Cold

Chemical:
Fuel.

Physical:
Hand loads, Falling objects, Fall Protection Slips, Trips & Falls

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 TA-2 - Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
PH TOUTAINT	191947	
Donovan Toups	170066	
SHAWN LAURENT	192795	
Lee Lavado	192794	
TADWEST	142856	
TUCKER	190389	
Kevin A Millike	191502	
DAN DANARD	190586	
ANIE ORTIZ	192477	
Bob Lewis	192794	
Tim Hogan	141544	
DANA WILLIAMS	178110	
John Conley	182455	
ERNEST CRUFT	191329	
JIM FENNEMA	19503	
Jack Reust	191644	
Elaine Brown	190385	
Florentino Stuky	148146	
ADAM SCOTT	176367	
JIM STACHE	190381	
Mary Sam Winch	114734	
HAL RUTLAND	190588	

Meeting Conducted By: _____ SSO _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]al Area: TA-2 SSHASP No. Date 11/4/02

SAFETY TOPICS PRESENTED

UBJECTS DISCUSSED (Including Change Orders)
TA-61 STACK DOWN-ENDING
TENT ERECTION
SNOW + ICE-

HAZARDS

Biological:
Cold

Chemical:
Fuel

Physical:
TRIP & FALL OVERHEAD HAZARDS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- TA-2 LOS ALAMOS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Jack Rust	191044	
DANIEL ORTIZ	192477	
Bob Longstr	192791	
DANA WILLIAMS	178110	
TED WEST	192857	
Kevin R Molliken	191502	
obert H Touchaim		
Jon Laguardo	192374	
CRAIG HARRIS	191800	
Darril Stafford	113569	
Josh Barlow	191792	
Tim Hague	141512	
ADAM SCOTT	176367	
JIM STAEHR	190381	
SHAWN LAUGHT	192795	
Matt Williams	191796	
DAN DAUGHERTY	190586	
John Conley	182457	
MaryJane Winch	114734	

Meeting Conducted By: Marcin Pszczyński SSR
(Print Name) (Title) (Signature)

OWR D&D
Pre Job Briefing

Date: 11-2-02	Task: TENT ERECTION

Job Summary:
INSTALL TENT PANELS
INSTALL PURLINS, SITE CLEANUP

Hazards:
RAIN, ELECTRICAL SAFETY
CRANE SAFETY

Safety Measures (PPE):
HEARING PROTECTION WHEN REQUIRED

Employee Name:	Job Assignment:	Signature:
Nick Hawley	TENT	
TOM WARSH	TENT	
DANIEL ORTIZ	TENT	
Robert Livingston	TENT	
John Conley	SAT	
SHAWN LAURENT	MOTA	
Elaine Brown	SEC	
Kevin Remillard	MOTA	
RALPH YOUNG	OAKS CREW	
M. FENNEMA	MOTA	
ERNEST ORTIZ	SEC	

Supervisor/crew leader:

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 11/01/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT ERECTION
Asbestos Abatement
Housekeeping

HAZARDS

Biological:
cold

Chemical:
Fuel, oil

Physical:
[redacted]bread loaf, Falling objects, Lifting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

11 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
SHAWN LAURENT	192795	
Robert Livingston	192794	
DANA WILLIAMS	178110	
ALOB HINKLE	187060	
Elaine Brown	190385	
Jordan Trivie	D00606	
JIM STAEHR	190381	
Scott Kerr	190389	
Gerard Schmit	[illegible]	
Kevin R Milliken	191502	
John Conley	182455	
[illegible]	190526	
ERNEST CRAFT	191325	
DANIEL CRITE	192477	
HAL RUTLAND	190588	
TAB WEST	142856	
ERNEST CRAFT	191325	
CRAIG CHARLES	191800	
ADAM SCOTT	176347	
JOE LUVATO	192374	
Floating Stanley	148146	
Helen Robinson	191799	
RENE GOMEZ	147436	
Jack Foust	191044	
Leon Gleason	182467	
JIM FENNEMA	191503	
MaryJane Winn	114734	

Meeting Conducted By: MARTY CZYZYKSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/31/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT ERECTION
GI JACK PUK + LOTA
ASBESTOS

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
[redacted] Head Lamps, STAMIN, Falling objects

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 Los Alamos

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JON DANIELS	190586	
SHAUN LAURENT	192795	
DAN SCOTT	176367	
Bob Livingston	192794	
Donovan Torrid	170066	
Jim Fennema	191503	
DANA WILLIAMS	178110	
HAL RUTLAND	190568	
DAVID HINKLE	187060	
Kevin R Milliken	191502	
John Conley	82455	
Jon	192574	
GENE MARRIOTT	191800	
Scott Kear	190389	
DANIEL ORTIZ	192477	
Ernest Cook	191525	
D Sheldon	190386	
G Schell	191326	
Elaine Brown	190385	
Tim Rogers	147846	
Jason Wes	192856	
Jack Reist	191044	
Floratino Stanley	148146	
RENE GOMEZ	147436	
Leon Greeson	182467	
Mary Jane Wunderlich	114734	

Meeting Conducted By: Mary Ann Przybyszewski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/30/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Over Head loads > TEAM Exercise
Pinch Points
Crane Removal
TA-61 Pinup

HAZARDS

Biological:
cold

Chemical:
Fuel

Physical:
Hand loads, Pinch Points, Slip, Trip & Fall

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Ken R Milliken	191502	
JAN DANCARD	190586	
DANA WILLIAMS	178110	
Donovan Torivio	170066	
DAN SCOTT	176367	
ALOD HINKLE	187060	
OFFICER	190389	
HAL RUTLAND	190588	
ERNEST CRAFT	191325	
Jim Fagliano	191503	
John Conley	182455	
Adrian Bonine	120634	
Elaine Brown	190385	
DANIEL ORTIZ	192477	
JIM STAGER	190381	
Jon Loutis	192794	
TAB WEST	192856	
Floratine Stanley	148146	
HELEN ROBINSON	191799	
BOB LIVINGSTON	192794	
Mary Jane Wind	114734	
T.i. Hogan	141544	
Shawn Laurent	197195	
GERALD SHUEY	191326	

Meeting Conducted By: Mary L Livingston SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/29/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Tent erection
Frame room clean-out
61 set-up

HAZARDS

Biological:
cold

Chemical:
Fuel, oil

Physical:
[redacted]nd Hazard

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- TA-2 Los Alamos

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Bob Livingston	192794	
Jim Fournet	191503	
Coleman	190383	
Scott Kerr	190389	
Ernest Coats	191800	
Hal Rutland	190588	
John Conley	182453	
Adrian Romero	120829	
Walter Ortiz	192477	
Dan Jansen	190586	
Shawn Lacicero	192795	
Craig Harris	191800	
Donovan Trevino	170066	
Dana Williams	178110	
Jim Strehr	190381	
Elaine Brown	190385	
Rene Gomez	141436	
Tarsino Stanley	148146	
Jon Lewis	192394	
J. Gibson	182467	
MTI Inc	114782	

Meeting Conducted By: Monty L Pizzy Sr. SSE
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/28/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT ERECTION
ASBESTOS ABATEMENT
FRANZ RUM clean out
61 PREP

HAZARDS

Biological:

Chemical:

Physical:

[redacted]Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JAN DUGARD	190586	
Jon Lovato	192974	
Jonathan Colayan	190386	
ERICK CRAFT	191321	
Tim Hogan	141541	
HAL RUTLAND	190588	
Rene Gomez	147436	
Thomas Stanley	148146	
CADE HUNTER	187060	
SHAWN CAUDELL	192795	
Bub Livingston	192794	
D S Higman	190386	
John Conley	182455	
CRAIG HARRIS	191800	
DANIEL ORTIZ	192472	
John Gordon	190221	
DANA WILLIAMS	178110	
HELEN ROBINSON	191799	
TAD WEST	182856	
Myra Lopez	0578598	
Elaine Brown	190385	
EDDIE Schley	191326	
Scott KERR	190389	
Mario Vargas	181351	
Donovan Torivio	1700616	
Adam Scoggins	176367	
Jim Stein	190831	
Matt Williams	9259458274	
Josh Bivelow	585-75-6010	
~~Scott Cottrell~~	~~182456~~	
Flor Ann Stanley	146146	

Meeting Conducted By: Mary Pazyniak SSE
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]al Area: TA-2 SSHASP No. Date 10/25T02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT ERECTION
FORMAL ROOM CLEAN-OUT
ASBESTOS ABATEMENT
HOUSEKEEPING

HAZARDS

Biological:
COLD STRESS

Chemical:
OIL, FUEL,

Physical:
[redacted]ER HEAD LOADS, FALLING OBJECTS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2
MAIN PAGER

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Robert Livingston	192794	
Scott Cecil	190389	
Shawn Laurent	192795	
J Coleman	190383	
Hal Rutland	190588	
Bob White	187060	
D. Dansard	190586	
[illegible]	192794	
[illegible]	181351	
John [illegible]	190921	
Craig Hopkins	191880	
Josh Bruton	191792	
Matt Williams	191796	
Adam Scott	176362	
Dave Williams	178110	
Donovan Torvio	1700666	
D Sheiman	190386	
Daniel Ortiz	192477	
John Conley	182455	
Elaine Brown	190385	
Helen Robinson	191799	
Myra Lopez	087898	
Mary Lou Wink	114734	

Meeting Conducted By: Mary Lou Wink SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/24/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT ERECTION
FRAME ROOF CLEAN-OUT

HAZARDS

Biological:

Chemical:
Fuel, oil

Physical:
[redacted]R HEAD LOADS, MOVING EQUIPMENT

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - LOS ALAMOS TA-2
RAIN PLACE
[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Robert Livingston	192794	
Shawn Laurent	192795	
Scott Kerr	190389	
D. Daggard	190586	
Donovan Torivio	170066	
Alex Hinkle	187065	
Debra Gonzales	192296	
Adam Scott	176867	
Dana Williams	178110	
Craig Harris	191800	
Edgar Craft / SEC	191325	
SS Heilman	190386	
Myra Lopez	087896	
Jovan	192394	
Helen Robinson	191799	
Elaine Brown	190385	
Hal Rutland	190588	
Mary Jane Winch	114734	

Meeting Conducted By: (Print Name) SSC (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/23/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT ERECTION
FRAME ROOM CLEAN-OUT
ASBESTOS ABATEMENT
HAND RAIL INSTALLATION

HAZARDS

Biological:
cold,

Chemical:
Oil Fuel

Physical:
[redacted]e Head loads, Fall Protection, Lifting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2
RAIN PAGER

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
SHAWN M. LAUREAT	192795	
ERVIN R MILLIKEN	191502	
[illegible] KEER	190389	
[illegible] LIVINGSTON	192794	
JAN DANSARD	190[illegible]	
[illegible] Coleman	190383	
JIM FENNEMA	191503	
Elaine Brown	190385	
[illegible] Torivio	1700660	
DANA WILLIAMS	178110	
ADAM SCOTT	176367	
John Cupelson	190921	
CALEB HINKLE	187060	
DANIEL ORTIZ	192477	
Mario [illegible]	181351	
TIM [illegible]	141144	
ERNEST CRAFT / SEC	191325	
CRAIG HARRIS	191800	
GERALD SCOTT	191324	
Josh Burford	585-75-6010	
Jose Gonzales	192296	
Rick Hawley		
[illegible]		
Matt Williams	525858279	
Joe Lovato	192394	
Jack Pruett	1910411	
Helen Robinson	191799	
ELIZABETH HICKEN	193089	
Florentino Stanley	148146	
Leon Gleason 1w611.	182467	
Mary Jane Winch	114734	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/22/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT UNLOAD
VENT PIPE CLEAN-OUT
FOAM ROOM
HAND RAIL RE TOP

HAZARDS

Biological:

Chemical:
Fuel, oil

Physical:
[redacted]FALL PROTECTION, OVERHEAD LOADS, CONFINED SPACE

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Jonathan Lohman	190383	
SHAWN LAURENT	192795	
OBERT LIVINGSTON	192794	
KEAR	190389	
DAN DANARD	190586	
ENE Gomez	148436	
K. SUMMERS	191324	
DANA WILLIAMS	178110	
CALEB HINKLE	187060	
JONOVAN TORIVIO	170066	
TOM SCOTT	176367	
CRAIG HARRIS	191800	
HAL RUTLAND	191588	
IM LEVATO	192394	
DEBRA GONZALES	192296	
RNST. CRAFT SEC.	191325	
JIM FOWLER MOA	191503	
Myra Lopez	097898	
TAD WEST	142856	
DSTHELLAR	190784	
Matt Williams	525-858279	
Florentin Stanley	148146	
KEVIN R MILLIKEN	191502	
DANIEL ORTIZ	192477	
Maria Ventas	181351	
Elaine Brown	190385	
Tim Hughes	141546	
Mary Jane Wink	14234	
Jack L Rust	191044	

Meeting Conducted By: MARK L PRZYBYSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/21/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TENT ERECTION
FIRM POWER WASTE PACKAGING
TA-61

HAZARDS

Biological:

Chemical:
Oil, Fuel

Physical:
[redacted]ING EQUIPMENT, OVER HEAD LOADS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2
Radio Page

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Scott KERR	190919	
SHAWN LAURENT	192795	
Robert Livingston	192794	
Elaine Brown	190385	
Jim FENNEMA	191503	
DAN DANSARA	190526	
Dana Williams	178110	
John Carlson	190921	
JColeman	190383	
Debra Gonzales	192296	
Jon Lewis	192794	
M. Green	190558	
CA160 Hintze	187060	
Mario Vargas	181351	
CRAIG HARRIS	191860	
Helen Robinson		
ERNEST CORTEZ	191325	
DSHelmer	190386	
Myra Lopez	087898	
DANIEL ORTIZ	192477	
Tim Avery	141565	
Karen R Milliken	191502	
ADAM SCOTT	176367	
Donovan Torrio	170066	
Mary Jane Wind	114734	
John Conley	182455	
Floratin Stanley	148146	
Mark L. Ross	121041	

Meeting Conducted By: Mary L Przybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/18/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Concrete Pour
Foam Room Clean-out

HAZARDS

Biological:
Cold Weather

Chemical:
Fuel, oil

Physical:
[redacted]ETING

Radiological:
Per RWP

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2
Rain Payne
[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
CRAIG HARRIS	191800	
ROBERT LIVINGSTON	192794	
Elaine Brown	190385	
DANIEL ORTIZ	192477	
HAL RUTLAND	190588	
CALOB HINKLE	197060	
SCOTT KERR	190384	
JIM FANNEMA	191503	
SHAUN LAURENT	192795	
Helen Robinson	191999	
TAD WEST	192856	
John Oakley	192455	
Jay Lovell	192794	
Debra Gonzales	192296	
Ashni Romero	120634	
GERARD Schuetz	191326	
Florentino Stanley	148116	
DAN DANIARD	190586	
Myra Lopez	087898	
MARY JANE DINH	114734	

Meeting Conducted By: MARTIN PRZYBYLSKI SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/17/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

101 CLEAN-UP
SET FORM FOR CONCRETE POUR
FRAME ROOM CLEAN-OUT
HOUSE KEEPING

HAZARDS

Biological:
INSECTS

Chemical:
Fuel, oil, dust

Physical:
[redacted]ING EQUIPMENT, FALLING OBJECTS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - LOS ALAMOS TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Dana Williams	178110	
Tim Hogan	141566	
Rene Gomez	147436	
[illegible] Stanley	148146	
DAN LANGARD	190586	
Kevin R Milliken	191502	
John Conley	KG2455	
Stan Carlson	190721	
J Coleman	190383	
GARLOD HINKLE	187065	
JIM FENNEMA	91503	
Scott Ickes	190389	
HAL RUTLAND	190588	
M GRANUS	190158	
Jon Lambert	192394	
Debra Gonzales	192296	
Helen Robinson	191997	
DANIEL ORTIZ	192477	
ERIC ST. CLAIR	191525	
CRAIG HARRIS	191800	
ELAINE BROWN	190385	
ADAM SCOTT	176367	
Donovan Torivio	170066	
SHAWN LAURENT	192795	
Patrick Hogan	192478	
ROBERT LIVINGSTON	192794	
Mary Jane Winek	114734	

Meeting Conducted By: Mary L Przybylski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/16/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

FINAL CLEAN-UP BLDG 102
FINAL RUN WASTE CLEAN-OUT

HAZARDS

Biological:

INSECTS

Chemical:

FUEL DUST

Physical:

[redacted]ING OBJECTS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-7 LOS ALAMOS

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
CHAST CRAFT SEC	191525	
obert Livingston	192794	
SHAWN LAURENT	192795	
HAL RUTLAND	190588	
Elaine Brown	190385	
Kevin R Mullins	191502	
Dave Williams	178110	
Tim Hogan	141763	
JD Sowder	141589	
John Carlson	190921	
TADWELL	182EC	
Donovan Torivio	170066	
CAleb White	187060	
ReneGomez	147436	
Adam Scott	176362	
JColeman	190383	
Florentino Stark	148146	
Jon Lavado	142394	
Debra Gonzales	192296	
Helen Robinson	191799	
DANIEL ORTIZ	192477	
Myra Lopez	087898	
Jim STAEHR	190381	
MCANUS	190158	
CRAIG HARRIS	191800	
John Conley	182455	
Ed Williams	191504	
DANIEL GONZALES	525-78-6598	
PATRICK HOGAN	192478	
MaryJane Winch	114734	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/15/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Bldg 101 Demo
EPD issue - TRAINING
TA-61 Survey
Firm; Rain Clean-up

HAZARDS

Biological:
INSECTS

Chemical:
Oil, Fuel

Physical:
[redacted]ing objects

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:
CONTACT CONRADE PRIOR TO ENTERING DOSE AREA

Special Equipment:

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
HAL RUTLAND	190588	
Lorenzo Stanley	148146	
[illegible]	190383	
M GRANUS	190158	
Kevin R Mollica	191502	
SHAWN LAUREAT	192795	
DANA WILLIAMS	178110	
Robert Livingston	192794	
John Conley	182453	
CAIAB HINKLE	187060	
DAN DANSARD	190586	
TADWEST	192872	
DANIEL ORTIZ	192477	
JIM FONNEMA	191503	
CRAIG HARRIS	191800	
ADAM SCOTT	176367	
JIM STAEHR	190381	
ERNEST CRAFT	191325	
Adrian Ramos	120634	
JACK RAUST	191044	
Jay Lewis	192794	
Debra Gonzales	192296	
EDWARD Williams	191804	
[illegible]		
Jim Hogan	141566	
JD STACTAK	141589	
Myra Lopez	087898	
PATRICK HOGAN	192178	
Mary Jane Dimke	114734	
Elaine Brown	190385	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/14/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

EPD TRAINING
Rm 101 Demo
Flame Room clean out

HAZARDS

Fit

Biological:

Insects

Chemical:

Fuel oil

Physical:

Lifting, Falling Objects, Fall Protection

[redacted]adiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 TA-2 Los Alamos

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Bob Livingston	192794	
Hal Rutland	190588	
Dan Dansard	190586	
Scott Ickes	190309	
Tim Adgon	141762	
Shawn Laurent	435-15-1855	
J Coleman	190389	
Dana Williams	178110	
Gabe Hinkle	187060	
Craig Harris	191800	
Ladwell	192954	
Gerald Shell	191326	
Jon Levito	192774	
Jim Fennema	191503	
John Conley	152454	
Ernest Cizfit	191325	
Helen Robinson	191799	
Myra Lopez	089878	
Elaine Brown	190385	
Florentino Stuky	190146	
Debra Gonzales	192796	
Jade Rast	191044	
Mary Jan Winch	114734	
Daniel Ortiz	192477	
Donovan Torivio	170066	
Adam Scott	170362	

Meeting Conducted By: Mario L Partyka SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/13/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Demo 101

HAZARDS

Biological:

Chemical:

Physical:

[redacted]l HAZARD

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANA WILLIAMS	178110	Dana Williams
Matt WILLIAMS	525-85-3279	Matt
J.D. STALLIT.2	141584	J.D. Stallit.2
ADAM SCOTT	176367	Adam Scott
D S HEILMAN	190380	D S H
T. HUGHES	141164	T H
Donovan TORIVIO	1700666	Donovan Torivio
TIM STAENM	190381	Tim Staenm
Jeno Gomez	147436	Jeno Gomez
John Conley	184456	John Conley

Meeting Conducted By: Manny L Jaszczuk (Print Name) CSO (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/12/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Bldg 101 Demo

HAZARDS

Biological: —

Chemical: —

Physical: [redacted]alling objects, Fall Protection, Moving Equipment

[redacted]adiological: —

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANA WILLIAMS	178110	Dana Williams
Tim Hodge	141JL4	
TAD WEST	142856	Tad West
Donovan Torivio	1700606	
J.D. STALTER	141589	
K. SUMMERS	141324	K
ADAM SCOTT	176367	Adam Scott
RENE GOMEZ	147436	Rene Gomez
J Coleman	190383	

Meeting Conducted By: Mark L. Pettigrew SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 10 / 11 / 02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Building 101 Demo
Housekeeping
Rad waste Packaging

HAZARDS

Biological:
Reptiles, Insects

Chemical:
Fuel oil, Dust,

Physical:
Moving objects

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Vests around moving Equipment

Engineering/Administrative Controls:
Barriers Tape, Wet-down area for dust control

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Florentino Stanley	148146	
Bob Livingston	192794	
Tim Hogan	141546	
Donovan Torivio	170016	
Jim Fennema	191503	
Elaine Brown	190385	
J-D. Stalter	141589	
Hal Rutland	190586	
Scott Kell	190389	
Dana Williams	178110	
Jon Lewis	192274	
Caleb Hinkle	187060	
John Conley	182455	
Helen Robinson	191799	
Debra Gonzales	192296	
Daniel Ortiz	192477	
Gerad Schuff	191326	
Rodrim Reveo	120634	
Edward Williams	[illegible]	
Myra Lopez	087898	
Jack Roush	191044	
F. Craft	191325	
[illegible]	190383	
DS Heilman	190384	
Craig Harris	191800	
Kevin R Milliken	191502	
Rene Gomez	147436	
M Genus	190117	
MJ Winch	114734	

Meeting Conducted By: [illegible] (Print Name) [illegible] (Title) [illegible] (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10/10/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Fork Truck Training @ 1300
Trenching + Installation of HEPA Vent Pipe
Building 101 Demo

HAZARDS

Biological:
Insects, Wildlife

Chemical:
Fuel oil; Lead

Physical:
[redacted]ing, Falling objects, Fall Protection

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Vest Around Excavation

Engineering/Administrative Controls:
Barricade Tape

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- Los Alamos TA-2.
Main Page

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Bob Livingston	192741	
C. Ortiz	190399	
J Coleman	190383	
Dana Williams	178110	
Jim Steele	190531	
Dan Hanson	190526	
John Conley	182455	
Adam Scott	176567	
Rene Gomez	147436	
Donovan Torivio	170066	
Tad West	162016	
Joe Lovato	192274	
Gaiod Hinkle	187060	
Jim Fennema	191503	
Kevin R Milliken	191502	
Hal Rutland	190585	
Elaine Brown	190385	
Tim Hogan	141764	
Debra Gonzales	192296	
Myra Lopez	0075C8	
Tate Reust	191044	
Dean Grant	191325	
David Pinola	192430	
Jake Lovato Jr	116580	
Daniel Ortiz	192477	
Helen Robinson	191799	
J.P. Stoltzel	141589	
Craig Hanes	191800	
J S Heiman	190386	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/09/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

House Keeping - Keep Work Area Free of Clutter
Vent Line Placement
Bldg Demo

HAZARDS

Biological:
Insects

Chemical:
Fuel, Lead Fumes

Physical:
[redacted] Points, Falling Objects

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JAN L ANSARI	190586	
Coleman	190383	
Tim Hogan	141564	
TADWEST	142554	
Elaine Brown	190385	
ZANE Gomez	147436	
Horatio Stanley	148146	
Bob Livingston	02653854	
DANA WILLIAMS	178110	
JD STIGLETZ	141589	
John Conley	182455	
ADAM Scott	176367	
Donovan Torivio	170066	
J. FONSECA	191503	
Kevin R Milliken	191502	
GERALD L Schug	191326	
Scott KERL	190380	
CHAD Hinkle	187066	
Helen Robinson	191795	
EDWARD CRAFT	191325	
Debora Gonzales	190296	
DANIEL ORTIZ	192477	
David Barela	192430	
pat Loucks	192794	
D SNELLMAN	190386	
CRAIG HARRIS	191800	
Myra Lopez	087598	
JIM STAEHR	190381	
Jack Rost	191044	
TODD GREER	118575	
Kevin R Milliken	191502	
Jake Loucks	116540	

Meeting Conducted By: MARK L JAZWIECKI SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/08/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
Demo PREP WORK Rm 101
Pump & cut 12" & 30" Line
Roof Survey

HAZARDS

Biological:
INSECTS & Wildlife

Chemical:
Fuel, oil, WATER, Lead Fumes

Physical:
[redacted]l Hazard, Falling objects, LIFTING

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
MONITOR FOR Roof Survey

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 Los Alamos TA-2
[redacted] Page

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Elaine Brown	190385	
[illegible]	190556	
[illegible] Trivio	1700066	
NE Gomez	1474316	
[illegible] Scott	176367	
Jim Staehr	180381	
[illegible] Williams	178110	
[illegible] Schmidt	191324	
[illegible] R Milliken	191502	
[illegible] ICARR	190387	
[illegible] Hinkle	187600	
[illegible]	192594	
[illegible] Craft	191325	
[illegible]	120634	
Tim Hogan	141746	
David Barela	192430	
[illegible] Ortiz	192477	
Helen Robinson	191799	
[illegible]	190383	
[illegible] Lopez	0878918	
[illegible] Herrmann	190386	
John Carlson	190921	
John Conley	182455	
[illegible] Colorado	1415-F3	
Debra Gonzales	192296	
Craig Harris	191800	
[illegible] West	142356	
Horacio Stanley	148146	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/07/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Site Security -
Pumping LATRA
Bldg Demo

HAZARDS

Biological:
Insects, Reptiles

Chemical:
Fuel oil

Physical:
[redacted]ling obstacle Lighting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Face shield For water Pumping

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-3

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Scott Kerr	190398	
Tim Hogan	141154	
Dana Williams	178110	
Jim Fenner	191503	
Leo Lovato	192394	
D. Dansara	190580	
Floratine Stanley	148146	
Craig Harris	191800	
Lorenzo	190383	
Hal Rutland	190588	
Kevin Rinolliker	191502	
Elaine Brown	190385	
Edd Shuey	91326	
Todd Hinkle	187065	
Myra Lopez	087898	
D Sherman	190386	
Melvin Moreno	120634	

Meeting Conducted By: Marty L Przybyski SSA
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/04/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

CRD Removal CRANE ON-SITE
Fire extinguisher check #10 missing
DRAIN 12" LINE
House keeping

HAZARDS

Biological:
INSECTS, Wildlife

Chemical:
Fuel oil

Physical:
[redacted]ll protection, LIFTING, OVERHEAD WORK

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2
Radio page

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Elaine Brown	190385	Elaine Brown
DAN LANSARA	190586	
SAM SCOTT	176567	
Donovan Torivio	170066	
DANA WILLIAMS	178110	
Debra Gonzales	192296	
[illegible]	192594	
David Barela	190430	
DANIEL ORTIZ	192477	
JIMMIE L. JONES JR	191043	
CAIOB HINKLE	190660	
JOHN CONLEY	182452	
SGdem	PA0383	
GERALD STEVENS	191326	
HELEN ROBINSON	191799	
CRAIG HARRIS	191580	
D SHELAND	190386	
JACK POST	151044	
JIM FENNEMA	191503	
KEVIN R MILLICAN	191502	
JIM STAEHR	190831	
HAL RUTLAND	190588	
JOHN CARLSON	190921	
IAD WEST	142856	
Kevin Sagers	185675	

Meeting Conducted By: Marty Pompeo (Print Name) ESA (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/03/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TRENCHING
GATE LOCKING
BARREL MOVEMENT

HAZARDS

Biological:

INSECTS

Chemical:

Fuel oil

Physical:

[redacted]ZING

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2
ROIN Page

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Tim Hogpu	141564	
Adam Scott	176367	
Donovan Torivio	170066	
Jim Fennema	191503	
Alob Hinkle	187060	
Hal Rutland	190588	
Adrian Rowo	120534	
Craig Harris	191800	
Helen Robinson	191799	
Ted West	142852	
Kevin R Milliken	191502	
Dan Dansard	190586	
Tommie L. Jones Jr	191043	
Ron Loveto	192396	
John Conley	182455	
Daniel Ortiz	192477	
David Barela	192430	
Florentin Stanly	148146	
Albert Aguilar J/I Excavation	186778	
Debora Gonzales	192296	
Gerard Schutz	191326	
	190383	
Dana Williams	178110	
Elaine Brown	190385	
Jim Stacy	190381	
Ernest Craft	191325	
Jack Roost	191044	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 10/02/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TOUR @ 1400
RM 101 SURVEY
TRENCHING

HAZARDS

Biological:
INSECTS

Chemical:
FUEL OIL

Physical:
[redacted]LS, MOVING EQUIPMENT

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
VEST HIGHVIS EQUIPMENT

Engineering/Administrative Controls:
—

Monitoring:
—

Special Equipment:
—

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2
RAIN PAGER

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
IM FENNEMA / MOTA	191503	
AL RUTLAND	190588	
COTTICERA	190389	
DAN DANSER	190596	
Michael Dennis	181554	
CALEB HINKLE	187060	
Tim Hogan	141526	
ADAM SCOTT	176367	
Donovan Torivio	1700606	
DANA WILLIAMS	178110	
Debra Gonzales	192216	
Jon Lovato	192774	
Kevin R Millikan	191502	
John Conley	182455	
John Carlson	190921	
J Coleman	190383	
CRAIG HARRIS	191800	
LEE WEST	192852	
Tommy Lee Sims Jr	191043	
GERALD Schueg	191328	
Elaine Brown	190385	
ERNEST CRAFT	191325	
JIM STAENR	190381	
Florentine Stanley	148146	
Myra Lopez	0878918	
David Barela	0192430	
DANIEL ORTIZ	192477	

Meeting Conducted By: Marty L Pazbyszki SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 10 / 1 / 02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Rad Tags
Core Drilling
Rad Tool Survey
PPE

HAZARDS

Biological:
Insects, wildlife

Chemical:
Fuel oil

Physical:
[redacted]l Protection, Lift

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - TA-2 Los Alamos
Rain Pager
[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Scott KERR	190389	
HAL RUTLAND	190588	
Donovan Torivio	170066	
ADAM SCOTT	176367	
TAD WEST	142556	
Summers	191324	
Gerald Schmidt	191326	
Coleman	190383	
CRAIG HARRIS	191800	
ERNEST D CRAFT	191325	
[illegible]	192394	
CAleb Hinkle	187060	
Debra Gonzales	192296	
Helen Robinson	191799	
David Burda	192450	
DANIEL ORTIZ	192477	
Jonathan Stanley	148146	
Elaine Brown	190385	
John Conley	182455	
Myra Lopez	099878	
JIM STAEHR	190381	
DANA WILLIAMS	178110	
John Carlson	190921	
D S Helmuth	190386	
Adrian Ramord	120634	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/30/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Smoking Area.
Rm 101 Survey
House Keeping

HAZARDS

Biological:
Insects

Chemical:
Fuel oil.

Physical:
[redacted]ll Protection, Listing

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - Los Alamos TA-2
Rain Payne
[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JAN DANGARD	190586	
HAL RUTLAND	190588	
JCdeMen	190383	
J. Carlson	190921	
SCOTT KERN	190389	
GERALD Schnell	191326	
Donovan Torivio	170066	
Loratin Stanley	148146	
Helen Robinson	191799	
Myra Lopez	087898	
Tim Hoopu	141564	
DS Heilman	190386	
Summons	191329	
Elaine Brown	190385	
Craig Stroop	008161	
Wyatt Wood	191501	
Adrien Konord	120634	
ERNEST CRAFT	191325	
DANA WILLIAMS	178110	
ADAM SCOTT	176367	
CAleB Hinkle	187060	
Debra Gonzales	192296	
Jon Lawton	192914	
DANIEL CRITZ	192427	
David Bandy	192430	
Bruce Moffett	190159	
John Conley	182455	

Meeting Conducted By: MALCOLM Frazier SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/27/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Tripping and Falling Object Hazards in Rm 101
Eating in Trailer.
Housekeeping

HAZARDS

Biological:
Insects Wildlife

Chemical:
Fuel, oil, Asbestos

Physical:
[redacted]ead knocker

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
TINA WILLIAMS	178110	
DAN DANSARD	190586	
HAL RUTLAND	190588	
Paulette Bailey	192062	
Scott KRAL	190385	
Adam Scott	176367	
Donovan Torivio	170046	
EDWARD Schell	191326	
DAVID S. HEILMAN	190386	
Adrian Lovato	170634	
Elaine Brown	190385	
CRAIG HARRIS	191800	
John Conlon	190921	
JACK Dust	151044	
M (DANU)	190158	
Myra Lopez	087898	
Helen Robinson	091799	
Tim Hoyt	141711	
J Coleman	190383	
B. Moffett	190159	
John Conley	182455	
Del Crum	190055	
Debra Gonzales	192916	

Meeting Conducted By: MARTY L PENNYSEL SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/26/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

NAILS & DEBRIS
RM 101 CUTTING
CUT BLUE SPOT.

HAZARDS

Biological:
WILDLIFE

Chemical:
OIL, LEAD DUST

Physical:
[redacted]ETING FALLING OBJECTS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
TYVEK W/ HEPA

Engineering/Administrative Controls:
OPEN DOORS FOR VENTILATION

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Brovan Torivio	170066	
Tim Noonan	141566	
DAN DANSARD	190586	
JIMAL RUTLAND	190588	
Scott KERR	190389	
CRAIG HARRIS	191806	
Adrian Romero	120634	
[illegible]	192316	
Paulette Bailey	192062	
Helen Robinson	191799	
Joe Loureiro	192394	
Steven Arnijo	192331	
DANIEL ORTIZ	192477	
[illegible]	192430	
Debora Gonzales	192296	
John Conley	852455	
Jack Rush	191044	
Elaine Brown	190385	
D Steiner	190384	
G. Schmidt	191326	
T. Curran	190921	
Myra Lopez	089878	
Bruce Moffatt	190159	
[illegible] ADAM Scott	176367	
Dana Williams	178110	

Meeting Conducted By: [illegible] SSO [signature]
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 07/25/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Pipe Removal Room 101 - Lead work area

Don't Feed The Bears

HAZARDS

Biological:

Insects, Wild life (Bears)

Chemical:

Lead Fumes, oil

Physical:

[redacted]lling objects, Lifting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Full Face Resp. W/shield For Torch cutting 101 Pipe

Engineering/Administrative Controls:

Door open For smoke Removal

Monitoring:

BZ For lead

Special Equipment:

EMERGENCY ACTIONS

911- Los Alamos TA-2

Radio Report.

MEETING ATTENDEES

9/25/02

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Jim Hogan	141544	
HAL RUTLAND	190588	
DAN DANGER	190586	
DANA WILLIAMS	178110	
Bobby Barker	192062	
JIM FENNEMA	191503	
Flowline Study	148146	
JIM STAEHR	190381	
Helen Robinson	191799	
Elaine Brown	190385	
Scott McCabe	190389	
Gerald Schnell	191326	
Adam Scott	176362	
Donovan Tocivio	1700606	
John Conley	182455	
Michael Jennings FWD-CGRP	187554	
CRAIG HARRIS	191800	
Myra Lopez	087898	
S Heiland	190386	
Debra Gonzales	192296	
Bruce Moffett	190159	

Meeting Conducted By: Mark C Przybylski SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/24/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Room 101 INTERNAL Removal
Bldg 90 Removal
Lead HAZARD

HAZARDS

Biological:
INSECTS

Chemical:
Lead DUST & Fumes, Fuel oil

Physical:
[redacted]ing objects, LIFTING

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Full Face w/ HEPA For Pipe Torch CUTTING

Engineering/Administrative Controls:
HEPA VAC

Monitoring:
RZ For lead

Special Equipment:

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2

[redacted]

MEETING ATTENDEES

9/24/02

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
T. in Hagen	141566	
onovan Torivio	1700666	
AD WEST	142854	
JIM STAEHR	190381	
DAN SCOTT	176367	
HAL RUTLAND	140588	
SCOTT KERR	190385	
DAN DANSARD	190586	
JANA WILLIAMS	178110	
Jonathan Stanley	148146	
JIM FOWLKES / MOTA	191503	
Elaine Brown	190385	
CRAIG HARRIS	191800	
John Conley	192455	
Helen Robinson	191999	
D S Heilman	190389	
GERALD Schenck	191326	
Paulette Barba	158062	
Debra Gonzales	192296	
Myra Lopez	087898	
Paula Dent	191094	
David Barba	192430	
Steven Tag	192431	
[illegible]		

Meeting Conducted By: Mary L Przybyska SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/23/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

HOUSE KEEPING
EQUIPMENT INSPECTIONS
ASBESTOS ABATEMENT
SPECTRUM TECH CLEAN OUT

HAZARDS

Biological:
INSECTS

Chemical:
Fuel oil, oil, Hg

Physical:
[redacted]CTING

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Resp w/ Hg cartridge may be need For spec. metal removal

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2

MEETING ATTENDEES

9/23/02

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Dina Williams	178110	
Jim Tennema	AS191503	
Adam Scott	176367	
Dan Dansard	190586	
Donovan Trivio	1700166	
Jack Roust	191044	
Charlotte Bailey	192062	
Scott Kerr	190389	
Coleman	190383	
Hal Rutland	190588	
Julian Cuellar	190221	
Craig V Harris	191800	
John Conley	182456	
Helen Robinson	191199	
Myra Lopez	087898	
Elaine Brown	190385	
Gerald Schnell	191326	
Al West	142856	
Loretta Staley	148146	
Debra Gonzales	192296	
Jim Strahan	190389	
Matt Williams	525-85-8274	
Josh Duelow	585-75-6010	

Meeting Conducted By: Marty Ingram (Print Name) SSO (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/12/102

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Post Removal

HAZARDS

Biological:

INSECTS

Chemical:

Fuel oil

Physical:

[redacted]STING

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911

Rain Region

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANA WILLIAMS	178110	
D H TOUTAINT	191947	
JIM FENNEMA / MOTA	191503	
SCOTT KERR	190389	
DAN DANIARD	190586	
GERARD SCHMIT	191326	
HAL Rutland	190588	

Meeting Conducted By: MARK PRZYBYSZ SSC
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/20/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Pull Port Blocks
Hard Hat & Safety Glasses in Bldg

HAZARDS

Biological:
Insects

Chemical:
Fuel, oil

Physical:
[redacted]ting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2
Rain Pass
[redacted]ark

MEETING ATTENDEES

9/20/02

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
H Toutain	191947	
D. DANSARD	190596	
DAN SCOTT	176367	
Steven Tavis	170016a	
Jack Reust	191044	
Tim Hogan	141516	
Jim FENNEMA	191403	
Gail Welsh	114849	
DANA WILLIAMS	178110	
JIM STAEHR	190381	
Scott KERR	190389	
Paulette Bailey	192062	
Elaine Brown	190385	
JIMMIE L. JONES JR	191043	
Floration Study	148146	
CRAIG V HARRIS	191800	
John Conley	192455	
Helen Robinson	191799	
Bruce Moffett	190156	
GERALD Schmidt	191326	
D SHERMAN	190386	
Myra Lopez	097898	
Patricia Rocha	120634	
Debra Gonzales	192296	
[illegible] WEST	142856	

Meeting Conducted By: [illegible] SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 09/19/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

High Pool Noise
Asbestos Abatement
Strap Building
Turn Separation

HAZARDS

Biological:
Insects, Reptiles

Chemical:
Fuel, oil

Physical:
[redacted]ting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 - Los Alamos TA-2

[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
Scott Kerr	190389	
Jim Staehr	190381	
Paulette Reidy	190672	
Hal Rutland	190588	
Elaine Brown	190385	
R Toutaint	191947	
D S Heilman	190384	
Dana Williams	178110	
Gerald Schnell	191326	
Madd Williams	585-85-5225	
Joe Williams	585-80-6725	
[illegible]	585-50-5725	
John Bueler	585-75-6020	
Lonnie C. Jones Jr	191043	
Tim Hogan	141542	
Halliburton	142356	
John Conley	182453	
Florentino Stanley	148146	
Debra Gonzales	192296	
Helen Robinson	191799	
Adam Scott	176367	
Myra Lopez	585-92-0443	
Adrian Rivera	120634	
D Murad	190586	
Donavan Trivino	176066	

Meeting Conducted By: Marty Lipinski SSO
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/18/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

House Keeping.
Movement of High Rad material
CRANE ON SITE - Rigging

HAZARDS

Biological:
INSECTS REPTILES

Chemical:
Fuel, Oil

Physical:
[redacted]ETING, PINCH POINTS

Radiological:
High RAD

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
VEST AROUND CRANE

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911- LOS ALAMOS TA-2
RADIO PAGER
[redacted]HORN.

MEETING ATTENDEES

9/18/02

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DONNA WILLIAMS	178110	
H Tourtellotte	191947	
JAN DANIELS	190586	
JIM STAEHLE	190381	
Jim FENNEMA	191503	
HAL RUTLAND	190588	
ONNIE L. JONES JR	191043	
Laine Brown	190385	
ration Study	~~150~~ 148146	
RAIG HARRIS	191800	
Jack Deist	191044	
Robert Reed	120634	
Helen Robinson	191797	
John Conley	182455	
M GRANUS	190158	
GERALD SCHNELL	191326	
ERNEST COFFEY	191325	
AD WEST	148854	
Debra Gonzales	192296	
Scott KERR	140389	
Myra Lopez	585-92-0493	
Josh Shelton	585-75-6010	
Matt Williams	586-82-8576	
Myra A Lopez	585-92-0493	

Meeting Conducted By: [illegible] SSC
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]nical Area: TA-2 SSHASP No. Date 09/17/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

PARKING
PANT Block Removal
Asbestos Abatement

HAZARDS

Biological:
INSECTS, REPTILES

Chemical:
Fuel, oil

Physical:
[redacted]EFTING, PINCH POINTS

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- LOS ALAMOS TA-2
RAIN Pagers
[redacted]HORN

7/1/02

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
obert Toutaint	191947	
JIM STAEHR	190381	
Jim Fennema	191503	
HAL RUTLAND	190588	
Elaine Brown	190385	
GERALD Schnell	191326	
Erk Summers	191324	
Paulette Bailey	192062	
Bruce Moffatt	190159	
Jack Rast	191044	
D ANSARI	190586	
CRAIG HARRIS	191800	
AB WEST	192856	
Keith Kaufman	190611	
DANA WILLIAMS	178110	
ERNEST CRAFT	191526	
ONNIE L. JONES JR	191093	
lorentine Stanley	1481416	
Debora Gonzales	525-15-3856	
Helen Robinson	191799	
Myra Lopez	585-92-0443	

Meeting Conducted By: _____ _____
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/16/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Port Removal
Asbestos Abatement
Personnel Gate

HAZARDS

Biological:

Chemical:

Physical:

[redacted]

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

[redacted]

9/16/02

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
S... KERR	190389	
...il M. Welsh	114849	Gail M. Welsh
...ana Williams	178110	Diana Williams
...Ron Conley	182455	John Conley
...laine Brown	190385	Elaine Brown
...rutin Study	148146	Horatio Study
...ard Schuck	191326	
M FENNEMA	191503	
...AD WEST	142956	
...nulette Bailey	192062	
...Coleman	190383	
K. Summers	191329	
...ke Perst	191044	
Tommie L. Jones Jr	191093	
CRAIG V HARRIS	191800	
DAVID S. HEILMAN	190386	
JIM STAEHR	190381	
M ...ANUS	191...55	
Adrian Romero	120634	
DeDra Gonzales	525-15-3856	Debra Gonzales

Meeting Conducted By: ...Mary L Przybyski... 550
(Print Name) (Title) (Signature)

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]ical Area: TA-2 SSHASP No. Date 09/13/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Pull PARTS
Load SCRAP

HAZARDS

Biological:
INSECTS

Chemical:
Fuel oil,

Physical:
[redacted]TIVITY,

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911- TA-2 Los Alamos
RAIN Pajarito
[redacted]

MEETING ATTENDEES

9/13/02

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Scott Kerr	190399	
Dan Dansard	190586	
Gail Welsh	114849	Gail M. Welsh
PH Tout Aint	191947	
Jim Staehr	190381	
Donovan Tolivia	1700606	
Adam Scott	174367	
Paulette M. Bailey	192062	
Elaine Brown	190385	
Dana Williams	178110	
Jim Fennema	191503	
Craig Harris	191800	
Helen Robinson	191799	
Jack Rose	191044	
Bruce Moffett	190159	
Tommie L. Jones Jr SAI	191093	
Florat. w Stanley	148146	
John (Conley)	182455	
Kevin Sager	185675	
Leon Glass	18240	
Hal Rutland		
Al West	142866	

Meeting Conducted By: Mark Pettyjohn SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting Part 2

OMEGA WEST REACTOR DEMOLITION

Tailgate Safety Meeting

[redacted]cal Area: TA-2 SSHASP No. Date 9/12/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Parking & Vehical Access
Port Removal
Boiler House Equpt Removal
Asbestos Abatement

HAZARDS

Biological:
Insect

Chemical:
Fuel oil

Physical:
[redacted]ction

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911
Main Phone
[redacted]Horn

Mercury Hazard Communication

This fact sheet answers the most frequently asked health questions about mercury. For more information, you may call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: **Exposure to mercury occurs from breathing contaminated air, ingesting contaminated water and food, and having dental and medical treatments. Mercury, at high levels, may damage the brain, kidneys, and developing fetus. This chemical has been found in at least 714 of 1,467 National Priorities List sites identified by the Environmental Protection Agency.**

What is mercury?
(Pronounced mer'kur-ee)

Mercury is a naturally occurring metal which has several forms. The metallic mercury is a shiny, silver-white, odorless liquid. If heated, it is a colorless, odorless gas.

Mercury combines with other elements, such as chlorine, sulfur, or oxygen, to form inorganic mercury compounds or "salts," which are usually white powders or crystals. Mercury also combines with carbon to make organic mercury compounds. The most common one, methylmercury, is produced mainly by microscopic organisms in the water and soil. More mercury in the environment can increase the amounts of methylmercury that these small organisms make.

Metallic mercury is used to produce chlorine gas and caustic soda, and is also used in thermometers, dental fillings, and batteries. Mercury salts are sometimes used in skin lightening creams and as antiseptic creams and ointments.

Source of Information

Agency for Toxic Substances and Disease Registry (ATSDR). 1999. Toxicological profile for mercury. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Animal testing is sometimes necessary to find out how toxic substances might harm people and how to treat people who have been exposed. Laws today protect the welfare of research animals and scientists must follow strict guidelines.

Where can I get more information?

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

For more information, contact:

Agency for Toxic Substances and Disease Registry
Division of Toxicology
1600 Clifton Road NE, Mailstop E-29
Atlanta, GA 30333
Phone: 1-888-422-8737
FAX: (404)498-0057

What happens to mercury when it enters the environment?

- Inorganic mercury (metallic mercury and inorganic mercury compounds) enters the air from mining ore deposits, burning coal and waste, and from manufacturing plants.
- It enters the water or soil from natural deposits, disposal of wastes, and volcanic activity.
- Methylmercury may be formed in water and soil by small organisms called bacteria.
- Methylmercury builds up in the tissues of fish. Larger and older fish tend to have the highest levels of mercury.

How might I be exposed to mercury?

- Eating fish or shellfish contaminated with methylmercury.
- Breathing vapors in air from spills, incinerators, and industries that burn mercury-containing fuels.
- Release of mercury from dental work and medical treatments.
- Breathing contaminated workplace air or skin contact during use in the workplace (dental, health services, chemical, and other industries that use mercury).
- Practicing rituals that include mercury.

How can mercury affect my health?

The nervous system is very sensitive to all forms of mercury. Methylmercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.

Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation.

How likely is mercury to cause cancer?

There are inadequate human cancer data available for all forms of mercury. Mercuric chloride has caused increases in several types of tumors in rats and mice, and methylmercury has caused kidney tumors in male mice. The EPA has determined that mercuric chloride and methylmercury are possible human carcinogens.

How does mercury affect children?

Very young children are more sensitive to mercury than adults. Mercury in the mother's body passes to the fetus and may accumulate there. It can also can pass to a nursing infant

through breast milk. However, the benefits of breast feeding may be greater than the possible adverse effects of mercury in breast milk.

Mercury's harmful effects that may be passed from the mother to the fetus include brain damage, mental retardation, incoordination, blindness, seizures, and inability to speak. Children poisoned by mercury may develop problems of their nervous and digestive systems, and kidney damage.

How can families reduce the risk of exposure to mercury?

Carefully handle and dispose of products that contain mercury, such as thermometers or fluorescent light bulbs. Do not vacuum up spilled mercury, because it will vaporize and increase exposure. If a large amount of mercury has been spilled, contact your health department. Teach children not to play with shiny, silver liquids.

Properly dispose of older medicines that contain mercury. Keep all mercury-containing medicines away from children.

Pregnant women and children should keep away from rooms where liquid mercury has been used.

Learn about wildlife and fish advisories in your area from your public health or natural resources department.

Is there a medical test to show whether I've been exposed to mercury?

Tests are available to measure mercury levels in the body. Blood or urine samples are used to test for exposure to metallic mercury and to inorganic forms of mercury. Mercury in whole blood or in scalp hair is measured to determine exposure to methylmercury. Your doctor can take samples and send them to a testing laboratory.

Has the federal government made recommendations to protect human health?

The EPA has set a limit of 2 parts of mercury per billion parts of drinking water (2 ppb).

The Food and Drug Administration (FDA) has set a maximum permissible level of 1 part of methylmercury in a million parts of seafood (1 ppm).

The Occupational Safety and Health Administration (OSHA) has set limits of 0.1 milligram of organic mercury per cubic meter of workplace air (0.1 mg/m^3) and 0.05 mg/m^3 of metallic mercury vapor for 8-hour shifts and 40-hour work weeks.

Tailgate Safety Meeting

ec[redacted]cal Area: SSHASP No. Date 08/21/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
INSPECT HAND TOOLS AND CORDS
ELECTRICAL SAFETY

HAZARDS
TRIPING HAZARDS

Biological:
BLOOD BORN KIT IN DOUBLE WIDE W/FIRST AID

Chemical:
PROPER STORAGE OF MATERIALS

Physical:
HEAT STRESS

[redacted]diological:
BUILDINGS ARE POSTED

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:
AS NEEDED

Special Equipment:

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2
RADIO PAGER
[redacted]

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z#	SIGNATURE
DAN DANSARD	190586	
DENNIS BROUGHTON	191045	
Elaine Brown	190385	
KIRK SUMMERS	191324	
GERALD SCHMIDT	191326	
DOUG MOFFATT	190159	
[illegible]	190389	
ERNEST CRAFT	191325	
DAVID S. HEILMAN	190386	
David Stafford	113569	
D. HAL RUTLAND	190588	
STEVE GARNER	191330	
TED WEEKS MOTA	191329	
Jonathon Coleman	190383	
RON SWETNAM	190160	
Wyatt REED	191501	
JIM STAEHR	190381	
Jack Reed	191044	
Adrian Rancid	120634	
MCMINN	190155	
MARK SHEPARD	168688	M.A. Shepard

Meeting Conducted By: DANA WILLIAMS (Print Name) CM (Title) Dana Williams (Signature)

Tailgate Safety Meeting

cal Area: TA-2 SSHASP No. Date 8/21/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders).
AWARENESS BREIFING OF SUSPECT MERCURY FINDINGS IN ROOM 101 BLUE SPECTROMITER. OPERATIONS SHUT DOWN UNTIL FURTHER EVALUATION CAN BE PERFORMED

HAZARDS

Biological:

Chemical:

Physical:.

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

MARC GRANUS NOTIFIED KEITH RENDELL

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DAN SWETNAM WD3	190160	
Bruce Moffatt WD3	190159	
Scott Wood	191501	
DENNIS BROUGHTON DURATEK	191045	
Dr. Ira Konero Duratek	120634	
GAIL WELSH	114849	Gail M. Welsh
MARK GRANUS	190158	
Patrick Stafford	110010	
KIRK SUMMERS	191324	
Elaine Brown	190385	
Scott M. KERR	190389	
JAMES FENNIMA / MOTA	191503	
Kevin R Milliken / MOTA	191502	
HAL RUTLAND	70588	
DAVID S. HEILMAN	190386	
GERALD L Schuetz	191326	
ERNEST D. CRAFT	191325	

Meeting Conducted By: DANA WILLIAMS CM
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: SSHASP No. Date 08/20/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
NEUTRON SPECTROMITER - REMOVAL
ELECTRICAL HOOK UP CONTINUES
INSPECT HAND TOOLS

HAZARDS
TRIPING HAZARDS

Biological:

Chemical:
PROPER STORAGE OF MATERIALS

Physical:
PROPER LIFTING

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS
911 LOS ALAMOS TA-2
PAIN PAGER
HORN

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
RK Summers / SEC	191324	
laine Brown / SEC	190385	
[illegible]	190389	
ENNIS BROUGHTON	191045	
CHEST CRAFT	191325	
TEVE GARNER		
ue Moffatt	190159	
yril STOFford	113569	
AVID S. HEILMAN	190396	
HAL RUTLAND	190588	
DAN DANGERS	190586	
GERARD Schnell	191326	
JColeman	190383	
T C Weeks	191329	
JIM STAEHR	190381	
Jeff Carlson	190921	
Ed Vanhoose / Diatek	172634	

Meeting Conducted By: DANA WILLIAMS (Print Name) CM (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: SSHASP No. Date 08/19/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

SOUTH WEST MOB
CRANE SET-UP
NEUTRON SPECTROMETER - Removal
HARD HATS, SAFETY BOOTS, & SAFETY GLASSES-

HAZARDS

Biological:
INSECTS, SNAKES

Chemical:
Fuel, SPECTROMETER OIL

Physical:
[redacted]ETING,

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 - LOS ALAMOS TA-2
RAIN PASEO
[redacted]ORN

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
M. GRAHAM	190158	
DAVID S. HEILMAN	190386	
JACK L. DEUST	191044	
Wyatt WOOD		
HAL RUTLAND	190588	
DAN DANSARD	190586	
DENNIS BROUGHTON	191045	
[illegible] Moffatt	191159	
John Carlson	190921	
ERNEST CRAFT	191325	
[illegible] GARNER	191330	
JAMES A FENNEMA		
JColeman	190383	
JR & W Weeks	191329	
[illegible] Schell	191326	
KIRK SUMMERS	191329	
RENE GOMEZ	147436	
TADWEST	142856	
Florating Stanley	148146	
TOMMIE L. JONES JR	191043	
SCOTT KEAN	190389	

Meeting Conducted By: DANA WILLIAMS (Print Name) CM (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 08/16/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Removal of Neutron Spectrometer

HAZARDS

Biological:

Chemical:

Oil

Physical:

Lifting

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

EMERGENCY ACTIONS

911 Los Alamos TA-2

Horn

Town Hall

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANA WILLIAMS / WG11	178110	Dana Williams
BOSTCRAFT / SEC	191325	
Elaine Brown	190385	Elaine Brown

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: 2 SSHASP No. Date 08/14/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

VIDEO CORE

REMOVE/PUMP OIL NEUTRON SPECTROMETER

HAZARDS

Biological:

INSECTS

Chemical:

OIL

Physical:.

LIFTING - FALL PROTECTION

Radiological:

TOP OF RL

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

FALL PROTECTION may be Required For VIDEO OF CORE

Engineering/Administrative Controls:

—

Monitoring:

—

Special Equipment:

—

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2

HORN

MAIN PAGER

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Jonathan Coleman / SEC	190383	
DAVID S. HEILMAN / SEC	190386	
GERARD SCHMITT / SEC	191326	
KIRK SUMMERS / SEC	191329	
Ingrid Wood / SEC		
Chris Crisp	191325	
Dave Williams / Jungle	178110	
Scott Aaman JT Trucking	186778	
Tony L Pacheco	191011	

Meeting Conducted By: Mark L Pietrzykski SSO
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: SSHASP No. Date 08/13/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Neutron Spectrometer Removal
Tank Placement

HAZARDS

Biological:

Insects

Chemical:

Fuel, Oil in Spectrometer

Physical:

Lifting, Pinch Points

Radiological:

Contamination in Spectrometer

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Heat Around Moving Equipment

Engineering/Administrative Controls:

—

Monitoring:

—

Special Equipment:

—

EMERGENCY ACTIONS

911 Los Alamos TA-2
Horn
Main Gate

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
M L Pazbyszki / WGI	190412	
Dana Williams / WGII	178110	
MARK SHEPARD / WD3	168688	
DAVID S. HELLMAN / WD3	190386	
Elaine Brown	190385	
nathan Coleman	190383	

Meeting Conducted By: M L Pazbyszki (Print Name) SSO (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 08/12/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Spectrometer Removal Pipe-Tob Bracing

HAZARDS

Biological:

Insects

Chemical:

Oil

Physical:

Lifting, Pinch Point

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls:

—

Monitoring:

—

Special Equipment:

—

EMERGENCY ACTIONS

911 TA-2 Los Alamos

Rain Pond

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DAVID S. HEILMAN / WD3	190386	David S. Heilman
SCOTT M. ICERA	190389	
HAL RUTLAND	190588	
TED WEEKS		
JOHN C PRZYBYSKI / LUGI	190412	

Meeting Conducted By: _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

[redacted]cal Area: SSHASP No. Date 08/12/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Trenching
Moving Equipment

HAZARDS

Biological:
Insects

Chemical:
Fuel

Physical:.
[redacted]oving Equipment

Radiological:
—

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
Vest Around moving Equipment

Engineering/Administrative Controls:
—

Monitoring:
—

Special Equipment:
—

EMERGENCY ACTIONS

911 - Los Alamos TA-2
Pajarito Pagers
Verbal

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Elaine Brown	191385	Elaine Brown
HAL RUTLAND	190588	Hal Rutland
MARK SHEPARD / WD3	168688	M.D. Shepard
John Carlson / WD3	190521	
Scott ICERR	190389	
Jonathan Coleman	190383	
Neil Stetfud LANL	113569	
Jon McGee / Framatome		
Bruce Moffatt WO3	190156	
MW GRANDS	190157	
JON SWETNAM	190160	
Jack Reost	191044	
MARTY L PIZZYLYSKI	190412	
DANA WILLIAMS / WGI	178110	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Area: 2 SSHASP No. Date 08/09/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

TRAILER - MOVING EQUIPMENT
DOT TEST

HAZARDS

Biological:
INSECTS

Chemical:
FUEL

Physical:
MOVING EQUIPT

Radiological:
—

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
VEST AROUND MOVING EQUIPMENT

Engineering/Administrative Controls:
—

Monitoring:
—

Special Equipment:
—

EMERGENCY ACTIONS

911 - LOS ALAMOS TA-2
RADIO PAGER
HAND

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
HAL RUTLAND	190588	
John Carlson	190921	
VM ZIEGLER	190384	
ANA WILLIAMS / WSII	178110	
MARK SHEPARD / WD3	168688	
Laine Brown	190385	
Jonathan Coleman / SEC	190383	
JIM STAEHR	190381	
April Stafford LANL	113569	
Jack Rust / Duratek	191044	
Ron Shoemaker	190160	
MARK GRAY	190158	
DAVID S. HEILMAN	190386	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: 2 SSHASP No. Date 8/8/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

PARKING
EQUIPMENT MOVEMENT

HAZARDS

Biological:
INSECTS

Chemical:
FUEL

Physical:
MOVING EQUIPMENT

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
VEST AROUND MOVING EQUIPMENT

Engineering/Administrative Controls:
—

Monitoring:
—

Special Equipment:

EMERGENCY ACTIONS

911 LOS ALAMOS TA-2
HORN - RAIN PAGER
RAIN PAGER

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DANO WILLIAMS/WGH	178110	
JOHN CARLSON/FDES	190921	
JIM STAEHR	190381	
HAL RUTLAND	190588	
WM ZIEGLER/SEC	190384	
SCOTT KERR	190389	
MARK SHEPARD / WDS	168688	
Jonathan Coleman/SEC	190383	
Elaine Brown	190385	
JACK REUST	191044	
BRUCE MOFFATT	190159	
[illegible]	190158	
DAVID S. HEICHMAN	190386	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: 2 SSHASP No. Date 8/7/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Parking

HAZARDS

Biological:

Insects,

Chemical:

Fuel

Physical:

Slip Trips & Falls

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Visit Ground Equipment.

Engineering/Administrative Controls:

N/A

Monitoring:

N/A

Special Equipment:

N/A

EMERGENCY ACTIONS

911 Los Alamos TA-2

Hoam

Muster Area @ Gate.

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
JON SWETNAM	190160	
Dan Williams / WGII	178110	
John Carlson / WD3	190921	
MARK SHEPARD / WD3	168688	
MARK GRANT WD3	190158	
DAVID S. HEICMAN / SEC	190386	
Jonathan Coleman / SEC	190383	
WM ZIEGLER / SEC	190384	
Elaine Brown / sec	190385	
Jack Reust / Duratek	191044	
Hal Rutland / MOTA	190588	
Adriah Romero / Duratek	120634	
JIM STAEHLIN	190381	
Randall Bell	144696	
Matthew Vigil	175619	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Technical Area: TA-2 SSHASP No. Date 8/6/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
VEHICLE TRAFFIC, EQUIPMENT SAFTEY

HAZARDS
OVERHEAD POWER LINES

Biological:
INSECTS

Chemical:
FUEL

Physical:
USE PROPER LIFTING TECH

Radiological:
MONITORING OF SOIL AS NEEDED

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
VESTS AROUND EQUIPMENT

Engineering/Administrative Controls:
DUST CONTROL PROVIDED

Monitoring:
N/A

Special Equipment:
N/A

EMERGENCY ACTIONS
MUSTER AREA @ GATE

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
DEAN Halliburton IJ TRUCKING	186778	
WM ZIEGLER WT3/SEC	190384	
DAVID S. HEILMAN	190386	
AL RUTLAND	190588	
SCOTT M. KERR	190389	
JIM STAEHR	190381	
ALAN GRAVES	190150	

Meeting Conducted By: DAVID WILLIAMS CM
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Project Area: SSHASP No. Date 08/05/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

Equipment Movement

HAZARDS

Biological:

INSECTS

Chemical:

Fuel

Physical:

Equipment movement

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Vest Hearing Equipment

Engineering/Administrative Controls:

Monitoring:

Special Equipment:

N/A

EMERGENCY ACTIONS

911 The Los Alamos Medical Center

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Kip Hovlik - Pueblo Elect	116571	
Adell Bell - Pueblo Elec	144696	
JM ZIEGLER WO3/SEC	190384	
Matthew Vigil Pueblo Elect	175619	
Avril Stafford CANL	113569	
DAVID S. HERMAN / SEC	190386	
Russell L. Hovlik	181921	
LIBERT AGUILAR J/J Swift	186778	
INCENT AGUILAR J/J EXCAV	181183	
Jake Lovato J/J Exc.	116580	
Albert Cociz J/J Exca	186780	
ANA WILLIAMS / WG11	178110	
LAL RUTLAND MOTA	190588	
Scott KERR MOTA	109389	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

ical Area: 2 SSHASP No. Date 08/02/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

MOVING EQUIPMENT

HAZARDS

MOVING EQUIPMENT

Biological:

INSECTS,

Chemical:

Fuel,

Physical:

Noise, DUST, MOVING EQUIPMENT

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

VEST AROUND EQUIPMENT

Engineering/Administrative Controls:

N/A

Monitoring:

N/A

Special Equipment:

N/A

EMERGENCY ACTIONS

911 - HORN

Tailgate Safety Meeting

al Area: 2 SSHASP No. Date 08/02/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

DIRT WORK

HAZARDS

Biological:

INSECTS

Chemical:

FUEL

Physical:

WORK EQUIPMENT

Radiological:

N/A

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

VEST AROUND EQUIP.

Engineering/Administrative Controls:

—

Monitoring:

—

Special Equipment:

—

EMERGENCY ACTIONS

911 - AIR HORN

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
ing C Pacheco J/J Exc	585-53-2000	
Albert Cortez J/J Exc	186780	
ANA WILLIAMS WG11	178110	
WM ZIEGLER WD3/SEC	190384	
DS HEILMAN WD3/SEC	190386	
JColeman WD3/SEC	190383	
[illegible] STAFFORD CANL	113569	
Jake Laycock J/J EXC	116580	
JON WEIMAN WD9	190160	
Jack Peart / WD3	150-48-3001	
JAL RUTLAND MOTA	190588	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

Physical Area: TA-2 SSHASP No. Date 08/01/02

SPRAY TA-2 Bldg #1

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)

HANTA VIRUS - SPRAYING WATER TO KILL POTENTIAL HANTA-VIRUS

HAZARDS

Biological: POTENTIAL HANTA VIRUS

Chemical: Bleach & water

Physical:

Radiological:

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed

Engineering/Administrative Controls: None

Monitoring: None

Special Equipment: None

EMERGENCY ACTIONS

MUSTER AREA @ ENTRANCE GATE

911 - "T-A-2 @ Los Alamos"

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
SCOTT KERR MOTA	190389	
HAL RUTLAND MOTA	190588	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

Tailgate Safety Meeting

cal Area: SSHASP No. Date 8/1/02

SAFETY TOPICS PRESENTED

SUBJECTS DISCUSSED (Including Change Orders)
VEHICLE SAFETY, EQUIPMENT SAFETY - MOUNTING & DISMOUNTING EQUIPMENT
SITE LAYOUT, COMMUNICATION OF PERSONNEL

HAZARDS
MOVING EQUIPMENT, PERSONNEL ON GROUND, PROPER LIFTING

Biological:
INSECTS, REPTILES, BLOODBORN KIT LOCATEDED W/ FIRST AID KIT

Chemical:
PROPER STORAGE OF MATERIAL, MAINTAIN MSDS

Physical:
PROPER LIFTING TECH.

Radiological:
N/A

HAZARD CONTROL MEASURES

Personal Protective Equipment: Hardhat, Safety Shoes & Glasses, and Work Gloves as Needed
VESTS NEEDED AROUND MOVING EQUIPMENT

Engineering/Administrative Controls:
DUST CONTROL WILL BE PROVIDED WHEN NEEDED, INSTALL STORM WATER CONTRO

Monitoring:
N/A

Special Equipment:
N/A

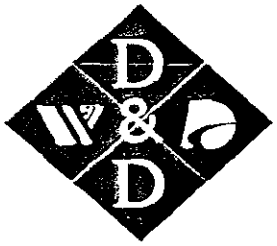
EMERGENCY ACTIONS
MUSTER AREA LOCATED WEST GATE, CALL 911 AND GIVE LOCATIO

MEETING ATTENDEES

PRINT NAME / ORGANIZATION	Z #	SIGNATURE
Dana Williams / WGII	178110	
Jake Loyeto / J/J Exc	116580	
Tony L. Pacheco / J/J Exc.		
Albert Cosio J/J Exc	186780	

Meeting Conducted By: _____ _____ _____
(Print Name) (Title) (Signature)

WD3
Omega West D&D Project



OMEGA WEST DECOMMISSIONING FINAL PROJECT REPORT

Volume 3

DOCUMENT/DISTRIBUTION SHEET
WD3 CERRO GRANDE PROJECT
S[redacted]CONTRACT 41968-000-02-CJ

854 18.140 Crane Inspections
Crane Inspections for 2002 27

Provided By Document Controls

Basic Type: Proj. Mgt.____ Proj. Tech. ✓ Confidential____ Proposals____

Project Code: 26300 00

DOCUMENT DATE: 11/15/02 - 12/31/02 CATEGORY: SE

TO: File AUTHOR/ORIGINATOR: Marty Przybyski

TITLE/SUBJECT: Crane Inspections for 2002

KEY WORD:

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E-mailed: E Faxed: F

____Albrethsen, D.	____Gleason, L	____Reust, J.
____Beck, C	____Haaker, R.	____Shepard, M
____Carlson, J.	____Hill, D.	____Staehr, J.
____Coleman, J.	____Hogan, T.	____Stringer, J.
____DeJoia, J.	____Law, J.	____Swetnam, R.
____Fraley, D.	____Logan, V.	____West, T.
____Garner, S.	____Przybyski, M	____Williams, D
____Gillespie, K	____Ray, L	

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Yes____ No ✓

QA Record:
Yes____ No ✓

Special Requests:

Submitted By: Lisa Gonzales Date: 5/1/03 Distribution Done by:

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex / Lorrain
Model: Truck Mount 40 TON
Serial Number: 4103-0001

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT used
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT used
	Pin Keepers*	☐	☐	☐	
	Sheaves*	☐	☐	☑	
MAIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C...IER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☐	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____

12-31-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington Grove
Make Grove
Model RT865
Serial Number 4092-581

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not on crane
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not on crane
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	NOT used
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Gomez

Date 12-31-02

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex Telehandler
Model: Truck Mount 40 TON
Serial Number: 4163-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☐	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CRANE		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By: Rafik Yon

Date: 12-30-02

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT865 65 Ton
Serial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BL	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT on crane
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT on crane
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
N HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT USED
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

12-30-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex Horizon
Model: Truck Mount 40 TON
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C. ?	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

12-19-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner WASHington
Make Terex Heights
Model Truck Mount 40ton
Serial Number 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C?	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☐	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph R Young
Inspected By

12-18-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT 865
Serial Number 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
E	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
IN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	NOT USed
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C[illegible]	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

12-18-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT865
Serial Number 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☐	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	NOT IN USE
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
C R		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

12-17-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT865
Serial Number 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C, R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

12-16-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☐	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
L	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
.IN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	NOT USED
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
C		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☐	☐	☑	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Younts
Inspected By

12-11-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT865
Serial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
[illegible]	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☑	☐	☐	
	Cords and Lacings*	☑	☐	☐	
	Guards*	☑	☐	☐	NOT ON CRANE
	Jib Stop*	☑	☐	☐	
	Pin Keepers*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☐	
	Cords and Lacings*	☐	☐	☐	
	Guards*	☐	☐	☐	NOT ON CRANE
	Jib Stop*	☐	☐	☐	
	Pin Keepers*	☐	☐	☐	
	Sheaves*	☐	☐	☐	
[illegible]AIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☐	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	NOT USING
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*	N/A	☑	☐	☐	N/A
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

12-5-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: 65 TON RT865
Serial Number: 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
[illegible]	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
[illegible]AIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☐	NOT USING
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
R		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☐	☐	☑	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

12-9-02
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner WASHington
Make GROVE
Model RT65 TON
Serial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
FOR ALL	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☑	☐	☐	
	Cords and Lacings*	☑	☐	☐	
	Guards*	☑	☐	☐	JIB off of crane
	Jib Stop*	☑	☐	☐	
	Pin Keepers*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
HOOK	Connecting Pins*	☑	☐	☐	
	Cords and Lacings*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Jib Stop*	☑	☐	☐	
	Pin Keepers*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
LOAD	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	need to Replace
		Hook*	☑	☐	☐	Head Ache Ball
		Safety Latch*	☑	☐	☐	(over all)
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
JIER		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	chunk out of LR tire tread
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☐	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
spected By

11/15/02
Date

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SUBCONTRACT 41968-000-02-CJ

853 18.140 Crane Inspections
Crane Inspections for 2003 165

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Washington

HYDRAULIC CRANE INSPECTION

ner Washington
ke Terex / Long, N
del 46 TON Truckmount
rial Number 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BC	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*	☐	☐	☑	
	Mounting/Alignment*	☐	☐	☑	
	Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Capacity/Weight Label	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Guards*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Hook*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Safety Latch*	☐	☐	☑	NOT used
	AUXILIARY LOAD BLOCK/BALL — Sheaves*	☐	☐	☑	
	WIRE ROPE — Condition*	☐	☐	☑	
	WIRE ROPE — Correct Size*	☐	☐	☑	
	WIRE ROPE — Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*	☑	☐	☐	
	Exhaust*	☑	☐	☐	
	Linkage*	☑	☐	☐	
CAR	Proper Operation*	☑	☐	☐	
	Air Leaks*	☑	☐	☐	
	Backup Alarm*	☑	☐	☐	
	Frame*	☑	☐	☐	
	Oil Leaks*	☑	☐	☐	
	Outriggers and Pads*	☑	☐	☐	
	Rotation Bearing and Mounting Bolts*	☑	☐	☐	
	Tires*	☑	☐	☐	
MISC. ITEMS	Connecting Pins*	☑	☐	☐	
	Cords and Lacings*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph L Young

Date 4-21-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex / Lorain
Model: 40TON Truck Crane
Serial Number: 4183-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BC	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

Unit should not be used if item is not in good condition

Inspected By Ralph R Young

4-16-03
Date

Washington

HYDRAULIC CRANE INSPECTION

wner Washington
ake Terex Terrain
odel 40 ton Truckmount
rial Number 4103-0001

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	not used
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	not used
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
AUXILIARY HOIST	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	NOT USED
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____

4-14-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex / Lorain
Model: 40 TON TRUCK CRANE
Serial Number: 4463-001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
N HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS	CONDITION good	rejected	n/a	REMARKS
	Leakage*	☐	☐	☑	
	Mounting/Alignment*	☐	☐	☑	
	Wire Rope Spooling*	☐	☐	☑	
AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	Not used
AUXILIARY LOAD BLOCK/BALL	Guards*	☐	☐	☑	
AUXILIARY LOAD BLOCK/BALL	Hook*	☐	☐	☑	
AUXILIARY LOAD BLOCK/BALL	Safety Latch*	☐	☐	☑	
AUXILIARY LOAD BLOCK/BALL	Sheaves*	☐	☐	☑	
WIRE ROPE	Condition*	☐	☐	☑	
WIRE ROPE	Correct Size*	☐	☐	☑	
WIRE ROPE	Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*	☑	☐	☐	
ENGINE	Exhaust*	☑	☐	☐	
ENGINE	Linkage*	☑	☐	☐	
CAR	Proper Operation*	☑	☐	☐	
CAR	Air Leaks*	☑	☐	☐	
CAR	Backup Alarm*	☑	☐	☐	
CAR	Frame*	☑	☐	☐	
CAR	Oil Leaks*	☑	☐	☐	
CAR	Outriggers and Pads*	☑	☐	☐	
CAR	Rotation Bearing and Mounting Bolts*	☑	☐	☐	
CAR	Tires*	☑	☐	☐	
MISC. ITEMS	Connecting Pins*	☑	☐	☐	
MISC. ITEMS	Cords and Lacings*	☑	☐	☐	
MISC. ITEMS	Guards*	☑	☐	☐	
MISC. ITEMS	Jib Stop*	☑	☐	☐	

Unit should not be used if item is not in good condition

Ralph Young
Inspected By

4-9-03
Date

Washington

HYDRAULIC CRANE INSPECTION

ner Washington
ke Grove
del RT865
ial Number 4092-531

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BO	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT Used
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT Used
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☐	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 4-7-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☐	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ONBOARD
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ONBOARD
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CARF		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☐	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 4-1-03

Washington

HYDRAULIC CRANE INSPECTION

ner Washington
ke Grove
del RT815
ial Number 4092-531

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT USED
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT USED
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*	☐	☐	☑	
	Mounting/Alignment*	☐	☐	☑	
	Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Capacity/Weight Label	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Guards*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Hook*	☐	☐	☑	NOT USED
	AUXILIARY LOAD BLOCK/BALL — Safety Latch*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL — Sheaves*	☐	☐	☑	
	WIRE ROPE — Condition*	☐	☐	☑	
	WIRE ROPE — Correct Size*	☐	☐	☑	
	WIRE ROPE — Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*	☑	☐	☐	
	Exhaust*	☑	☐	☐	
	Linkage*	☑	☐	☐	
CAF	Proper Operation*	☑	☐	☐	
	Air Leaks*	☑	☐	☐	
	Backup Alarm*	☑	☐	☐	
	Frame*	☑	☐	☐	
	Oil Leaks*	☑	☐	☐	
	Outriggers and Pads*	☑	☐	☐	
	Rotation Bearing and Mounting Bolts*	☑	☐	☐	
	Tires*	☑	☐	☐	
MISC. ITEMS	Connecting Pins*	☑	☐	☐	
	Cords and Lacings*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____

4-8-03
Date

Washington

HYDRAULIC CRANE INSPECTION

ner WASHington
ke Grove
del RT865
rial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BO	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CAR		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Rafael Gonzalez

Date 3-31-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	Not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 3-28-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex/Conrad
Model: 40 Ton Truck Mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BC	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT Used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT Used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
N HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT Used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAF	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 3-27-03

608

Washington

HYDRAULIC CRANE INSPECTION

wner Washington
ake Terex/Load-N
odel 40 Ton Truck Mount
rial Number 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

3-26-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex/Lonsin
Model: 40TON Truck mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT USED
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ronald Young

Date 3-25-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington Group
Make: RT565
Model:
Serial Number: 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☐	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☐	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BC	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	not on crane
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	not on crane
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	NOT USED
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☐	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph L Young
Inspected By

3-24-03
Date

Washington

HYDRAULIC CRANE INSPECTION

ner Washington
ke Grove
del RT865
ial Number 4092531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not on unit
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not on unit
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Roy Olson

Date 3-21-03

Washington

HYDRAULIC CRANE INSPECTION

ner Washington
ke GROVE
del RT865
erial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	not on crane
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	not on crane
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE Condition*	☑	☐	☐	
	WIRE ROPE Correct Size*	☑	☐	☐	
	WIRE ROPE Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK Guards*	☑	☐	☐	
	MAIN LOAD BLOCK Hook*	☑	☐	☐	
	MAIN LOAD BLOCK Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CAR		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By [signature]

Date 3-20-03

Washington

HYDRAULIC CRANE INSPECTION

Owner WASHington
Make GROVE
Model RT 865
Serial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT ON CRANE
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT ON CRANE
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT Used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Ryon

Date 3-17-03

Washington

HYDRAULIC CRANE INSPECTION

mer Washington
ke Grove
del RT 865
rial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	not on crane
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	not on crane
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	NOT used
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph R. Young
Inspected By

3-14-03
Date

Washington

HYDRAULIC CRANE INSPECTION

wner Washington
ake Grove
odel RT865
erial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BC	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE Condition*	☑	☐	☐	
	WIRE ROPE Correct Size*	☑	☐	☐	
	WIRE ROPE Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK Guards*	☑	☐	☐	
	MAIN LOAD BLOCK Hook*	☑	☐	☐	
	MAIN LOAD BLOCK Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT Used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

B-13-03
Date

Washington

HYDRAULIC CRANE INSPECTION

mer Washington
ke Grove
del RT865
rial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE: Condition*	☑	☐	☐	
	WIRE ROPE: Correct Size*	☑	☐	☐	
	WIRE ROPE: Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK: Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK: Guards*	☑	☐	☐	
	MAIN LOAD BLOCK: Hook*	☑	☐	☐	
	MAIN LOAD BLOCK: Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK: Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By

3/2/03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington Group
Make
Model MT865
Serial Number 4052-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BO	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	NOT on Crane
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☐	NOT on Crane
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARF	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph R Young

Date 3-11-03

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make WASHington
Model Grove
Serial Number RT865
4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
N HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C[illegible]	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Rafik Y[illegible]

Date 3-10-03

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model GTK65
Serial Number 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT Used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
C 'R		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 3-8-03

Washington

HYDRAULIC CRANE INSPECTION

[redacted]
wner Washington
lake Grove
lodel RT865
erial Number 4042-531

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☐	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☐	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
E	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT on crane
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT on crane
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAT	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph R. Young — Inspected By

3-7-03 — Date

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make Washington Grove RT 865
Model 4012-531
Serial Number

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BO	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
IOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☑	
	Mounting/Alignment*		☑	☐	☑	
	Wire Rope Spooling*		☑	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☑	
		Guards*	☑	☐	☑	
		Hook*	☑	☐	☑	
		Safety Latch*	☐	☐	☑	NOT used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 3-6-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Groot
Model: RT865
Serial Number: 4092-53

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BI	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT on Crane
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT on crane
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT Used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

3-5-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner WASHington
Make GROVE
Model RT865
Serial Number 4092-531

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BO	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT on CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT on CRANE
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT Used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

3-3-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT865
Serial Number 4092-531

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BC	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT on CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT on CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT USED
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CAT		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-28-03

Washington

HYDRAULIC CRANE INSPECTION

[redacted]
wner Washington
ake Groove
odel RT 875
erial Number 4092-531

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
E	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C[illegible]R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

2-27-03
Date

Washington

HYDRAULIC CRANE INSPECTION

ner Washington
ke Grove
del RT865
al Number 4092-531

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BC	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT on crane
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT on crane
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

2-26-03
Date

Washington

HYDRAULIC CRANE INSPECTION

wner Washington Group
ake RT865
odel 4092-531
erial Number

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BO	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
N HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____

2-25-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make WASHington Grove
Model RT865
Serial Number 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
N HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C...	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

2-21-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex / Horton
Model: 40 Ton Truck Crane
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT USED
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CRANE		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

2-19-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex/Lorain
Model: 40 Ton Truck Crane
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
E	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-18-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex/Lorain
Model: Motor Truck Crane
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph R. Young

Date 2-17-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex / Loegering
Model: 40 Ton Hunter Mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CA R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-14-03

650

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex Torrit
Model: 40 Ton Truck Mount
Serial Number: 41013-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BC	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	Not Used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	Not Used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
.IN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CRANE		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-1303

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make — Washington Group
Model — RT865
Serial Number — 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	NOT ON CRANE
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☐	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
IN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-12-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex Lorain
Model: 40 Ton Truck Mount
Serial Number: 4103-0001

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	not used
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	not used
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
MAIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-12-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: GROVE
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	Not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C. ER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-11-03

Washington

HYDRAULIC CRANE INSPECTION

[redacted]ner
Make: Washington
Model: Terex/Lorain Truck Mount 40TCN
Serial Number: 4107-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BC	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
IN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 2-11-03

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make: Washington
Model: Grove RT 865
Serial Number: 4092-531

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph R Young — Inspected By

2-10-03 — Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: TEREX/LORAIN
Model: TRUCK MOUNT 40 TON
Serial Number: 4103-0001

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT USED
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT USED
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
MAIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CA R		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-10-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex/LORAIN
Model: 40 TON Truck Mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 7-08-03

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make: Washington / Terex Lorain
Model: 40 Ton Truck Mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
E	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-7-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT 865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-7-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex / Loradin
Model: 40 Ton Truck mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CA		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

2-6-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex Pegasus
Model: 40 Ton Truckmount
Serial Number: 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT Used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CA ER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____

Date 2-5-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex Litbasin
Model: 40 Ton Truck Mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☐	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 2-4-03

Washington

HYDRAULIC CRANE INSPECTION

[redacted]

Owner Washington
Make Grove
Model RT 865
Serial Number 4092531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	Not on Crane
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not on crane
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
C[illegible]ER		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-4-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	NOT ON CRANE
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT USED
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CAR		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

2-3-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex Lorain
Model: 40 Ton Truck Mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
C ER		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☐	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 2-3-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex / Lorain
Model: 40 Ton Truck Mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
E	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT USED
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

1-30-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT865
Serial Number: 031-531

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
B	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT ON CRANE
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
AIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT USed
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CA R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-30-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: TEREX / LORAIN
Model: 40 TON Truck mount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
IN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☐	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☐	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CARRIER		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 1-29-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex Rondin
Model: 40 TON Truck Mount
Serial Number: 4103-0001

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
[illegible]	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	not used
	Pin Keepers*	☐	☐	☐	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	not used
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
[illegible]AIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CA R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-2703

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex / Lorain
Model: 40 Ton Truckmount
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CA R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Ryan

Date 1-24-03

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make WASHington
Model Terex Lehsin
Serial Number Truck mount 40TON
4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
( )	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☐	☐	☐	
		Sheaves*	☐	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C, ER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ron Lyons

1-23-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner WASHington
Make Terex/Lorain
Model Truck mount 40 ton
Serial Number 4103-001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CAR		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 1-22-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex Horsin
Model: Truck Mount 40T0N
Serial Number: 4103-0021

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☐	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C. ER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By: Rob Kyon

Date: 1-20-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex / Lorain
Model: Truck Mount 40 Ton
Serial Number: 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☐	Not used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	Not used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CA R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

1-21- Ralph Young
Inspected By

1-21-03
Date

700

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: TM865
Serial Number: 4092-531

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE — Condition*		☑	☐	☐	
	WIRE ROPE — Correct Size*		☑	☐	☐	
	WIRE ROPE — Dead Ended Property		☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label		☑	☐	☐	
	MAIN LOAD BLOCK — Guards*		☑	☐	☐	
	MAIN LOAD BLOCK — Hook*		☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*		☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☑	
	Mounting/Alignment*		☑	☐	☑	
	Wire Rope Spooling*		☑	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAB	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Ralph Young
Inspected By

1-20-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT865
Serial Number 4092-531

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	NOT ON CRANE
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	NOT ON CRANE
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Rafael Young

Date 1-17-03

Washington

HYDRAULIC CRANE INSPECTION

Owner
Make — Terex Pioneer
Model — Truck Mount
Serial Number — 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
B	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT USED
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CA R	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By: Ralph Young

Date: 1-17-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex Lorain
Model: Truck 40 Ton
Serial Number: 4103-0001

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 1-16-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex / Lorraine
Model: 4070 Truck Crane
Serial Number: 4003-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph R. Young

Date 1-15-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT ON CRANE
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
MAIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C[illegible]ER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-15-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: GROVE
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-14-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex Genesis
Model: 40 TON Truck crane
Serial Number: 4103-0001

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☑	☐	☑	
	Cords and Lacings*	☑	☐	☑	
	Guards*	☑	☐	☑	not used
	Jib Stop*	☑	☐	☑	
	Pin Keepers*	☑	☐	☑	
	Sheaves*	☑	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☑	☐	☑	
	Cords and Lacings*	☑	☐	☑	
	Guards*	☑	☐	☑	not used
	Jib Stop*	☑	☐	☑	
	Pin Keepers*	☑	☐	☑	
	Sheaves*	☑	☐	☑	
MAIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE — Condition*	☑	☐	☐	
	WIRE ROPE — Correct Size*	☑	☐	☐	
	WIRE ROPE — Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK — Capacity/Weight Label	☑	☐	☐	
	MAIN LOAD BLOCK — Guards*	☑	☐	☐	
	MAIN LOAD BLOCK — Hook*	☑	☐	☐	
	MAIN LOAD BLOCK — Safety Latch*	☑	☐	☐	
	MAIN LOAD BLOCK — Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
C ER		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 1-14-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: TeReX
Model: 40 TON TRUCK CRANE
Serial Number: 4103-0001

	ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☑	☐	☐	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	not used
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	not used
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
MAIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph R Young

Date 1-13-03

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model RT865
Serial Number 4092-53

	ITEMS		CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
E	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	NOT USed
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By

1-13-03
Date

Washington

HYDRAULIC CRANE INSPECTION

Owner	WASHington
Make	GROVE
Model	RT865
Serial Number	41092-531

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION		Anti-Two-Block System*	☑	☐	☐	
		Boom Angle Indicator*	☑	☐	☐	
		Cab Door Latches	☑	☐	☐	
		Cab Glass	☑	☐	☐	
		Computer*	☑	☐	☐	
		Durable Load Chart*	☑	☐	☐	
		Fire Extinguisher*	☑	☐	☐	
		Level Indicator*	☐	☐	☐	
		Operating Control Labels	☑	☐	☐	
		Parking Brake*	☑	☐	☐	
		Seat Belt	☑	☐	☐	
		Signal Horn*	☑	☐	☐	
		Swing Brake*	☑	☐	☐	
BOOM		Boom Alignment*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hydraulic Cylinders*	☑	☐	☐	
		Mounting Pins*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
		Wear Pads	☑	☐	☐	
JIB		Connecting Pins*	☐	☐	☑	
		Cords and Lacings*	☐	☐	☑	
		Guards*	☐	☐	☑	NOT ON CRANE
		Jib Stop*	☐	☐	☑	
		Pin Keepers*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION		Connecting Pins*	☐	☐	☑	
		Cords and Lacings*	☐	☐	☑	
		Guards*	☐	☐	☑	
		Jib Stop*	☐	☐	☑	NOT ON CRANE
		Pin Keepers*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
MAIN HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☐	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT USED
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-10-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex
Model: 40 Ton Truck Crane
Serial Number: 4092-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	NOT USED
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT USED
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
RIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☐	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-10-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-7-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex
Model: 40 TON Truck mount
Serial Number: 4092-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	
	Pin Keepers*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☐	
	Cords and Lacings*		☐	☐	☐	
	Guards*		☐	☐	☐	
	Jib Stop*		☐	☐	☐	
	Pin Keepers*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CRANE		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By: Ralph Young

Date: 1-9-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Grove
Model: RT 864
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
[illegible]	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT on crane
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
[illegible]AIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☐	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

7-8-03 Ralph Young — Inspected By

7-08-03 — Date

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: CRANE
Model: RT865
Serial Number: 4092-0531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☐	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT ON CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	NOT used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CAR	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☐	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☐	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-7-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex
Model: 40 Ton Truck
Serial Number: 41092-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	
	Pin Keepers*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
LATTIC BOOM EXTENSION	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	
	Pin Keepers*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☑	☐	☐	
		Mounting/Alignment*	☑	☐	☐	
		Wire Rope Spooling*	☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CARRIER		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-7-03

Washington

HYDRAULIC CRANE INSPECTION

Owner Washington
Make Grove
Model TM865
Serial Number 4092-531

	ITEMS	CONDITION good	rejected	n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*	☑	☐	☐	
	Boom Angle Indicator*	☑	☐	☐	
	Cab Door Latches	☑	☐	☐	
	Cab Glass	☑	☐	☐	
	Computer*	☑	☐	☐	
	Durable Load Chart*	☑	☐	☐	
	Fire Extinguisher*	☑	☐	☐	
	Level Indicator*	☑	☐	☐	
	Operating Control Labels	☑	☐	☐	
	Parking Brake*	☑	☐	☐	
	Seat Belt	☑	☐	☐	
	Signal Horn*	☑	☐	☐	
	Swing Brake*	☑	☐	☐	
BOOM	Boom Alignment*	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hydraulic Cylinders*	☑	☐	☐	
	Mounting Pins*	☑	☐	☐	
	Sheaves*	☑	☐	☐	
	Wear Pads	☑	☐	☐	
JIB	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	NOT ON CRANE
	Jib Stop*	☐	☐	☑	
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*	☐	☐	☑	
	Cords and Lacings*	☐	☐	☑	
	Guards*	☐	☐	☑	
	Jib Stop*	☐	☐	☑	NOT ON CRANE
	Pin Keepers*	☐	☐	☑	
	Sheaves*	☐	☐	☑	
MAIN HOIST	Leakage*	☑	☐	☐	
	Mounting/Alignment*	☑	☐	☐	
	Wire Rope Spooling*	☑	☐	☐	
WIRE ROPE	Condition*	☑	☐	☐	
	Correct Size*	☑	☐	☐	
	Dead Ended Property	☑	☐	☐	
MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
	Guards*	☑	☐	☐	
	Hook*	☑	☐	☐	
	Safety Latch*	☑	☐	☐	
	Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	not used
		Safety Latch*	☐	☐	☑	
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CRANE	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-7-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Terex / Lorraine
Model: Truck Mount 40Ton
Serial Number: H092-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☑	☐	☑	
	Cords and Lacings*		☑	☐	☑	
	Guards*		☑	☐	☑	not used
	Jib Stop*		☑	☐	☑	
	Pin Keepers*		☑	☐	☑	
	Sheaves*		☑	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☑	☐	☑	
	Cords and Lacings*		☑	☐	☑	
	Guards*		☑	☐	☑	not used
	Jib Stop*		☑	☐	☑	
	Pin Keepers*		☑	☐	☑	
	Sheaves*		☑	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Properly*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 1-6-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: Washington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not on chart
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	not on chart
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

		ITEMS	CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST		Leakage*	☐	☐	☑	
		Mounting/Alignment*	☐	☐	☑	
		Wire Rope Spooling*	☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☑	not used
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE		Drive Belts*	☑	☐	☐	
		Exhaust*	☑	☐	☐	
		Linkage*	☑	☐	☐	
CRANE		Proper Operation*	☑	☐	☐	
		Air Leaks*	☑	☐	☐	
		Backup Alarm*	☑	☐	☐	
		Frame*	☑	☐	☐	
		Oil Leaks*	☑	☐	☐	
		Outriggers and Pads*	☑	☐	☐	
		Rotation Bearing and Mounting Bolts*	☑	☐	☐	
		Tires*	☑	☐	☐	
MISC. ITEMS		Connecting Pins*	☑	☐	☐	
		Cords and Lacings*	☑	☐	☐	
		Guards*	☑	☐	☐	
		Jib Stop*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-6-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: iWASHington
Make: Grove
Model: RT865
Serial Number: 4092-531

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT on CRANE
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT ON CRANE
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
AUXILIARY HOIST	Leakage*		☐	☐	☑	
	Mounting/Alignment*		☐	☐	☑	
	Wire Rope Spooling*		☐	☐	☑	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☐	☐	☑	
		Guards*	☐	☐	☑	
		Hook*	☐	☐	☑	
		Safety Latch*	☐	☐	☐	NOT USed
		Sheaves*	☐	☐	☑	
	WIRE ROPE	Condition*	☐	☐	☑	
		Correct Size*	☐	☐	☑	
		Dead Ended Properly*	☐	☐	☑	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☐	☐	☐	
CARRIER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By Ralph Young

Date 1-2-03

Washington

HYDRAULIC CRANE INSPECTION

Owner: WASHington
Make: Terex / Lorain-t
Model: Truck Mount 40 ton
Serial Number: 4103-0001

	ITEMS		CONDITION good	CONDITION rejected	CONDITION n/a	REMARKS
OPERATOR STATION	Anti-Two-Block System*		☑	☐	☐	
	Boom Angle Indicator*		☑	☐	☐	
	Cab Door Latches		☑	☐	☐	
	Cab Glass		☑	☐	☐	
	Computer*		☑	☐	☐	
	Durable Load Chart*		☑	☐	☐	
	Fire Extinguisher*		☑	☐	☐	
	Level Indicator*		☑	☐	☐	
	Operating Control Labels		☑	☐	☐	
	Parking Brake*		☑	☐	☐	
	Seat Belt		☑	☐	☐	
	Signal Horn*		☑	☐	☐	
	Swing Brake*		☑	☐	☐	
BOOM	Boom Alignment*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Hydraulic Cylinders*		☑	☐	☐	
	Mounting Pins*		☑	☐	☐	
	Sheaves*		☑	☐	☐	
	Wear Pads		☑	☐	☐	
JIB	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	
	Jib Stop*		☐	☐	☑	NOT used
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
LATTIC BOOM EXTENSION	Connecting Pins*		☐	☐	☑	
	Cords and Lacings*		☐	☐	☑	
	Guards*		☐	☐	☑	NOT used
	Jib Stop*		☐	☐	☑	
	Pin Keepers*		☐	☐	☑	
	Sheaves*		☐	☐	☑	
MAIN HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property	☑	☐	☐	
	MAIN LOAD BLOCK	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	

* Unit should not be used if item is not in good condition

Washington

HYDRAULIC CRANE INSPECTION

	ITEMS		CONDITION good	rejected	n/a	REMARKS
AUXILIARY HOIST	Leakage*		☑	☐	☐	
	Mounting/Alignment*		☑	☐	☐	
	Wire Rope Spooling*		☑	☐	☐	
	AUXILIARY LOAD BLOCK/BALL	Capacity/Weight Label	☑	☐	☐	
		Guards*	☑	☐	☐	
		Hook*	☑	☐	☐	
		Safety Latch*	☑	☐	☐	
		Sheaves*	☑	☐	☐	
	WIRE ROPE	Condition*	☑	☐	☐	
		Correct Size*	☑	☐	☐	
		Dead Ended Property*	☑	☐	☐	
ENGINE	Drive Belts*		☑	☐	☐	
	Exhaust*		☑	☐	☐	
	Linkage*		☑	☐	☐	
C...IER	Proper Operation*		☑	☐	☐	
	Air Leaks*		☑	☐	☐	
	Backup Alarm*		☑	☐	☐	
	Frame*		☑	☐	☐	
	Oil Leaks*		☑	☐	☐	
	Outriggers and Pads*		☑	☐	☐	
	Rotation Bearing and Mounting Bolts*		☑	☐	☐	
	Tires*		☑	☐	☐	
MISC. ITEMS	Connecting Pins*		☑	☐	☐	
	Cords and Lacings*		☑	☐	☐	
	Guards*		☑	☐	☐	
	Jib Stop*		☑	☐	☐	

* Unit should not be used if item is not in good condition

Inspected By _____ Date 1-2-03

944

WD3
Omega West D&D Project

OMEGA WEST DECOMMISSIONING FINAL PROJECT REPORT

Volume 4

145

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REMOVAL OF GRAPHITE AND LEAD FROM THERMAL COLUMN

The removal of the graphite and lead from the thermal column is expected to generate the potential for microscopic particles of graphite that may have particles of radioactive material attached to them. We have already experienced very low levels of clothing contamination caused by what appears to be very small particles of graphite that exhibit electrostatic charge characteristics. As a result of the electrostatic charge the graphite particles become attached to clothing very easily. The contamination levels that have been observed, resulting from the microscopic graphite particles, have been in the range of 2k to 4K. The radioactive material attached to the graphite particles appears to be cobalt 60.

Double PCs appear to be effective in controlling the graphite particles. Single PC use in areas that have the potential for graphite particles has at times resulted in particles penetrating the PC material and becoming attached to the clothing worn under the PCs. Because of the cold weather significant amounts of clothing are worn under the PCs. People working outside of the areas having the potential for graphite particle contamination have been using lab coats to control the spread of graphite partiles.

When we enter the thermal column area a ventilated containment area will be established to control the release of graphite particles and other contaminants that may be present in the thermal column. Double PCs will be used to control the spread of graphite particles. Respirators will be used until the airborne radioactive material concentrations can be determined. The thermal column also has the potential for tritium to be attached to graphite particles. Tritium smears will also be taken in this work area during the removal of graphite and lead.

The observed contamination levels of 2k to 4k do not present any exposure problem. If contamination levels are experienced in this range the particles will be collected and disposed of as rad waste without further concern.

REMOVAL OF IN-GROUND OR UNDERGROUND ITEMS AT TA-61

SCOPE OF WORK

- Remove the concrete stack base.
- Remove the 8-inch stainless steel blower pipe.
- Remove the transite blower pipe.
- Remove the 2-inch drain line to the French drain.
- Remove the Offgas line up to the north fence line.
- Remove the fence post anchors.
- Remove the stack anchor points.
- Remove the French Drain structural material and gravel.
- Fill exposed trench with clean fill.
- Survey and sample trench areas for releasable levels.
- Remove packaged waste from TA-61 area.

At TA-61 there are in-ground stack anchor points that must be removed. The anchor points are in contamination free areas of TA-61 and can be removed without radiological controls and disposed of as clean material.

The fence post anchor points are also in contamination free areas of TA-61 and can be removed without radiological controls and disposed of as clean material.

The stack base is a 4'x4'x4' in-ground concrete base that has a contaminated 8-inch stainless steel blower pipe that penetrates through the base and is routed underground to the Blower House. Attached to the 8 inch blower pipe is a 2-inch drain line that is routed to a contaminated French drain and a 2-inch offgas line routed to the OWR. The 2-inch lines connected to the blower pipe are connected via pipe unions and can be disconnected from the blower pipe. Both 2-inch lines are contaminated. Attached to the stainless steel blower pipe is an 8-inch transite pipe that connects the blower pipe to the blower in the blower house. The transite pipe should not be contaminated. The transite pipe is routed through the concrete floor of the blower house.

The dirt around the concrete stack base should be removed and the concrete should be removed from the blower pipe. The dirt around the base of the stack does not appear to be contaminated. As the dirt is removed it should be checked for contamination and if clean the dirt should be moved to

the south and west side of the stack. Any dirt that appears to be contaminated, indicating twice background, should be stored east and north of the stack in or near the designated contaminated soil area on plastic sheeting. While the concrete is being removed from the blower pipe the pipe should be sealed to prevent the release of radioactive material from the pipe.

A trench will need to be opened from the stack base to the blower house so that the blower pipe and attached 2-inch pipes can be removed. The dirt to be removed for this trench is in an area that appears to be free of contamination. As the dirt is removed to open the trench the dirt should be checked for contamination. If the dirt is clean it should be stored west of the trench. If the dirt is contaminated it should be stored east of the trench in the area designated as a contaminated soil area or placed into a shipping container. The contaminated soil should be stored on plastic sheeting. While opening the trench for the blower pipe, care should be taken not to penetrate the pipe because the pipe is internally contaminated. The contamination level inside the pipe, 70k, will not present an external dose rate on the pipe. When disconnecting pipes from the 8-inch blower pipe seal both of the pipe ends to prevent the release of radioactive material. Open the trench to the extent that the trench walls can be sloped such that trench wall supports are not required. When the transite pipe connection to the stainless steel pipe is reached disconnect the two pipes, seal both ends of the pipe and remove the stainless steel pipe from the trench. Move the stainless steel pipe to a location that it can be segmented for waste packaging.

Continue to open the blower pipe trench so that the transite pipe can be removed. Removing the transite pipe will require removing some of the blower building concrete floor. The blower building is in a free release status requiring no radiological controls. Asbestos controls will be required to remove the transite pipe. Check the point of connection between the transite and stainless steel pipe for possible contamination. If some portion of the transite pipe is contaminated establish asbestos controls and remove the contaminated portion of the transite pipe.

Expand the trench at the location of the contaminated 2-inch pipe routed to the French drain and expand the trench to the French drain so that the 2-inch line can be removed.

Control the slope of the trench walls so that trench wall supports are not required. As the trench approaches the French drain the level of soil contamination will increase requiring the soil to be placed in a shipping container or a contaminated soil area. When the 2-inch pipe is uncovered assure both ends of the pipe is sealed and move the pipe to an area in which the pipe can be segmented for waste packaging.

Remove the structural components of the French drain and dispose of the components as contaminated material. The walls of the French drain, the soil around the French drain and the gravel that forms the French drain are all contaminated. Radiological controls will be required when moving this soil and gravel. Expand the opening of the French drain so that the gravel in the bottom of the French drain can be removed. Place all contaminated soil in a shipping container or a controlled soil storage area. Remove soil as required to reach the release limits for the area. Collect soil samples as required to release the area.

Expand the trench at the point where the contaminated 2-inch offgas line connected to the blower pipe. Survey the dirt and place the clean dirt in an area that has not been designated as a soil contamination area. If the soil is contaminated place the soil on plastic sheeting designating it as a soil contamination area or place the soil in a shipping container. Control the slope of the trench so that trench wall supports are not required. Expand the trench uncovering the offgas pipe up to the north fence line of TA-61. Do not go beyond the fence line because of utilities such as a natural gas line in the area. Place a marker at the end of the trench so that the offgas line can be found when the trench is filled. Cut the uncovered offgas line and seal both ends of the pipe. Remove the pipe from the trench and segment the pipe for waste packaging.

Survey and sample the exposed trench areas to determine if the soil is at or below the release limits. If the trench area is releasable fill the trench with clean fill.

750

REMOVAL OF CONTAMINATED PIPE AND WALLBOARD FROM ROOM 115

The extent of the contamination of the south wall of room 115, above the ceiling, has been identified. While surveying the south wall above the ceiling the south wall was found to be contaminated below the ceiling also. There also is a possibility that there is contamination behind a fiberboard that has been placed over the drywall of the lower south wall. There is a contaminated drain line, with leaded joints, that is attached to the east, south and west walls of room 115. This contaminated drain line must also be removed. The contamination on the wallboard has been identified as Uranium and possible Plutonium. The contamination in the drain line has not been identified but appears to be beta/gamma activity. Contamination controls will assume alpha activity is present.

SCOPE OF WORK

The contaminated drain line must be removed. The leaded joints may need to be removed prior to packaging the drain line as waste.

The fiberboard that covers the lower south wall drywall is contaminated and must be removed to determine if the drywall is contaminated. If the drywall is contaminated it will need to be removed also.

The contaminated south wall drywall, above the ceiling, must be removed.

CONTAMINATION CONTROL

All debris must be removed from room 115 prior to removing any contaminated material.

Cover the floor of the room with plastic or other disposable material to prevent the contamination of the floor.

A HEPA should be used to provide localized ventilation of the work area when removing the contaminated drain line or the contaminated wallboard.

A HEPA Vacuum should be use if a saw is used to cut the contaminated drain line or contaminated wallboard.

The contaminated wallboard should be sealed with paint or tape prior to cutting or removing the wallboard.

Seal the open ends of the contaminated drain line before and after cutting the drain line.

A sticky pad can be placed under the drain line when it is being cut to collect particles from the cutting process.

As the wallboard is removed conduct a survey in the inner wall area to determine if there is inner wall contamination.

Using a HEPA vacuum, collect the dust and small particles created when cutting the drain line or wallboard. The collection of the dust and small particles should be ongoing during the removal of the drain line and wallboard.

Establish room 115 as a contaminated area while removing the drain line and wallboard.

WASTE PACKAGING

Cut all waste to fit into a B25 box.

Collect Rad date to support waste packaging.

RAD CONTROLS

Fullface Respirators will be used while cutting the drain line and when cutting and removing the wallboard.

Air samplers will be in operation and collecting breathing zone samples while cutting the drain line and wallboard.

Protective clothing will be used while removing and cutting the drain line and wallboard.

OMEGA WEST PROJECT MAN REM ESTIMATE

The initial Man Rem estimate of 43 Man Rem for the Omega West project was based on a schedule developed in May of this year. The concepts of how this project was going to be conducted in May were also used to estimate the Man Rem for the project. Since May the duration estimates for tasks have changed, concepts as to how the tasks will be done have changed and dose rate information has improved since May. The current estimate is 24.4 Man Rem. The project completion is estimated at 20 to 25% complete. At this level of project completion the estimated Man Rem would be 4.9 to 6.1 Man Rem. The current Man Rem as of 10/9/02 is 1.414 Man Rem.

The initial Man Rem was based on not using a fully shielded platform on top of the Reactor. Currently a fully shielded platform with up to 6 inches of steel will be used. This platform has a working dose rate design of 5 mr/hr. Extensive use of TV cameras are currently proposed for the in vessel work. Remote cutting tools have been designed and tested to remove in vessel components.

Current dose rate information from the top of the reactor vessel to the core components is more extensive now than was available in May.

Reactor Internals RP Support

Reactor Building Routines (Tent)

1. Add daily dose rate survey on each HEPA bank and dust collector system.

2. Daily log the D/P of each dust collector, HEPA bank and HEPA bank prefilter.

3. Daily general area dose rates and contamination levels on all levels of tent.

4. Twice each day contamination levels all stepoff pads.

5. Collect and count all air samples taken in tent.

6. Collect particulate and tritium samples from the HEPA system effluent.

7. Weekly take tritium smears from all levels of the tent.

8. Daily check air flow into reactor vessel from upper deck.

Dosimetry

1. Exchange MOTA and RP TLDs weekly.

2. Daily collect and track electronic dosimetry data.

Instruments

1. Onsite 30 min early to setup instruments and control point.

2. Manage all samples sent to HPAL.

3. Maintain all TV systems.

Staffing

1. At least 2 RCTs assigned to Rx upper deck 6 days/week. Starting 11/11/02 to 1/15/03. Direct two Southwest decon people to decon, pickup trash and PCs.

2. Two RCTs assigned to beam port work. About 6 to 10 work days. Rotate to Fuel pool decon, HEPA support and FSS.

3. 1 RCT daily routines for site. 6 days/week

4. 1 RCT assigned to instruments, dosimetry, HPAL coordination, TV system maintenance and computer support. 6 days per week.

5. 1 RCT to support waste packaging

MOVEMENT OF THE Be & Pb SHIELDS

1. The Be and Pb shields are currently stored in a liner with a bolted lid. The liner is stored in an underground storage area.

2. The removal of the Be & Pb shields from the storage liner will be conducted from the underground storage area.

3. Unbolting of the storage liner lid will be done with a long extension rod attached to an electric dive unit. One of the underground storage lids can be used as shielding during the unbolting of the liner lid.

4. Long poles will be used to grapple the slings attached to the Be & Pb shields when attaching the slings to the crane hook.

5. Electronic dosimeters will be set at 25 R/Hr and 100 mr exposure for personnel working near the liner lid.

6. Electronic dosimeters will be used as extremities monitors and will be set at 50 R/hr and 5 Rem.

7. The crane operator's electronic dosimeter will be set at 5 R/hr and 100 mr exposure.

8. The permanent disposal liner for the Be & Pb shields will be installed in the shipping cask with the liner lid removed.

9. Shoring will be installed in the liner followed by the Be shield and the Pb shield.

10. Additional Pb shielding will be placed in the disposal liner prior to installing the liner lid.

11. Impact guns will be used to secure the liner lid to liner.

12. A remotely operated TV camera will be used to overview the transfer operation of the Be and Pb shields.

13. During the transfer of the shields the site will be evacuated.

14. LANL representatives will be notified prior to the transfer so that increases in background radiation levels can be expected.

15. The outer gate to the site will be secured during the transfer.

REMAIN RADIOLOGICAL WORK AT THE OMEGA WEST REACTOR

1. Remove the lower 8 feet of the Reactor Bio Shield.

   Estimated Man Rem 0.350

2. Remove and package the lower 8 feet of the Reactor Vessel including the remaining Thermal Column flange.

   Estimated Man Rem 1.8

3. Remove the Thermal Column Housing.

   Estimated Man Rem 0.125

4. Remove and package the underground reactor cooling piping.

   Estimated Man Rem 0.025

5. Load one waste liner.

   Estimated Man Rem 0.05

6. Package and load the Be & Pb shield.

	Man Rem	Extremities (REM)
Remove old liner lid	0.200	1.0
Rig Slings for Be & Pb	0.050	
Crane operator	0.025	
Place lid on new liner	0.200	1.0
Estimated Man Rem	0.475	2.0

Total Man Rem to complete Radiological work at the OWR

2.825 Man Rem to complete project
34.210 Man Rem as of 3/12/03

37.035 Man Rem total to complete project

COLLECT LINER INFORMATION ON LINERS IN HIGH LEVEL STORAGE VAULT AND TRANSFER Be AND Pb SHIELD TO UNDERGROUND STORAGE

SCOPE of Task

The High level Storage vault will be opened to collect liner information on the three liners stored in the High Level Storage Vault. Information to be collected will be dose rates and weight of the liners.

To gain access to the liners in the High Level Storage Vault will require the removal of the shield blocks and steel plate that is currently resting on top of the vault for shielding. To gain access to the vault and then replace the shielding will require 0.500 Man Rem each time the vault is opened. To collect the liner information and ship each of the three liners in the vault will require 1.75 Man Rem. By moving the Be shield and Pb shield containing liner from the vault to an underground storage location will reduce the Man Rem expenditure to ship the remaining three liners to 0.900 Man Rem. This reduction in Man Rem is caused by the removal of the Be & Pb liner reducing the dose rate in the area of the High Level Storage Vault. The dose rate reduction reduces the need for shielding material on top of the vault thus reducing the handling of the shielding material.

1. Establish a Critical lift plane.

2. Establish an ALARA plan.

3. Establish an RWP

4. Make notifications to LANL that Be shield will be moved.

5. Establish the WD3 staff to remain onsite during the transfer of the Be shield.

MAN REM ESTIMATE TO TRANSFER Be & Pb LINER AND COLLECT LINER INFORMATION:

1.	Removing shielding blocks and lid from HLSV	0.250
2.	Attach Be&Pb liner slings to crane	0.050
3.	Crane operator	0.025
4.	Place lid & shielding on Be/Pb underground storage area.	0.075
5.	Collect data on low dose liner	0.015
6.	Collect data on High dose liner	0.050
7.	Replace lid on HLSV	0.025
8.	RCT support	0.020
	Total	0.510

DEMOLITION OF BIOSHIELD AND ASSOCIATED STEEL

1. Coat Rx Vessel walls to fix contamination.
2. Coat Thermal Column to fix contamination.
3. Remove Secondary wooden work platform.
4. Remove Bioshield structural steel.
5. Remove shielded work platform.
6. Operate Brok and shear.
7. Operate Bobcat.
8. Load Boxes.
9. Load high dose rate vessel parts in liner.
10. Spray water for dust control.
11. Coat material to fix contamination.
12. Transport waste containers.
13. Process Laundry.
14. Process Rad Trash.
15. Provide RCT support.
16. Mgr support.

After the reactor internals have been removed the reactor vessel shell will be segmented to allow for removal as the Bioshield is removed. The upper portions of the vessel shell, from the top of the fuel rack area up, should only be contaminated. The upper shell segments can be packaged in LSA boxes and should be segmented to 4'x4'x6' sections. Below the level of the fuel racks the vessel shell could be increasingly activated requiring some shell segments to be packaged in a liner.

After the vessel shell has been segmented a coating should be applied to the shell to fix the surface contamination. The inner portion of the Bioshield, near the shell, may also be coated if required. The Thermal Column and Beam Ports should also be coated to fix any contamination in these areas.

The secondary wooden platform that has been added east of the vessel will need to be removed to allow access to the structural steel surrounding the Bioshield. The structural steel is on the upper portion of the Bioshield and the mezzanine. It is generally all of the blue structural steel.

There will be Beam Port sections with elevated dose rates, lower vessel shell segments with elevated dose rates, and some rebar near the lower vessel shell could also have elevated dose rates.

After the vessel shell has been segmented debris will be removed from the reactor vessel floor. This can be by remote pickup, remote operations of a vacuum cleaner or if dose rates are low enough by direct pickup. Some elevated dose rate items will have fallen into the coolant pipe that is connected to the floor of the reactor vessel. As this pipe is remove caution will be needed to monitor for elevated dose rates and high contamination levels. Bismuth, lead, and aluminum fines may be found in this pipe.

Heavy equipment will be used to knockdown the Bioshield and remove the vessel shell. During this process coolant pipes will be exposed having elevated dose rates along with significant amounts of lead. The rubble generated by this process will be loaded into boxes with a Bobcat or the Brok. Forklifts will be used to move loaded boxes from the tent through the airlock.

As the loaded boxes are removed from the tent dose rates and contamination levels will be required along with any required decontamination. The weight of each box will also need to be determined.

During the Bioshield demolition the tent will be the containment device. All ventilation systems will be required to be operating. Frequent prefilter changes will be required.

Extensive air sampling will be required in the tent work area with air sample counting being done frequently. An AMS-3 will be operated in the tent as a trend indicator only. Respirators may be required just by the dust conditions. Routine radiological surveys will be conducted in the tent daily or more often as required.

A buffer zone will be established in the control room at the door into the tent. In this buffer zone PCs will be removed and the area will be ventilated using a 500 to 5000 CFM HEPA. An air sampler will be operated in this buffer zone.

Be & Pb Shield Removal Staffing

Site Manager	MOTA Manager	RP Manager	RW Manager
J. Staher	J. Fennema	R. Swetnam	J. Reust
505 780 0365	505 780 0366	505 780 0357	865 406 4107

Safety Manager
M. Przybyski
505 780 0371

LANL RCT
D. Stafford Cell phone 505 699 1005

Person in charge of both lifts

H. Rutland

On Top of Reactor

H. Rutland
R. Toutaint
R. Livingston
S. Blackwell
K. Summers RP backup as required
G. Schnell RP TV support as required

Tent Floor (low dose area east side of BioShield)

H. Rutland
R. Toutaint
R. Livingston
S. Blackwell
K. Summers RP backup as required
G. Schnell RP TV support as required
R. Young Crane Operator
J. Reust Container Support 865 406 4107
A. Romero Container Support

Control Point

J. Coleman RP lead Control Point 505 780 0362
R. Swetnam Cell phone 505 780 0357
J. Staher Cell phone 505 780 0365
J. Fennema Cell phone 505 780 0366
S. Kerr
S. Laurent

M. Przybyski Cell phone 505 780 0371

South Side of Creek

E. Brown RP Support Cell phone 505 780 0680
D. Ortiz RP Support
M. Mountain
D. Dansard

Outer West Gate

D. Gonzales RP Support Cell phone 505 780 0802

Top of Canyon

J. Jackson RP Support Cell phone 801 388 3559

During the period from 1/1/03 to 4/22/03 the Omega West Reactor D&D Project accumulated 33.625 Man Rem in the following areas:

Thermal Column Interior work	0.848
Thermal Column Graphite removal	5.255
Thermal Column Bolt removal	4.677
Thermal Column Flange Removal	1.577
Aluminum Shield Segmentation	1.908
Bi Shield Segmentation	1.875
Core Support Box Removal	2.162
Other Internal Reactor Work	9.017
Beam Port Work	0.571
Liner and Cask work	1.362
Be/Pb Loading	0.125
BioShield Steel	0.145
BioShield as of 3/6 to 4/13/03	4.103
Total	33.625

2002 Total 4.362

Remaining work remove underground pipe 0.250

THERMAL COLUMN GRAPHITE AND BOLT REMOVAL

Discussions on 1/17/03 and 1/18/03 culminated in the conclusion that the remaining graphite in the Thermal Column could only be removed by direct contact without shielding. Because of the configuration of the Thermal Column any shielding placed in the Thermal Column would have required additional Man Rem to install and remove. Any shielding installed would also result in more time required to remove the graphite resulting in more Man Rem to remove the graphite. The net result from attempting to install shielding to remove the graphite would have been a higher Man Rem accumulation than the resultant 4.1 Man Rem to remove the graphite.

Discussions on 1/18/03, after the graphite was removed, came to the conclusion that the bolts holding the Thermal Column head in place could be removed quickly because the graphite removal had provided direct access to the bolts. It appeared that an exposure accumulation of 3.0 Rem would be required to remove the bolts. The removal time was estimated at 30 minutes for 26 bolts and would require two people to remove the bolts. The installation of shielding was evaluated and found not to result in any net Man Rem savings. As a result of the shielding evaluation indicating no net Man Rem savings shielding was not used. As the bolt removal progressed all but 3 bolts could be removed for a total exposure of 2.5 Man Rem. The remaining 3 bolts required the removal of some remaining graphite. Two of the bolts were removed quickly with the third bolt requiring most of the removal time. An additional 1.6 Man Rem was required to remove the last three bolts for a total of 4.1 Man Rem. If shielding had been used for the bolt removal process it would have been removed to remove the last three bolts resulting in additional exposure.

In the final evaluation of the removal of the graphite and bolts from the Thermal Column it was determined that at least 8.2 Man Rem would have been required to remove the graphite and bolts no matter the duration. It is possible that a longer duration for the removal of the graphite and bolts would have increased the total Man Rem accumulation.

TC WORK HOLD POINTS

1. GENERAL AREA WORKING DOSE RATE OF 20 R/Hr

2. TOTAL MAN REM ACCUMULATION OF 5 MAN REM WITH A PROGRESS EVALUATION AT 2.5

3. DIGI DOSE ALARM MAX 500 mr

4. DIGI DOSE RATE MAX 10 R/Hr

5. EXTREMITIES DOSE ESTIMATE OF 10 REM

6. SMEARABLE LEVELS ABOVE 1 MILLION DPM BETA GAMMA AND 10 MILLION DPM TRITIUM

7. BETA/GAMMA AIRBORNE 1E-8, TRITIUM 1E-5

Removal and Transfer of Beryllium Reflector from Reactor Vessel to Temporary Storage Cask ALARA Summary

On 1/6/03 the transfer of the Beryllium reflector was performed safely and effectively due to proper planning and coordination of the activity by all personnel involved. Due to the high dose rates involved it was necessary to stop all other project activities and limit the on site staff to only those directly involved with the removal and transfer of the reflector.
The lead shield was removed prior to the Beryllium reflector. The lead shield is of similar size and weight to that of the reflector. The dose rates on the lead shield were ~25R/hr on contact and ~ 500mr/hr at 1 meter.

- Remote video surveillance was utilized to eliminate the need for spotters to guide the crane operator. The cameras were positioned strategically to afford the crane operator and the senior HP technician the views needed to safely transfer the reflectors. A pan/tilt/zoom unit was placed over the vessel and a stationary unit was positioned near the shielded liner. Monitors were placed at the Radiological Control point controlling entry into the work area and in a location visible to the Crane Operator.

- A full size mock-up of the Be reflector was fabricated to duplicate the approximate weight and dimensions of the actual component. The purpose of this mock-up was to allow the crane operator to practice the lift, movement and subsequent transfer from the vessel to the shield cask. Due to the dose rates involved it was determined that the use of tag lines to stabilize the load were impractical. By practicing with the mock up reflector, the crane operator demonstrated that the load could be safely and efficiently moved without tag lines.

- A chute was constructed and placed inside the shielded liner to guide the reflector into the liner with minimal effort, thereby reducing the time required to align the reflector over the liner and lower into the shielded configuration.

Survey Data (R/hr)
Max contact - 5000
1 foot - 1200-1400
1 meter - 700

Personnel Exposure
Total person REM for transfer – 0.100
Highest dose to individual – 40 to crane operator

RWP Hold Points/Special Instructions

1) Ensure Rx Vessel HEPA System is in service and operating properly prior to transfer
2) ONLY Essential Personnel will be allowed on Site during transfer
3) Mock-Up of Removal and Transfer Required
4) Dose Rates to be determined when Be Reflector is ~half way out of Rx Vessel
5) Long Handle/Remote Tooling required
6) Continuous dose rate surveys to be performed O/S tent during transfer
7) Surveillance/control of site access gates to prevent entry during transfer
8) Remote video surveillance to be utilized

Lessons Learned

1) Use of a mock-up is essential to ensure an efficient transfer of material.
2) Remote surveillance equipment is critical to dose reduction by virtue of eliminating spotters as well as providing a safe operating distance for the crane operator and the HP tech.
3) An alignment chute ensures the load can be lowered into the liner in a very time efficient manner.
4) Pre stage remote dose rate instruments to obtain survey data with little or no dose to the HP technician(s).
5) It is essential that all non-essential personnel be restricted for ALARA purposes as well as eliminating distractions to the personnel involved in the task.
6) The use of remote or teledosimetry data provides real time exposure information to the HP staff.

ALARA REVIEW FOR THERMAL COLUMN REMOVAL

1. Describe Thermal Column

   A. Aluminum Head
   B. Bismuth Shield
   C. Stainless Steel Flange
   D. Flange Bolts
   E. Flange Lead

2. Thermal Column dose rates

3. Thermal Column contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium

3. Airborne contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium levels

4. Ventilation and contamination Controls

5. Estimated Man Rem 4.379

A.	MOTA	3.650
B.	Management	0.182
C.	RCTs	0.365
D.	Waste Packaging	0.182

ALARA REVIEW FOR THE REMOVAL OF THE REACTOR INTERNALS FROM THE OMEGA WEST REACTOR

- WORK SCHEDULE FOR THE OWR INTERNALS REMOVAL
- PREPARED COMPONENT SPECIFIC WORK INSTRUCTIONS
- MAN REM ESTIMATES
- ALARA ACTIONS

    1. SHIELDED PLATFORM FOR TOP OF REACTOR
    2. REACTOR VESSEL VENTILATION
    3. REMOTE VIEWING EQUIPMENT
    4. REMOTELY OPERATE TOOLING
    5. MOCKUP TESTING OF TOOLING
    6. COMMUNICATIONS EQUIPMENT
    7. ELECTRONIC DOSIMETERS
    8. RAD PROTECTION INSTRUMENTS
    9. DOSE TRACKING METHODS
    10. CREW ASSIGNMENTS
    11. DETAILED PLANNING AND PRE-JOB BRIEFINGS
    12. DECON CREW
    13. MANAGEMENT OVERSIGHT
    14. WORKING ENVIRONMENT

- ESTABLISHED RWP
- WASTE PACKAGING PLAN

    1. MATERIAL SIZING
    2. WASTE CONTAINER SHIELDING
    3. WASTE CONTAINING ONSITE TRANSPORTATION
    4. WASTE CONTAINER STORAGE

- ROUTINE RADIOLOGICAL SURVEY PLAN

    1. HEPA SYSTEM MONITORING
    2. GENERAL AREA DOSE RATES
    3. GENERAL AREA CONTAMINATION LEVELS

THINGS TO DO BEFORE Be SHIELD CAN BE REMOVED

1. Move Manlift into tent.
2. Setup airpallet system.
3. Position cask with liner in tent.
4. Install Be support with plywood guide in liner.
5. Install TV camera for liner with monitor locations at crane cab and at cask or in manlift.
6. Complete Be shield mockup.
7. Remove the remaining 4 flanged instrument liners and store in fuel pool for shielding until they can be cut. (So ventilation connections can be install. Instrument liner without flange does not enter core support box.)
8. Cleanup main floor and work areas around Beam Ports.
9. Install north and south ventilation connections on Beam ports. Connect to HEPA systems. Place shield blocks on north and south side.
10. Setup Electric hoist and load cell.
11. Walk through Be shield removal using Be mockup.
12. Videotape Be shield and inspect lifting lugs.
13. Setup tools to be used for the Be Shield removal.
14. Setup RO-7.
15. Conduct pre-job brief for work instructions and RWP. Review Mockup results.
16. Remove lid from Waste Storage area.

Setup 1/2/03 Remove 1/3/03

Setup 6 hours
1
2,3,4,5
6
7,8,9
10,12,13,14

Walk through 2 hours
11

Pre-Job brief 1 hour
15

Remove Storage area lid

MAN REM PROJECTIONS FOR THE OMEGA WEST DEMOLITION

The Man Rem projections for the demolition of the Omega West Reactor facility are based on the schedule as issued on 10/1/02. A working efficiency of 70% was assumed. The dose rate projections are based on survey data obtained during vessel inspections and removal of material from the beam ports.

Working dose rates are assumed to take three levels. The three levels are high dose rate, mid level dose rate and a low dose rate. Working times in each dose rate are estimated based on the type of work being performed. Vessel internal working dose rates are estimated based on shielding provided and the use of remote tools.

The Man Rem estimate for each task includes estimates for Rad Protection personnel, miscellaneous support personnel such as management personnel, waste packaging personnel and Crane Operators.

In vessel work is based on a platform design dose rate of 5 mr/hr. Most of the platform work is expected to be done with the use of TV Cameras, remote tools and the shielded platform inplace.

Waste packaging and handling man rem accumulations has also been considered.

Potential man rem accumulations for equipment repair has also been considered for each task considered.

Actual dose rates at the top of the vessel can be as high as 2 R/Hr. Effective dose rates are much lower because of movement in and out of the high dose rate fields while work is being performed. Dose rate reduction based on reactor component removal has been considered. Beam port removal has been estimated on the observed dose rate of 10 R/Hr when the west beam port was removed. It is assumed that all beam ports are constructed from Aluminum and that all beam ports will be removed externally from the bio-shield.

The estimated man rem for removal of the bio-shield is based on the man rem accumulated at other facilities with adjustments for larger equipment.

Man rem estimates have not been made for the office area, wooden building or TA61 because of the low dose rates observed in these areas.

ALARA EVALUATION OF THE THERMAL COLUMN REMOVAL

The initial Thermal Column Head removal plan was to use a wire saw to cut off both the Aluminum Head and the Bismuth head (which has a stainless steel flange). Using the wire saw would have required remote equipment operation approximately 25 feet into the reactor vessel. A mock-up setup of the proposed wire saw operation demonstrated that it would be successful, but with some operational risks. Based on the very high dose rates expected in the area of the Bismuth shield, the operational risk was acceptable but the possibility of additional schedule delays due to wire breakage remained evident.

After the Thermal Neutron ports were emptied, dose rates were taken inside the ports near the Bismuth shield and the stainless steel flange. The dose rate survey indicated 50 R/Hr dose rates in these areas. This dose rate presented an acceptable working condition while using remote tooling inside the Thermal Column for its removal. Drawings of the Thermal Column components were reviewed to determine the methods required to remove the Thermal Column head from inside the Thermal Column. The drawing review demonstrated that the Thermal Column head could be successfully removed from within the Thermal Column.

A Man Rem estimate was made, based on the Thermal head removal time estimate, and the observed dose rates measured inside the Thermal Column. The estimated Man Rem was 4.6 Man Rem, with 4 feet of the graphite removed. (The 4 feet of graphite removal projection was 0.3 Man Rem). The initial Thermal Head Column remote wire saw removal Man Rem estimate was 3.3 Man Rem, which included the removal of the graphite. The wire saw method would take 10 days, with an additional 2 days to remove the graphite from the Thermal Column. Direct removal of the Thermal Column, and interior Thermal Column graphite, was estimated at four days, saving 8 schedule days. The 8 day schedule time difference justified the increase of 1.6 Man Rem to remove the Thermal Column from inside the Thermal column.

Upon entering the Thermal Column, it became apparent that the removal of the Thermal Column graphite was more difficult than expected. Dose rates at 30 inches from the Bismuth Shield were found to be higher than expected. Because of the alignment of the graphite, we realized that Thermal Column head bolt removal from inside the Thermal Column, at 30 inches from the Bismuth shield, may not be possible. Work was stopped to consider more efficient methods for the required tasks, and to determine methods to provide better shielding for work conducted inside the Thermal Column. Numerous shielding methods were considered, but all hindered the removal of the graphite from the Thermal Column. It was estimated that a minimum of 3.5 inches of lead equivalent shielding would be required to adequately shield the work area. The installation alone for field assembled shielding of this magnitude would require more Man Rem to install than the method saved. The installation of any shielding in the Thermal Column would have required an extensive engineering evaluation and inherent procurement and fabrication delays; installation which conformed to the geometry of the Thermal Column would have been very Man Rem intensive as well.

ALTERNATIVE METHODS CONSIDERED BEFORE REMOVING THE GRAPHITE:

- Steel Plate shielding
- Lead Blanket shielding
- Breaking the graphite into small pieces
- Pulling the graphite out in one piece
- Providing water shielding
- Only removing the outer graphite blocks
- Using the wire saw
- High Pressure water

Due to shielding efficiency problems, it was determined that the only way to remove the graphite from the Thermal Column was to use a direct approach without shielding. In order to successfully use a direct approach, specific hold points were established, and intensive work briefings were held with all workers involved, including a graphite removal demonstration. A TV camera was installed to observe the work in the area, and to provide information to workers preparing to enter the area.

It was estimated that 5 Man Rem would be required to remove the graphite. Stop points of 2.5 Man Rem without progress was established along with other stop points. It took 2 hours and 4.1 Man Rem to remove the graphite. At this point it was determined that the Thermal Column head bolts were exposed and could be removed. An estimate of 30 minutes, and 2.5 Man Rem to remove the head bolts without shielding, was made. An evaluation of possible head bolt removal shielding configurations was made, but none were efficient enough to save Man Rem during the removal of the head bolts. It was determined that the most Man Rem efficient, and cost effective method, was the direct approach of removing the head bolts. The same hold points established for the graphite removal were used for the head bolt removal.

The removal of all but 3 head bolts took 30 minutes and 2.5 Man Rem. Three of the head bolts were found to be blocked with graphite. Two of the bolts were cleared of graphite and removed. A third bolt required extensive graphite removal to provide access of remote tooling necessary to remove the bolt. The removal of the last 3 head bolts required 1.7 Man Rem. A total of 4.2 Man Rem was required to remove the Thermal column head bolts.

The Thermal Column head bolt and graphite removal Man Rem total was 8.9 Man Rem; 0.7 Man Rem was required to remove the first 4 feet of graphite. The removal of a small amount of remaining graphite is estimated to require 1 Man Rem. The removal and segmenting of the Aluminum head and the Bismuth shield is estimated to require an additional 1 Man Rem. The removal of the stainless steel flange is estimated to take 1.1 Man Rem. The current total Man Rem estimate for the Thermal column removal is 11 Man Rem. At the estimated 12 Man Rem to complete the Thermal Column removal from inside the Thermal Column, the Man Rem increase is estimated at 7.621 Man Rem from

the original estimate. The original estimated savings resulting from removing the Thermal column from inside the Thermal Column was 8 days schedule reduction. The added cost of 7.621 Man Rem to remove the Thermal Column from inside the Thermal Column is an acceptable ALARA decision.

The Man Rem expended was distributed amongst 12 individuals. For the most part, the individuals involved in the removal of components from the Thermal Column were from the project management staff. The use of this exposure was prudent and would not adversely affect future work activities. The range of the exposure for the task was from 155 mrem to 1081 mrem with an average exposure of 677 mrem. Of the exposed group, only two individuals will be involved in future activities involving high exposure. We do not expect to approach the contractual exposure limit of 2 Rem for any person assigned to the project.

The original Omega West project Man Rem estimate, established in July of 2002, was 40.438, which included 11.59 Man Rem for Thermal Column removal. An October 2002 review of the project Man Rem estimate reduced the Man Rem goal to 28.113. Later in October 2002, a 20 Man Rem project goal was established. Based on the removal of the Thermal Column from inside the Thermal Column, the original Man Rem estimate of 40.438 appears to be more realistic, as it included an 11.59 Man Rem estimate for the removal of the Thermal Column components. An adjusted project goal of 30 Man Rem is now more realistic than the revised 20 Man Rem goal, yet still less than the originally expected total Man Rem of 40.438.

Estimated Man hours by task											
				hrs/task	70% eff	10% hi dose rate	hi doserate mr/hr	low dose hrs	low dose rate mr/hr	Man Rem
WBS Name	No. Of Techs	Hrs Per Tech	Total Tech Hours							
Install/Test HEPA	4	40	160	32	22.4	2	10			0.02
								11	1	0.011
Bldg 101 Equip Removal	4	80	320							0.05
Remove Tank Lid	4	64	256	120	84	8	300			2.4
Vertical Equip				120	84	8	300			2.4
Install Platform				18	11.2	1	300			0.3
								10	50	0.5
								10	50	0.5
								5	10	0.05
Remove TC Lead	4	36	144	72	50.4	5	150			0.75
								40	1	0.04
Remov BE Ass.				72	50.4	5	300			1.5
								25	10	0.25
								25	10	0.25
Remove BP Liners	4	48	192	192	134.4	13	300			3.9
								67	10	0.67
Remove TC Head	4	80	320	320	224	22	150			3.3
								60	10	0.6
Remove Fuel Racks	4	48	192	32	22.4	2	300			0.6
Grid Plate				160	112	11	300			3.3
								11	10	0.11
								56	10	0.56
Remove TC	4	144	576		403.2	8	300			2.4
						10	150			1.5
						100	20			2
								80	10	0.8
								200	1	0.2
Remove Spectrom.	4	120	480		336			336	0.1	0.033
Fume Hood										0
Remove Argonne Syst.	4	80	320		224	22		22	1	0.022
Emergency Spray								22	1	0.022
Misc. Systems								180	1	0.18
TA 2-89,90	4	32	128		89.6	89		89	0.1	0.009
Upper/Lower Bio Shield	4	520	2080		1456	70	100			7
								1000	1	1
								240	10	2.4
Install/Remove tent	8	200	1600		1120	112	2			0.224
								1008	0.1	0.1
Sub Floor	4	80	320		224			224	0.5	0.112
Final Survey 101	8	24	144		100		2			0.2
Demo 101	4	32	128		90		1			0.09
Abate 101 Roof	3	8	24		17		5			0.085
TOTAL										40.438

E[redacted]d Man Rem for Internals work completed 9.944 OWR Man R[redacted]ed on Schedule 10/1/02 Actual Man Rem for Internals wo[redacted]pleted 6.799

Item	days	people	hours	total hours	70%	HI dose hours	HI dose rate R/Hr	Mid dose hours	mid dose rate R/hr	low dose hrs	low dose rate	Total dose for task Mrta	RP support	misc support	total Man Rem	Task Status
Remove Rx Tk lid	3	4	10	120	84	8.4	0.15	33.6	0.01	42	0.001	1.638	0.4914	0.01638	2.146	done
install platform	3	4	10	120	84	8.4	0.15	33.6	0.04	42	0.005	2.814	0.8442	0.02814	3.686	done
Remove internal vert equip	5	4	10	200	140	0.7	0.05	56	0.005	83.3	0.001	0.3883	0.11949	0.03983	0.558	done
Remove Be reflector	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Beam port liners	6	3	10	180	126	12.6	0.1	50.4	0.005	63	0.001	1.575	0.4725	0.1575	2.205	done
Remove Lead shield	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Fuel racks	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Grid Plate & Base	5	4	10	200	140	7	0.03	56	0.005	77	0.001	0.567	0.1701	0.0567	0.794	working
Remove Thermal Column head	10	6	10	600	420	21	0.025	168	0.005	231	0.001	1.596	0.4788	0.1596	2.234	not started
Remove Debris	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Remove platform	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Plasma Arc Vessel Tank	1	4	10	40	28	1.4	0.01	11.2	0.0025	15.4	0.001	0.0574	0.01722	0.00574	0.080	not started
Remove material from storage ports	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	done
Remove Thermal column graphite	2	6	10	120	84	8.4	0.05	33.6	0.01	42	0.0005	0.777	0.2331	0.0777	1.088	working
Total dose Rx Internals				2060								10.6155	3.18465	0.66087	14.461	

Estimated Man Rem for remaining Internals work 4.518

Total estimated Man Rem for Internals work 14.461

ALARA REVIEW FOR THERMAL COLUMN REMOVAL

1. Describe Thermal Column

   A. Aluminum Head
   B. Bismuth Shield
   C. Stainless Steel Flange
   D. Flange Bolts
   E. Flange Lead

2. Thermal Column dose rates

3. Thermal Column contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium

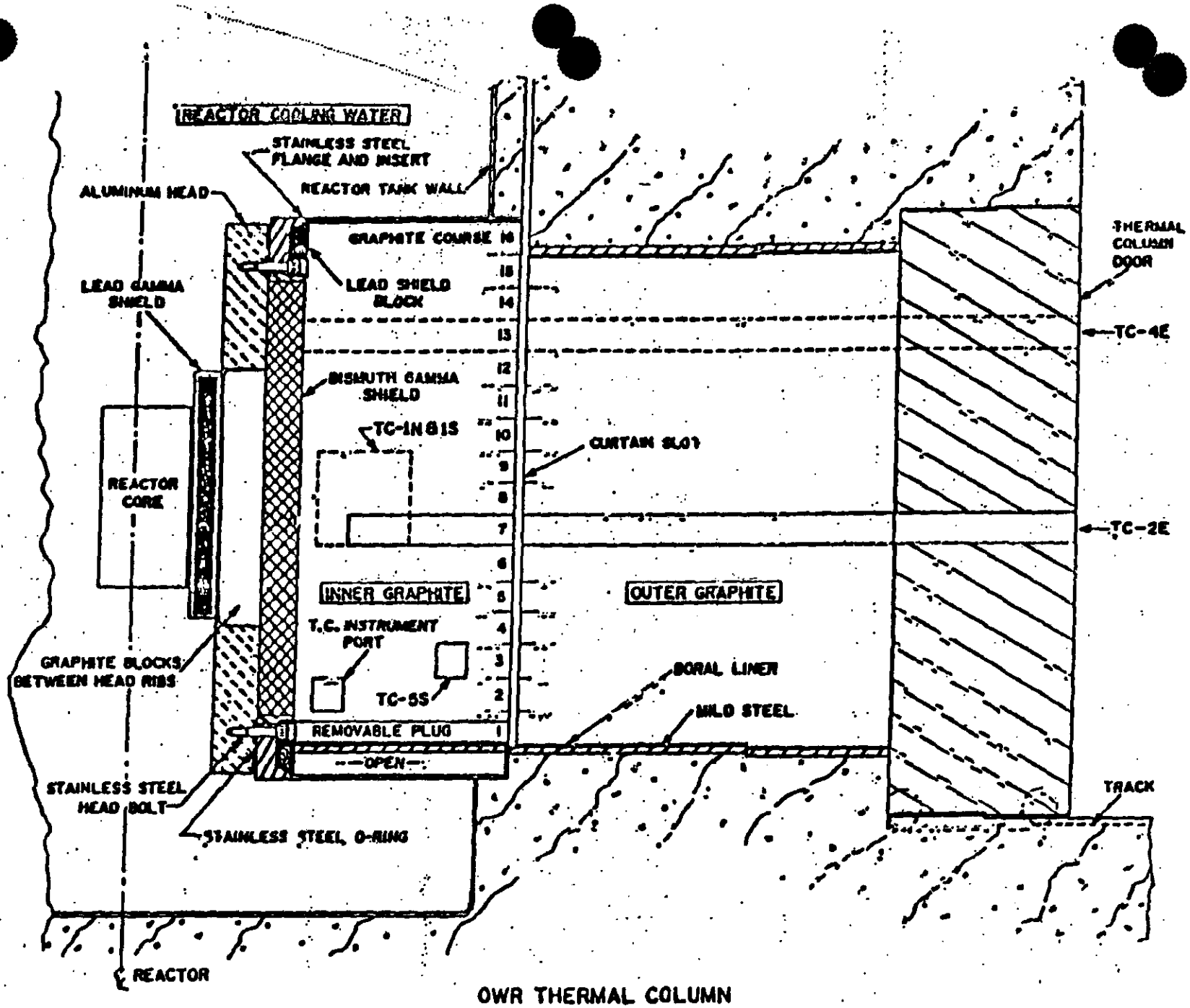
3. Airborne contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium levels

4. Ventilation and contamination Controls

5. Estimated Man Rem 4.379

A.	MOTA	3.650
B.	Management	0.182
C.	RCTs	0.365
D.	Waste Packaging	0.182



OWR THERMAL COLUMN

Los Alamos

Ω-West

Man Rem Estimate for Thermal Column

Task	Duration hours	people assigned	Man Hours	Effective hrs 70%	Low dose rate	Mid dose rate	High dose rate	LDR Man Rem	MDR Man Rem	HDR Man Rem	Man Rem/Task
Install sheilding	3	4	12	8.4	0.005	0.05	0.6	0.021	0.168	0.504	0.693
Remove remaining Graphite	4	2	8	5.6	0.005	0.05	0.6	0.014	0.112	0.336	0.462
Remove remaining Head bolts	4	2	8	5.6	0.05	0.05	0.6	0.14	0.112	0.336	0.588
Remove four segments of lead	1	2	2	1.4	0.05	0.05	0.6	0.035	0.028	0.084	0.147
Rig and remove Al head	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Segment Al head	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Rig and remove Bl shield	1	3	3	2.1	0.01	0.05	0.9	0.0105	0.042	0.189	0.242
Segment Bl sheild	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Remove SS flange	2	4	8	5.6	0.01	0.05	0.6	0.028	0.112	0.336	0.476
Segment SS flange	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Insrall ventilation control items	2	2	4	2.8	0.005	0.02	0.04	0.007	0.0224	0.0112	0.041
Remove sheilding	2	2	4	2.8	0.02	0.04	0.08	0.028	0.0448	0.0224	0.095
Secure Thermal Col area after removal	2	2	4	2.8	0.005	0.01	0.02	0.007	0.0112	0.0056	0.024
Mgr support											0.182
RCT support											0.365
Waste Packaging											0.182
Total											4.379

In itial Man Rem estimate 2.778

NAME Ext	Firm	Z#	TLD Data	20-Jan
Toutaint, Robert H. 4.5/5.7	MOTA	191947	JAN 13 TLD	853
Ortiz, Daniel	SW	192477	NOV TLD	875.7
Granus, Mark	WD3	190158	NOV TLD	888
Fennema, James	MOTA	191503	NOV TLD	899.4
Kerr, Scott	MOTA	190389	NOV TLD	974.3
Ball, David	MOTA	193024	NOV TLD	1007.7
Laurent, S	MOTA	192795	NOV TLD	1044.2
Przybyski, Marty	WD3	190412	NOV TLD	1048.9
Mountain, Mark	MOTA	193023	NOV TLD	1054.2
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	1065.9
Reust, Jack L.	Duratek	191044	NOV TLD	1068.3
Schnell, Gerald	SEC	191326	NOV TLD	1090.8
Coleman, John	WD3	190383	NOV TLD	1101.2

01/21/03 10:39pm P. 010
505 667 3360
MOTA CORP

TA -2 RADIOLOGICAL SURVEY FORM

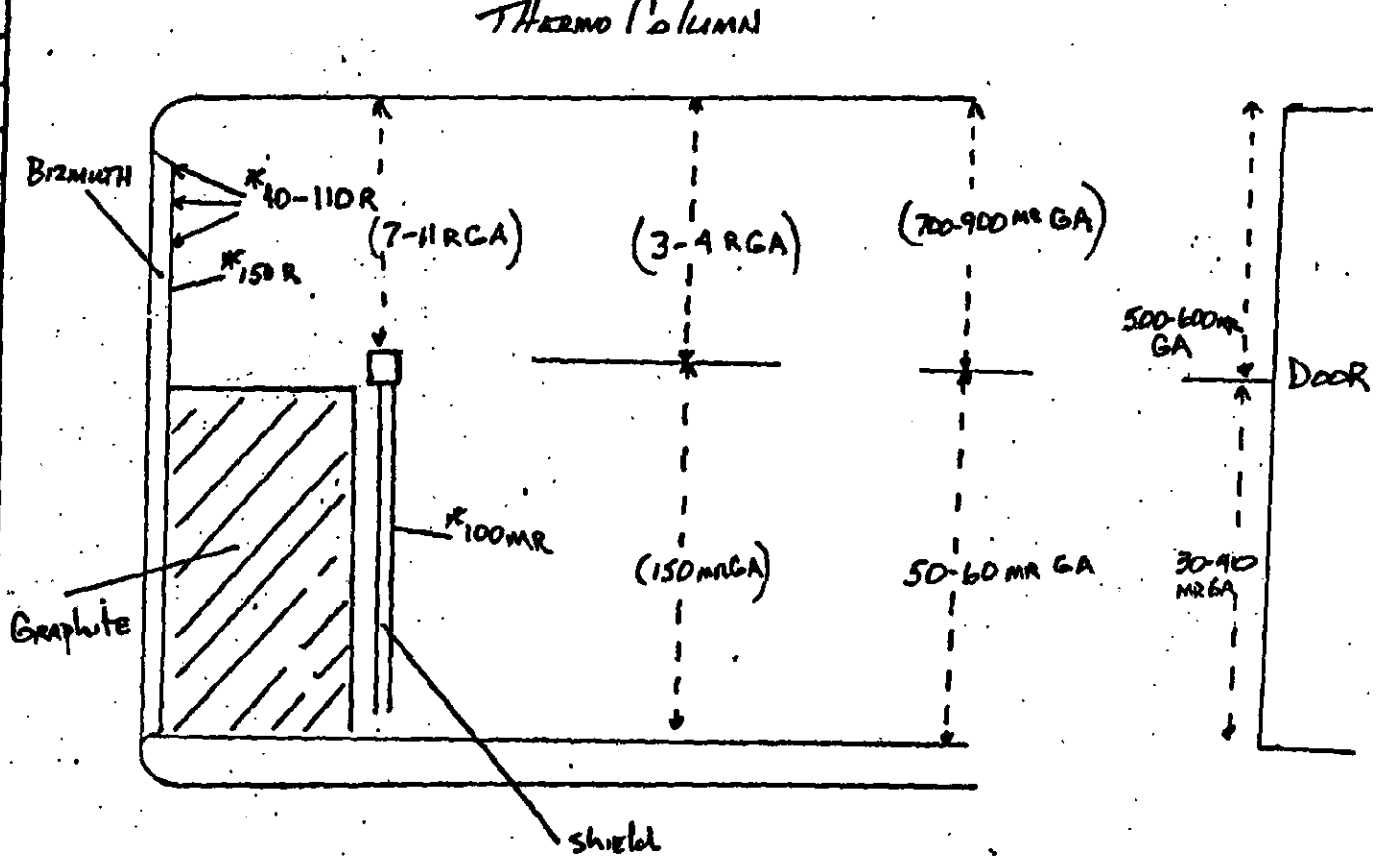
Survey #	Location
03-OWR-062	OWR
Date / Time	**RCT / Z #**
1/16/02 1430	SUMMERS 191329
RWP #	**RCT Signature**
HSR-1-02-029-TA2	

Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Slope CF	BKG
βγ Dose RD20	531	2/7/03	N/A	N/A	.2 mR/hr
βγ			N/A		
α					

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
	N/A		



Comments NONE

Reviewed by

MOTA CORP 505 667 3660 01/21/03 10:53pm P. 011

NAME Ext	Firm	Z#	TLD Data	
Coleman, John	WD3	190383	NOV TLD	1080.8
Granus, Mark	WD3	190158	NOV TLD	813.9
Przybyski, Marty	WD3	190412	NOV TLD	1005.5
Williams, Dana	WD3	178110	NOV TLD	759.3
Reust, Jack L.	Duratek	191044	NOV TLD	841
Romero, Adrian	Duratek	120634	NOV TLD	490.8
Ball, David	MOTA	193024	NOV TLD	155
Fennema, James	MOTA	191503	NOV TLD	874.1
Mountain, Mark	MOTA	193023	NOV TLD	454.7
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	188.1
Schnell, Gerald	SEC	191326	NOV TLD	610.3
Ortiz, Daniel	SW	192477	NOV TLD	831

01/17/03 10:59pm P. 012
505 667 3960
MOTA CORP

TA -2 RADIOLOGICAL SURVEY FORM

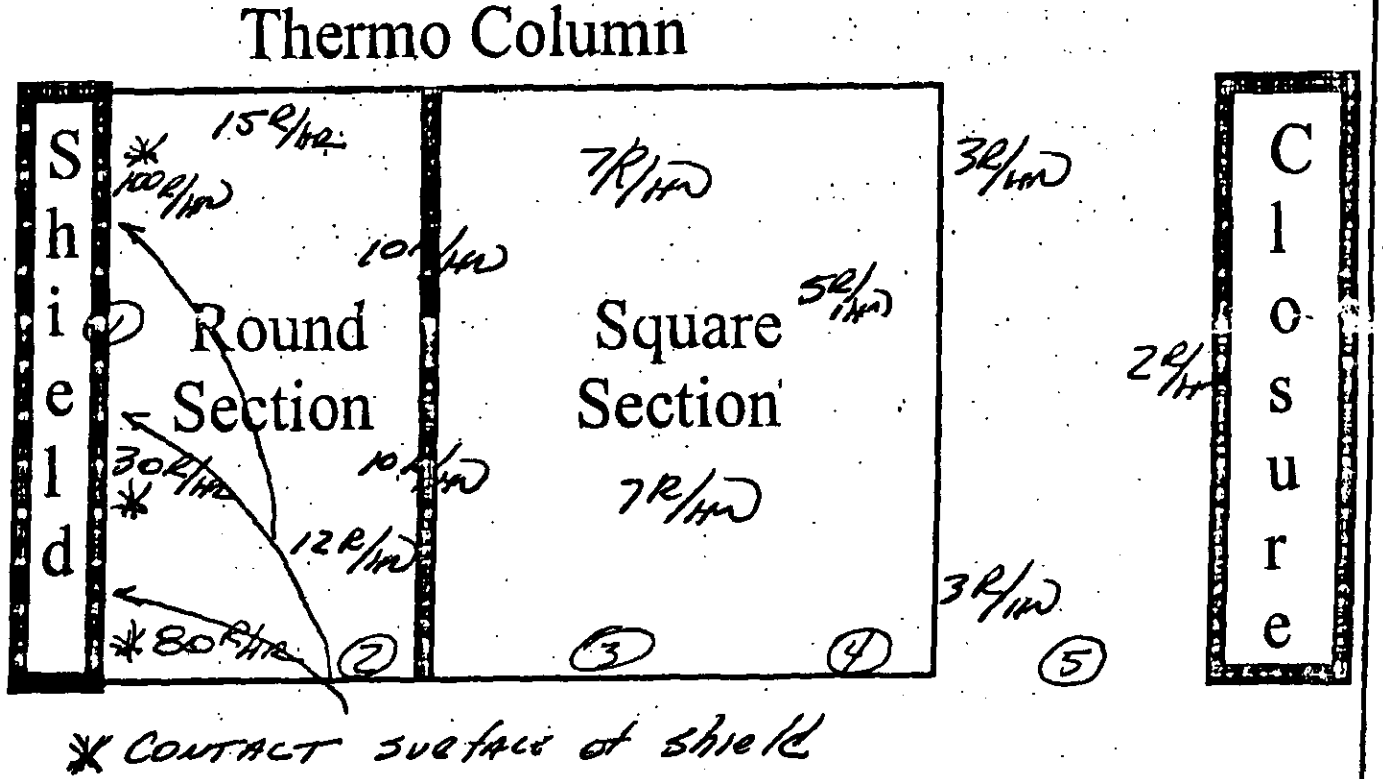
Survey #	Location
03-OWR-086	Inside ThermoColumn
Date / Time	**RCT / Z #**
1-18-03 / 1430	191326
RWP #	**RCT Signature**
HSR-1-02-0024	

Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose 6112B	1613	10/30/03	N/A	N/A	N/A
βγ ESP-1	7428	6/4/03	50	15.5 cm²	400 dpm
α 139	3768	3/21/03	50	47.5 cm²	0 cpm
N/A	N/A	N/A	N/A	N/A	N/A

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
1	surface Shield	30K	<20
2		30K	
3	SQR	10K	
4	MAP	3K	6
5		2K	<20



Reviewed by RLS 1/21/03

Comments

01/21/03 10:35pm P. 019
505 667 3360
MOTA CORP

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Subject : Formal ALARA Review - Removal/Transfer Thermal Column Activity
Date : Thu, 30 Jan 2003 08:56:54 -0700

Keith and Marty,

An ALARA Review Meeting was held on Tuesday, January 28, 2003, to discuss the radiological activities being performed on the Omega West D&D Project - Remove and Transfer of the Thermal Column Head. A review of the procedure was performed prior to the meeting by Jim Bland, HSR-12 Radiological Engineering Team, and review the radiological activities, expected dose rates and estimated person-rem by the project, and mitigating features to reduce radiation levels to the workers. During the meeting, items were discussed for clarification or more information to perform a proper ALARA Review.

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Requirements

1. HSR-1 Procedure ESH-1-06-01.2, External Exposure Control Standards, dated July 1, 1999, the ALARA Review Trigger Levels might be exceeded as projected by the project. It is presently estimated the individual dose and collective dose for this specific task could exceed the 500 mrem whole body EDE and 1 person-rem, respectively. This triggers a requirement for a formal radiological review in accordance with LIR402-700-01.

2. LIR402-700-01, Chapter 3, ALARA Program states the following programs elements must be met for the a high-potential-dose (>5 person-rem collective & >0.5 rem individual) expected for these tasks. The following program elements must be met (this is not a normal LANL facility operation but a D&D project so slight modification are made):
1. Management Commitment - LANL Project Team and MOTA's management
2. Training -
3. Procedures
4. ALARA goals
5. Design reviews
6. ALARA reviews
7. Cost-benefit analysis - besides dollar savings for a person-rem, the evaluation of installing an engineering control feature needs to evaluated for dose savings.
8. Performance assessment - (modified since D&D activity) LANL Project Team and LANL Radiation Protection SMEs assist in this assessment and is an ongoing activity.
9. ALARA Committees and coordinators - since this is a D&D operation - D&D LANL Project Team, LANLs radiation Protection SMEs, and MOTA's Radiation Safety Staff perform this activity
10. Documentation

ALARA Review Process requires the five-step process for safe work practices to include the following three parts

1. Pre-job planning and dose estimation. Detail the work and dose estimations. Determine whether a formal ALARA review is required.

2. Implementing ALARA control measures (use ALARA Review Checklist for required ALATA techniques) and dose-tracking. If a review is required, incorporate ALARA measures into the work. Track individual and collective doses and compare to the estimated dose to determine if the ALARA measures are effective.

3. Post-job review. If the actual doses fall outside the range of +/-25% of pre-job estimates, of if significant or successes were learned, then, perform and document a formal post-job review on improvements to optimize doses, for similar future work.

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ALARA Review Meeting (Tuesday,January 28, 2003 @ 10:00 a.m.)
The following items were discussed for clarification from items outlines in the work procedure at the meeting:
1. Procedure has been updated due to better information on the activities and updated procedure was provided for the ALARA Review.

2. Does the temporary ventilation system used in the work area have a HEPA filter?
Project Response: yes

3. Is there air sampling being performed in the work area to assist on evaluating the airborne concentration of radioactive materials?
Project Response: yes

4. Have radiation level hold points been established and a plan what needs to be done if these hold points are reached?
Project Response:
Yes, there have established task and individual dose allotments and area radiation field hold points.

5. What determines whether a shield curtain is installed or not and what is the attenuation factor of the shield curtain?
Project Response:
The radiation levels of the work area is evaluated and the dose received by installing the curtain vs performing the work without the curtain is assessed and a decision is made.
Each layer of the shield curtain has about a 30% reduction.

6. Discussed one of the steps of the procedure which referred to segmenting the bismuth shield using an abrasive wheel cutter on the stainless steel portion.
Project Response:
This has been changed in the updated procedure to be a plasma arc cutter.

7. Is the project having appropriate training for the workers to perform tasks efficiently and safely?
Project Response:
The project have mock-ups and dry runs to ensure task are performed efficiently and safely.
In fact, this was being conducting for one of the tasks as we were having the meeting.

8. Discussion of the activity needing to fill out an ALARA Check List, provided in LIR 402-700-01.
Project Response:
The project had filled out the ALARA Checklist and provided it for review.

The only change I would recommend is a yes not no for the item "Develop new engineering controls" because the project has used numerous mitigating features and continually evaluates the situation to incorporate other features when needed to reduce the radiation field to their worker, i.e., shielding in the reactor deck, shield curtains, ventilation, and containment plus others.

9. A RWP has been developed for this work with the oversight of Marty Peifer, HSR-1 Team Leader for this Project.

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ALARA Review Conclusion

The project has done an excellent job in planning the work to be performed and estimating the potential radiation doses. The project has implement ALARA radiation dose control measures and plan on having an ongoing evaluation of the radiological situation with the constant tracking of the work area radiation fields and doses to the workers. The project has established hold points to re-evaluate the radiological situation, if needed. A RWP and ALARA Review Checklist were developed for these activities. The project conducts training and mock-up/dry-runs. MOTA have very competent, professional and experienced individuals performing this work with appropriate supervision of activities. The work performed by MOTA has the oversight of Marty Peifer, HSR-1 Team Leader, and Keith Randell, LANL Project Leader with Stan Bodenstein as the Omega West SME.

The project must keep Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader, informed of any significant changes effecting radiation condition or any changes not discussed effecting the radiation dose to the workers or their safety. What is considered significant will be determined by Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader.

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A formal memorandum will be sent for this ALARA Review incorporating items outlined in this email.

Please contact me, if there are any significant changes to activities discussed for this ALARA review. Again, what is considered significant will be determined by Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader.

Jim Bland
HSR-12 Radiological Engineering Team

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ALARA EVALUATION OF THE THERMAL COLUMN REMOVAL

The initial concept for removing the Thermal Column Head consisted of using a wire saw to cut off the Aluminum Head and the Bismuth head with the Stainless Steel flange. Using the wire saw would require remote operations of the wire saw equipment at about 25 feet into the reactor vessel. The proposed wire saw equipment had been setup in a mockup to demonstrate the operation of the equipment. The wire saw had been demonstrated successfully but still had operational risks. The operational risk associated with the wire saw was acceptable based on the very high dose rates expected in the area of the Bismuth shield.

After the Thermal Neutron ports were emptied, dose rates were taken inside the ports near the Bismuth shield and the Stainless Steel flange. The dose rate survey indicated 50 R/Hr dose rates in the area of the Bismuth shield and Stainless Steel flange. This dose rate appeared to be an acceptable working condition in which to remove the Thermal Column from inside the Thermal Column using remote tooling. Drawings of the Thermal Column components were reviewed to determine the methods required to remove the Thermal Column head from inside the Thermal Column. The drawing review demonstrated that the Thermal Column head could be removed from within the Thermal Column.

A Man Rem estimate was made based on time estimates made to remove the Thermal Column head from within the Thermal Column and the observed dose rates measured inside the Thermal Column. The estimated Man Rem, to remove the Thermal Column from inside the Thermal Column, was estimated at 4.6 Man Rem with 4 feet of the graphite removed. The 4 feet of graphite removal required 0.3 Man Rem. The initial Man Rem estimate to use the wire saw to remove the Thermal Column head was 3.3 Man Rem which included the removal of the graphite. The wire saw method would take 10 days with an additional 2 days to remove the graphite from the Thermal Column. Removal of the Thermal Column and Thermal Column graphite from inside the Thermal Column was estimated to take four days saving 8 days of schedule time. The savings of 8 days of schedule time justified the increase of 1.6 Man Rem to remove the Thermal Column from inside the Thermal column.

Upon entering the Thermal Column it became apparent that the removal of the Thermal Column graphite was more difficult than expected. Dose rates at 30 inches from the Bismuth Shield were found to be higher than expected. It was also found that the ability to remove all of the Thermal Column head bolts from inside the Thermal Column at 30 inches from the Bismuth shield was not possible because of the alignment of the graphite. Based on the conditions found upon starting the Thermal Column removal work from inside the Thermal Column, work was stopped to determine more efficient methods for the required tasks and to determine methods to provide better shielding for work conducted inside the Thermal Column. Numerous shielding methods were considered but all hindered the removal of the graphite from the Thermal Column and required more Man Rem to install than the method saved. The installation of any shielding in the Thermal Column would have required an extensive engineering evaluation. The installation of any shielding to conform to the geometry of the Thermal Column would have been very Man Rem intensive.

CONSIDERATIONS GIVEN BEFORE REMOVING THE GRAPHITE:

- Steel Plate shielding
- Lead Blanket shielding
- Breaking the graphite into small pieces
- Pulling the graphite out in one piece
- Providing water shielding
- Only removing the outer graphite blocks
- Using the wire saw
- High Pressure water

As a result of the inability to efficiently shield the work area inside the Thermal Column it was determined that the only way to remove the graphite from the Thermal Column was the direct approach without shielding. As a result of taking the direct approach specific hold points were established, briefings were held to define the work that was to be done and a demonstration of how to remove the graphite was provided to people entering the work area. A TV camera was installed to observe the work in the area and to provide information to workers preparing to enter the area. It was estimated that 5 Man Rem would be required to remove the graphite. Stop points of 2.5 Man Rem without progress was established along with other stop points. It

took 2 hours and 4.1 Man Rem to remove the graphite. At this point it was determined that the Thermal Column head bolts were exposed and could be removed. An estimate of 30 minutes and 2.5 Man Rem was made to remove the head bolts without shielding. An evaluation of possible shielding configurations to support the removal of the head bolts was made but none were efficient enough to save Man Rem during the removal of the head bolts. It was determined that the most Man Rem efficient and cost effective method to removed the head bolts was the direct approach. The same hold points were used that were established for the graphite removal.

The removal of all but 3 head bolts took 30 minutes and 2.5 Man Rem. Three of the head bolts were found to be blocked with graphite. Two of the bolts were cleared of graphite and removed. A third bolt required extensive graphite removal to remove the bolt. The removal of the last 3 head bolts required 1.7 Man Rem. A total of 4.2 Man Rem was required to remove the Thermal column head bolts.

The total Man Rem cost to remove the graphite and the Thermal Column head bolts was 8.9 Man Rem, 0.7 Man Rem was required to remove the first 4 feet of graphite. The removal of a small amount of remaining graphite is estimated to require 1 Man Rem. The removal and segmenting of the Aluminum head and the Bismuth shield is estimated to require an additional 1 Man Rem. The removal of the Stainless Steel flange is estimated to take 1.1 Man Rem. The total Man Rem currently estimated to remove the Thermal column is 11 Man Rem. At the estimated 12 Man Rem to complete the Thermal Column removal from inside the Thermal Column the Man Rem increase is estimated at 7.621 Man Rem from the original estimate. The original estimated savings resulting from removing the Thermal column from inside the Thermal Column was schedule reduction of 8 days. The added cost of 7.621 Man Rem to remove the Thermal Column from inside the Thermal Column is an acceptable ALARA decision.

The Man Rem expended was distributed between 12 individuals. For the most part, the individuals involved in the removal of components from the Thermal Column were from the project management staff. The use of this exposure was prudent and would not adversely affect future work activities. The range of the exposure for the task was from 155 mr to 1081 mr with an average exposure of 677 mr. Of the exposed group, only two individuals will be

involved in future activities involving high exposure. We do not expect to approach the contractual exposure limit of 2 Rem for any person assigned to the project.

The original Man Rem estimate established in July of 2002 for the Omega West project had indicated 40.438 Man Rem for the project with 11.59 Man Rem estimated to remove all components associated with the Thermal Column. A review of the Man Rem estimate for the project was conducted in October of 2002 which reduced the Man Rem estimated for the project to 28.113 Man Rem. In October of 2002 a Man Rem goal for the project was established of 20 Man Rem. Based on the removal of the Thermal Column from inside the Thermal Column the original Man Rem estimate of 40.438 appears to be more realistic with an estimate of 11.59 Man Rem for the removal of the Thermal Column components. An adjusted Man Rem goal for the project of 30 Man Rem would seem to be more in line with the expected total Man Rem of 40.438.

Response to ALARA Comments of 2/12/03

The ALARA review is at 0900 2/13/03

1. Water from dust suppression operations will be absorbed with the dust. It will be a fine mist very low volume.

2. The Clementine foundation and underground piping is at 11 to 14 feet. We will remove all piping and concrete down to this level. A general contractual depth is at 2 feet.

3. HEPA filter DPs along with prefilter DP and dose rates are checked daily or more often as required.

4. Respirators will be used until airborne levels can be determined and found to be acceptable. We may continue some form of respiratory protection because of dust conditions in the tent.

5. The equipment exhaust will go through a scrubber plus the air flow through the tent will be 15,000 to 17,000 CFM. The exhaust flow from the equipment will not exceed 1200 CFM.

6. The reactor ventilation will be operating until the outlet recirc piping is removed. All three large HEPA units will operate during the Bioshield demo.

7. When we remove debris from the Rx vessel we will also inspect the Rx sump. Additional material removal will be done from the sump when we reach the floor of the reactor vessel. The sump will be coated when the vessel is coated.

RP INSTRUMENTS FOR VESSEL INTERNALS REMOVAL

VESSEL

1. In vessel camera with remote pan, tilt, zoom and light controls will be used. This camera has videotape, and CD-ROM recording capability. This system has a multiple monitor capability. This system is available.

2. A second in vessel camera should be considered as a backup and a second view position.

   Recommended equipment - Second VIT camera and controls.

3. A general area camera for platform observations is available with video tape recording and remote-monitoring capability is available.

4. A continuous air monitor of the AMS-3 type should be used at the elevation of the working platform to indicate trends in airborne activity. The alarm function of this instrument would not be operable.

   Recommended equipment - AMS-3 and air pump

5. An air sample head should be mounted on the work platform as a breathing zone air sampler.

   Recommended equipment - air pump and 2 sample heads mounted to work platform.

6. Local area dose rate indicator. There should be 3 of these indicators. One indicating the open vessel dose rate, one indicating the shielded platform dose rate and one indicating the low dose area dose rate.

   Recommended equipment - ROV Technologies and Eberline can provide this equipment.

7. Airflow indicator to provide indication of airflow into vessel. Low or no airflow would be a stop work indication.

Any simple air flow indicator.

BEAM PORTS

1. A ventilation control box constructed of clear plastic and a support framework, open on both ends, with hand holes and an attachment for a HEAP should be constructed to cut beam tubes as they are removed from the vessel.

Recommended equipment - 500 and 5000 CFM HEPAs are available. Framework can be made on site. A 3'x3'x4' box would work attached to one port of a 5000 CFM HEPA. The second port of the HEPA could be attached to the open end of the beam tube.

2. HEPA vac attached to beam port vent pipe. HEPA vac is available on site.

Assess Material Condition of Reactor Internals

OBJECTIVE

The objective of this task is to collect video information concerning the present status and construction of the Reactor internals. In addition dose rate profiles will be established for Reactor internal components and specific locations in the Reactor vessel. Samples will also be taken to determine the Beryllium concentration and isotopic mix on the surface of the Reactor internals. The source of the very high dose rates in the area of the west side Reactor internal fuel racks will be determined.

RADIOLOGICAL CONTROLS

The Reactor internal components that make up the Reactor Core and components that are in the immediate location of the Reactor Core are activated and present dose rates up to 200 R/Hr. An unidentified component or item in the area of the west side fuel racks is presenting dose rates in the range of 1300 R/Hr. The internal surfaces of the Reactor are contaminated with radioactive material consisting mainly of Co 60.

An RWP will be established to present the radiological conditions and define the precautions to be taken to minimize the exposure to radiation and radioactive material. The RWP will also define the methods required to prevent the release and spread of radioactive material from the Reactor.

Radiological surveys will be taken when lead is removed from the Reactor lid, the Reactor inspection ports are open and when any items are removed from the Reactor.

INDUSTRIAL SAFETY CONTROLS

A Beryllium shield, consisting of 21 blocks of bare Beryllium, is install as part of the Reactor core components. To prevent the release of Beryllium from the Reactor ventilation controls will be established. Fall protection measures will be taken when the Reactor lid inspection ports are open allowing inspection tooling to enter the Reactor.

SETUP

The temporary shielding currently installed on the reactor lid will be removed to the extent one or both reactor inspection ports can be opened. As much temporary shielding will remain on the reactor lid as possible.

Fall protection attachment points will be evaluated and defined prior to the start of the task.

All equipment placed into the reactor vessel will be protected with removable material to prevent excessive contamination with radioactive material or Beryllium. Methods will be established to decontaminate equipment as it is removed from the reactor.

Contamination control areas will be established to prevent the spread of contamination. Contamination control areas will consist of stepoff pads, waste containers, protective clothing contains and floor covering.

Two RO-7 instruments will be available with mid range and high range probes. Shielding devices may be used to function as directional shielding devices for the RO-7 probes. Poles will be available to position probe when it is in reactor.

A required tool list will be established.

INSPECTION OF THE REACTOR INTERNALS

A remotely operated TV camera will be lowered into the Reactor through an open Reactor lid inspection port. The TV camera will have the ability to pan, tilt and zoom with an 18:1 lens. The TV camera will be place at an elevation that will allow the Reactor internal fuel racks to be

inspected for radioactive components or debris causing elevated dose rates in this area of the Reactor.

The TV camera will be lowered further into the Reactor to inspect in detail the components and areas of the Reactor that are in view of the TV camera.

The TV system will be attached to recording devices to record the inspection for future evaluations.

Drawings and construction pictures and other information will be available to assist in identifying components being observed.

Dose rate instruments will be available to be lowered into the Reactor to determine dose rates in areas of concern in the Reactor.

The Reactor lid has a second inspection port that will be opened for additional inspections as were conducted during the inspection through the first inspection port.

The Beryllium shield will be inspected in detail to determine the condition of the Beryllium blocks. Samples will be taken from the surface of Reactor internal components to determine the extent of Beryllium material released from the Beryllium shield. The inspection of the Beryllium shield will be used to determine the methods to be used to remove the Beryllium shield.
Area of concern to be inspected in the Reactor are,

1. All Beam Ports.
2. Thermal column.
3. Fuel Storage pit.
4. Core support plenum.
5. Core support structure.
6. Lead shield.

REMOVAL OF GRAPHITE AND LEAD FROM THERMAL COLUMN

The removal of the graphite and lead from the thermal column is expected to generate the potential for microscopic particles of graphite that may have particles of radioactive material attached to them. We have already experienced very low levels of clothing contamination caused by what appears to be very small particles of graphite that exhibit electrostatic charge characteristics. As a result of the electrostatic charge the graphite particles become attached to clothing very easily. The contamination levels that have been observed, resulting from the microscopic graphite particles, have been in the range of 2k to 4K. The radioactive material attached to the graphite particles appears to be cobalt 60.

Double PCs appear to be effective in controlling the graphite particles. Single PC use in areas that have the potential for graphite particles has at times resulted in particles penetrating the PC material and becoming attached to the clothing worn under the PCs. Because of the cold weather significant amounts of clothing are worn under the PCs. People working outside of the areas having the potential for graphite particle contamination have been using lab coats to control the spread of graphite partiles.

When we enter the thermal column area a ventilated containment area will be established to control the release of graphite particles and other contaminants that may be present in the thermal column. Double PCs will be used to control the spread of graphite particles. Respirators will be used until the airborne radioactive material concentrations can be determined. The thermal column also has the potential for tritium to be attached to graphite particles. Tritium smears will also be taken in this work area during the removal of graphite and lead.

The observed contamination levels of 2k to 4k do not present any exposure problem. If contamination levels are experienced in this range the particles will be collected and disposed of as rad waste without further concern.

REACTOR WORK PLATFORM CONSIDERATIONS

The disassembly of the reactor internals is proposed to be conducted from a work platform placed over the top of the reactor with the original reactor lid removed. In this configuration the initial dose rate at the elevation of the reactor upper flange is estimated to be 1 R/Hr based on surveys taken during a LANL dose rate and video inspection of the reactor about 6 months ago. Flooding the reactor is not an option because of the potential for flooding at beam port o-ring seals and that beam ports are part of the internals to be removed.

Based on an estimate of 30 working days to remove the reactor internals 960 man hours could be expended for work involving work assignments on top of the reactor. Actual man hours spent on top of the reactor assuming a working efficency of 60% could be 576 actual work hours. It is estimated that 10% of the 576 actual work hours or 57 hours may be spent looking over the handrail of the work platform. An effective dose rate of 300 mr/hr may be expected based on dose rate reductions as reactor internal components are removed. Based on the assumptions that have been presented, and I might add that I think the assumptions are low, the potential Man Rem for removing the reactor internals could be 17 Rem to 34 Rem.

Because there is a potential to accumulate a significant amount of Man Rem removing the reactor internals special considerations should be given to the design of the proposed reactor work platform that will shield workers on the platform and reduce the Man Rem.

DESIGN ITEMS TO CONSIDER FOR REACTOR WORK PLATFORM

Platform shielding

The effective dose rate inside the shielding of the platform should be 5 to 10 mr/hr. Shielding for as much of the reactor opening that is not being used should be provided.

Time Spent looking over the side of the platform

The use of multiple, remotely operated, TV cameras should be considered to minimize the time looking over the side of the platform shielding to position equipment in the reactor

core. At least one TV monitor should be placed on the work platform along with the camera controls.

TA61 WORK PLAN CONSIDERATIONS

The TA61 Stack is internally contaminated. The Stack consists of an inner and outer pipe. It appears that the outer pipe is clean and can be removed from the inner pipe for free release. Cutting of the inner pipe will require radiological controls.

There are two ½" holes near the base of the stack that could be used for injecting foam into the bottom of the Stack to seal the bottom of the Stack preventing the release of radioactive material from the bottom of the Stack.

Once the Stack has been lowered to the ground a plug or bag can be placed over the top of the Stack as a containment device.

To cut the Stack into sections 6 feet long the outer pipe could be cut without radiological controls. All cutting should start at the top of the Stack for both the outer and inner pipe.

To cut the inner pipe, a HEPA could be connected to one end of the Stack while cutting. A small containment can be placed around the pipe to contain the cutting tools and pipe. This containment would also be connected to a HEPA. A fast drying liquid can be sprayed into the pipe to fix the contamination prior to each cut. Once each section is cut plastic pipe caps or tape can be used to seal the pipe.

Dose rates are not a consideration for cutting the pipe only the release of radioactive material.

Equipment requirements:

1. Generator with 220V capabilities plus 110V.
2. Lights in the CAM house.
3. Two B25 boxes
4. Blocks to support Stack on the ground.
5. HEPAs 1-5000 CFM and 1-500 CFM
6. Containment device.
7. Porta-Pot
8. Rad Inst, air sampler
9. Water Tank
10. Forklift rubber tires

Soil samples have been taken around the stack and the French Drain. Two samples have been found to contain Cs137. The first sample location was at the north side of the French Drain. Cs137 was found at samples taken at 6",12" and 18". The second sample was taken 20 feet north of the first sample and also contained Cs137 at 6",12" and 18". Samples taken north of the stack did not have any Cs137 contamination.

A resuspention test was conducted to determine if the Cs 137 in the soil could become airborne. An air sample taken during the resuspention test indicated no airborne activity was generated.

Shoe contamination has not been detected while working at TA61 in the area in which Cs137 has been detected.

Brush will need to be removed and a stack laydown area will need to be established at TA61. This will require soil movement. Some of the soil may be contaminated.

TA61 STACK LAYDOWN

The proposed stack laydown area is to the northeast of the stack. The brush and soil in this area could be relocated to the south side of TA61 to provide a stack laydown area. Additional brush and soil relocation will need to be done to provide a working location for one or two cranes.

Stack drawings will need to be evaluated to determine how long the inner stack pipe is and how the inner pipe is attached to the stack blower pipe. Mota will evaluate the stack drawings to determine how to disconnect the stack from the stack base. Mota will disconnect the stack from the stack base with the assistance of Coronado.

Coronado will determine the number of cranes required to lower the stack and will determine the rigging methods required to lower the stack. Coronado will provide supporting devices to elevate the stack high enough off the ground to allow the stack to be cut up for disposal.

Once the stack is on the ground and supported, Rad Protection will survey both ends of the stack inner and outer piping to determine if the outer pipe can be removed as a clean item. During periods of time no work is being

done on the stack both ends of the stack will be sealed to prevent the spread of contamination.

If the area between the inner and outer pipe is found to be clean the outer stack pipe can be removed without radiological controls.

When work is being done on the stack a HEPA will be connected to one end of the stack to allow airflow through the stack including the space between the inner and outer pipe. When a contaminated section of the stack is being cut an enclosure device will be used with a HEPA to prevent the spread of contamination. Contaminated sections of pipe will be cut into lengths that will fit into a B25 box.

TA61 STRUCTURES

The blower house can be abated and gutted at anytime. Bleach has been sprayed in the structure. A detailed survey has indicated the structure is clean. The underground blower discharge pipe will be contaminated at the connection to the offgas pipe from the OWR. After the final survey of the structure is complete the structure can be taken down.

The CAM house has been sprayed with bleach and a detailed survey of the structure has been done indicating the structure is clean. The structure will be used as a working area until the stack has been packaged. Abatement and gutting can be done at anytime. After the final survey is complete the structure can be taken down.

STACK BASE AND PIPING

The stack base piping will be contaminated. To remove the concrete base from the blower discharge pipe the pipe must be sealed. The blower discharge pipe will be contaminated back to the connection to the offgas pipe from the OWR. The remaining blower discharge pipe should be clean. Radiological controls will be required to remove the contaminated section of blower discharge piping.

The offgas pipe from the OWR will be contaminated. Radiological controls will be required to remove this pipe. As sections of the offgas pipe are removed the ends of the

pipe must be sealed. If the outside of the pipe is free of contamination the pipe trench will not require soil removal.

TA61 FENCE REMOVAL

The fence around TA61 can be removed at anytime as long as a temporary fence can be installed around areas requiring radiological controls or chemical controls. Components of the fence will require radiological surveys for free release.

SOIL REMOVAL

Additional soil samples will be required to determine the extent of soil contamination. Soil sampling should be done prior to brush and soil relocation.

INSPECTION OF THE OMEGA WEST REACTOR WEST BEAM PORT

The Omega West Reactor West Beam Port consists of a 6" diameter 5' long aluminum dry tube aligned with the west side of the reactor core. The outer portion of the beam tube consists of a 12" blank flange, a 12" diameter 18" thick concrete shield plug and an inner 10" diameter 18" thick concrete plug. Attached to the outer shield plug area is a 4" vertical pipe 9' long extending to the mezzanine level of the reactor. The 6" portion of the beam port has a graphite cylinder in it of unknown length. There are also historic indications that a test rig may still be present in the beam tube.

The objective of the inspection of the west beam port is to determine the amount and radiological condition of the material that may be present in the beam tube, the dose rates present at various locations in the beam tube and the contamination levels that are present in the beam tube. This information will be used to establish plans to remove all of the beam tubes from the reactor.

The beam port inspection will consist of the following steps:

1. Connect a HEPA vacuum cleaner to the 4" vertical vent pipe attached to the outer 12" shield plug housing of the beam port. This vacuum cleaner will provide an air flow into the face of the beam port of 70 to 75 CFM. The surface area of the beam port is 0.75 square feet. The face velocity of the beam port with the outer 12" shield plug removed will be 90 to 100 FPM. This will provide for loose surface contamination control. Additional HEPAs in the range of 500 CFM to 5,000 CFM will be available in the event additional contamination control is required.

2. Standard radiological controls will be established in the work area consisting of roping off and posting the area, placing contamination control material on the floor and bioshield area of the work area.

3. Electronic alarming dosimeters and extremity dosimetry will be used by personnel conducting the inspection.

4. Until contamination levels and airborne activity levels are established respiratory protection equipment will be used.

5. Long handled tools and transport devices will be used to remove and transport the beam port shield plugs.

6. Once the inner and outer shield plugs are removed a temporary shield plug will be inserted into the 6" beam tube to lower the radiation level in the working area of the beam port face.

7. A remotely operated TV camera and recording device will be used to conduct the inspection of the open beam port.

8. Extendable high range dose rate instruments will be used to determine dose rates at various locations in the beam tube.

9. In the event elevated loose surface contamination levels are encountered the contamination will be fixed to the surface of the beam tube or beam tube shield plugs.

10. Personnel traffic around the work area will be limited when the beam port shield plugs are removed.

11. Only the outer shield plug and blank flange will be replaced at the end of the inspection assuming a future entry into beam port to remove liner.

The expected radiological dose rate at the face of the beam port, with both shield plugs removed, are expected to be in the range of 7 to 10 Rem/Hr. This estimated dose rate will be from Co-60 containing components in the reactor having dose rates in the range of 400 to 900 Rem/Hr as measured during the reactor internal inspection on 8/12/02. The working dose rate on either side of the beam port out of the radiation beam is estimated to be 8 to 15 mr/hr. The loose surface contamination levels in the work area will be maintained below 10,000 DPM. On 8/20/02 smearable levels and dose rates were taken in the 4" vertical vent pipe and found to be at background levels.

Man Rem estimate to inspect West Beam Port

Remove outer blank flange				
15 min	3 people	0.01 mr/hr	0.0075	mr
Remove Outer Shield Plug				
30 min	3 people	10.0 mr/hr	15.000	mr
Fix surface contamination if required in outer plug				
15 min	1 person	10.0 mr/hr	2.500	mr
Remove Inner Shield Plug				
30 min	3 people	100.0 mr/hr	150.0	mr
Camera inspection of Beam Tube				
30 min	2 people	10 mr/hr	10.0	mr
Replace outer Shield Plug				
30 min	3 people	100 mr/hr	150.0	mr
Replace Blank Outer blank Flange				
15 min	3 people	10.0 mr/hr	7.5	mr
Cleanup work area				
60 min	3 people	1.0 mr/hr	3.0	mr

Total estimated Man Rem 0.338

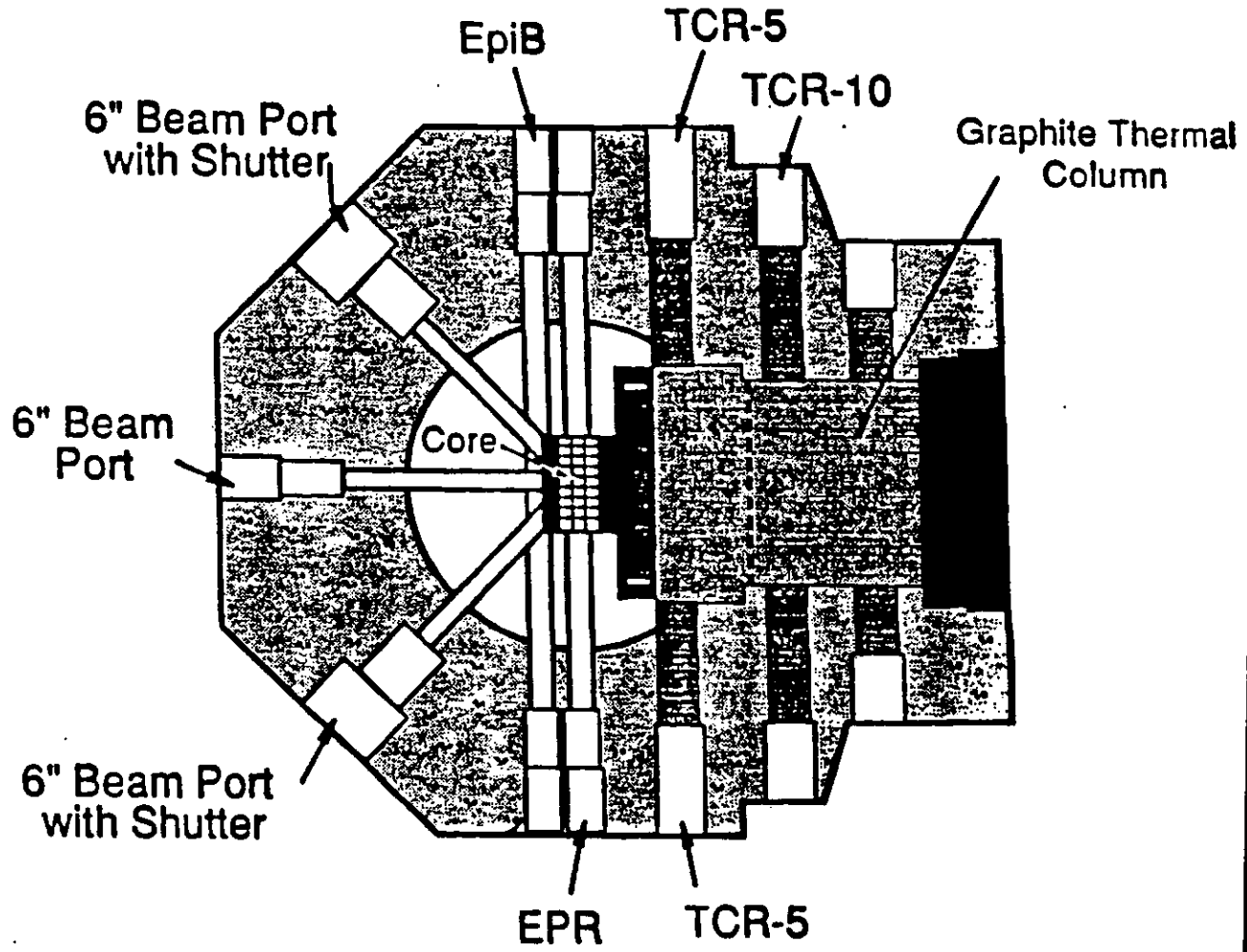


Figure 10-1 Plan View of the Omega West Reactor.

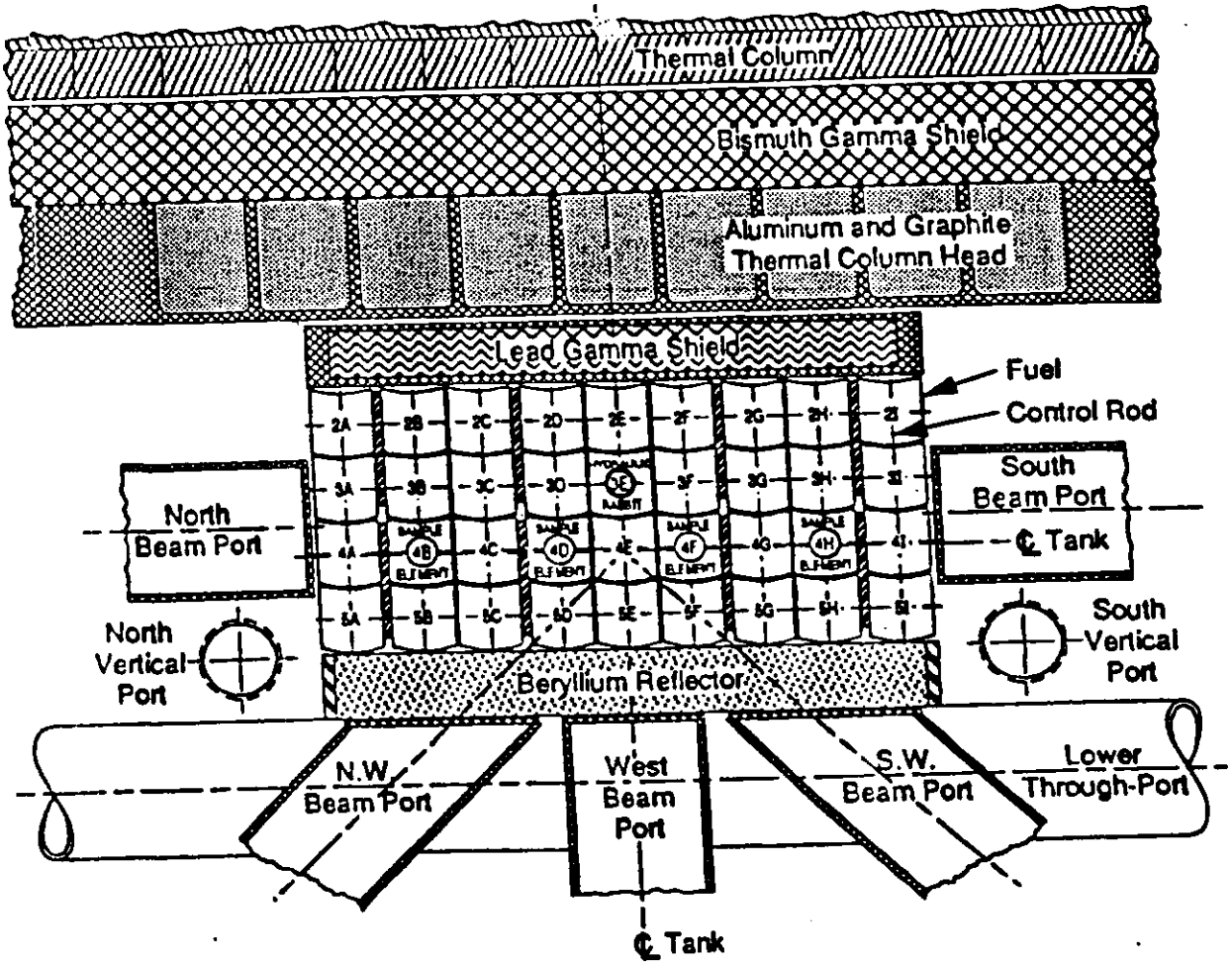
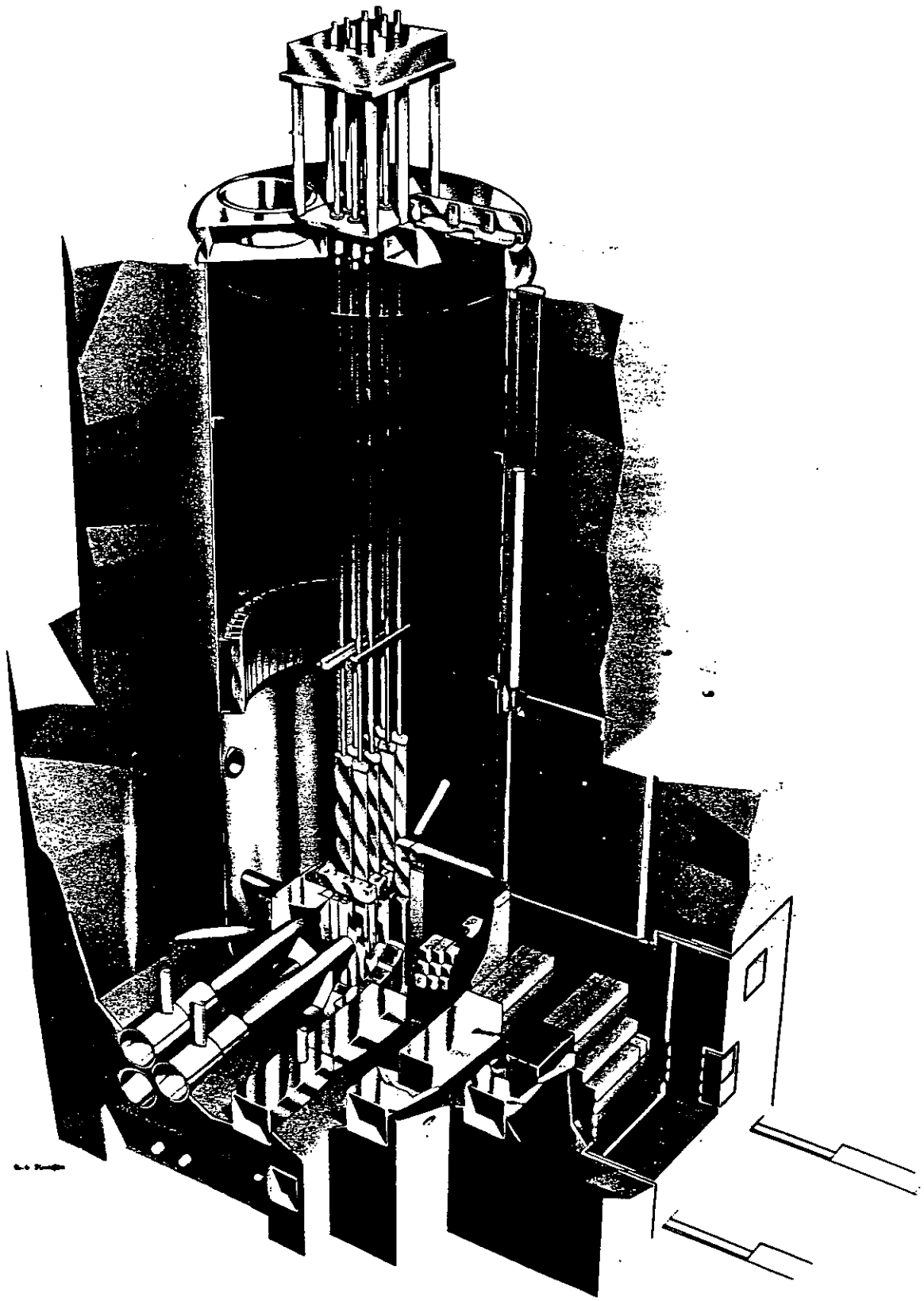
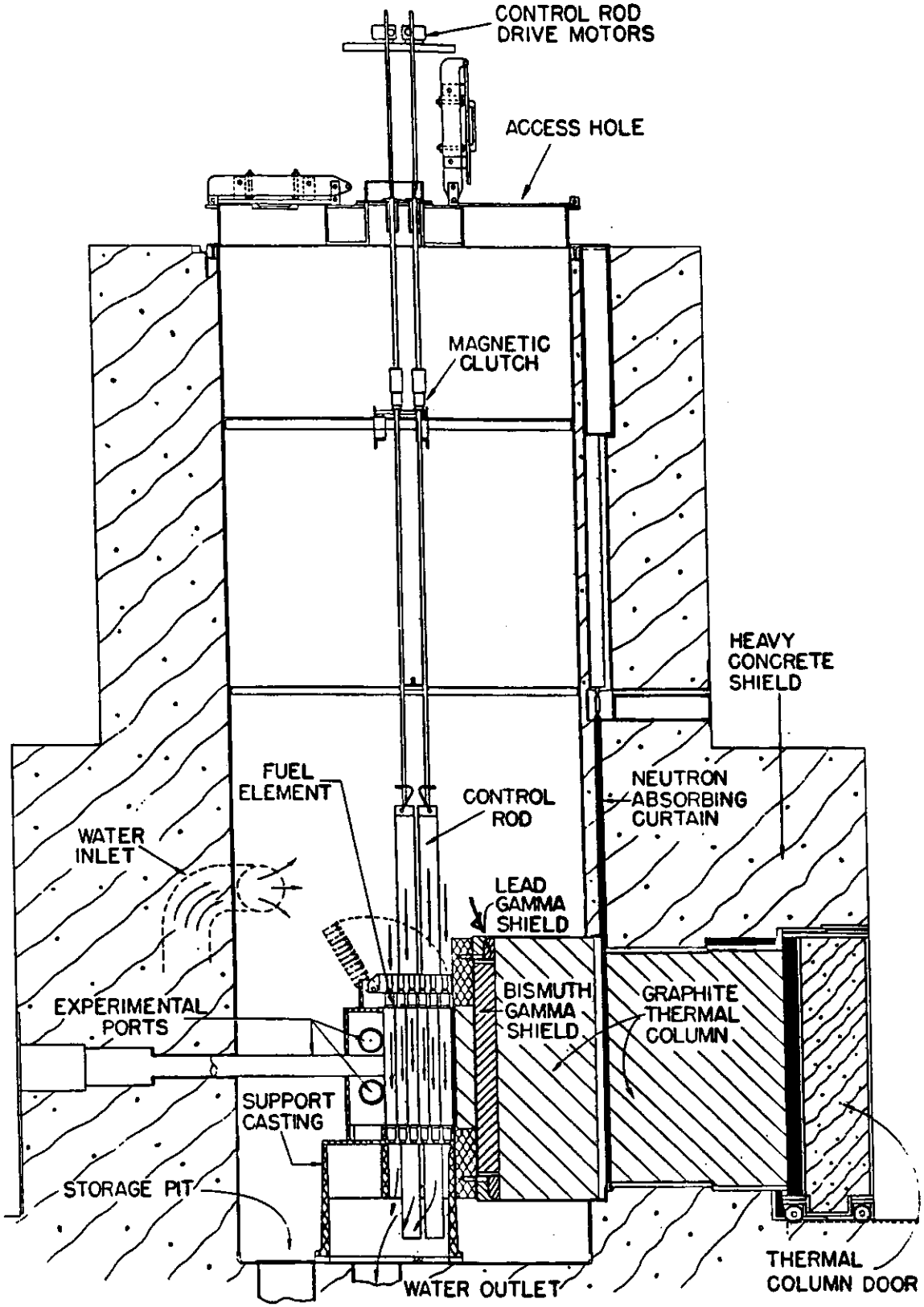


Figure 4-5 OWR core layout.



Jim Yarnell
662-7450



ALARA REVIEW FOR THE REMOVAL OF THE REACTOR INTERNALS FROM THE OMEGA WEST REACTOR

- WORK SCHEDULE FOR THE OWR INTERNALS REMOVAL
- PREPARED COMPONENT SPECIFIC WORK INSTRUCTIONS
- MAN REM ESTIMATES
- ALARA ACTIONS

    1. SHIELDED PLATFORM FOR TOP OF REACTOR
    2. REACTOR VESSEL VENTILATION
    3. REMOTE VIEWING EQUIPMENT
    4. REMOTELY OPERATE TOOLING
    5. MOCKUP TESTING OF TOOLING
    6. COMMUNICATIONS EQUIPMENT
    7. ELECTRONIC DOSIMETERS
    8. RAD PROTECTION INSTRUMENTS
    9. DOSE TRACKING METHODS
    10. CREW ASSIGNMENTS
    11. DETAILED PLANNING AND PRE-JOB BRIEFINGS
    12. DECON CREW
    13. MANAGEMENT OVERSIGHT
    14. WORKING ENVIRONMENT

- ESTABLISHED RWP
- WASTE PACKAGING PLAN

    1. MATERIAL SIZING
    2. WASTE CONTAINER SHIELDING
    3. WASTE CONTAINING ONSITE TRANSPORTATION
    4. WASTE CONTAINER STORAGE

- ROUTINE RADIOLOGICAL SURVEY PLAN

    1. HEPA SYSTEM MONITORING
    2. GENERAL AREA DOSE RATES
    3. GENERAL AREA CONTAMINATION LEVELS

OWR Man Rem Est[redacted]d on Schedule 11/1/02

Item	days	people	hours	total hours	70%	Hi dose hours	Hi dose rate R/Hr	Mid dose hours	mid dose rate R/hr	low dose hrs	low dose rate	Total dose for task Mota	RP support	misc support	total Man Rem
Remove Rx Tk lid	3	4	10	120	84	8.4	0.15	33.6	0.01	42	0.001	1.638	0.4914	0.01638	2.146
install platform	3	4	10	120	84	8.4	0.15	33.6	0.04	42	0.005	2.814	0.8442	0.02814	3.686
Remove internal vert equip	5	4	10	200	140	0.7	0.05	56	0.005	83.3	0.001	0.3983	0.11949	0.03983	0.558
Remove Be reflector	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396
Remove Beam port liners	6	3	10	180	126	12.6	0.1	50.4	0.005	63	0.001	1.575	0.4725	0.1575	2.205
Remove Lead shield	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396
Remove Fuel racks	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396
Remove Grid Plate & Base	5	4	10	200	140	7	0.03	56	0.005	77	0.001	0.567	0.1701	0.0567	0.794
Remove Thermal Column head	10	6	10	600	420	21	0.025	168	0.005	231	0.001	1.596	0.4788	0.1596	2.234
Remove Debris	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161
Remove platform	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161
Plasma Arc Vessel Tank	1	4	10	40	28	1.4	0.01	11.2	0.0025	15.4	0.001	0.0574	0.01722	0.00574	0.080
Remove material from storage ports	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161
Total dose Rx Internals				1940								9.8385	2.95155	0.58317	13.373

MOTA Man Hours 1940

Total Man Rem 13.373 for the Reactor Internals removal

Rad Protection Man Hours 1420

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ND3 CERRO GRANDE PROJECT
S[redacted]ONTRACT 41968-000-02-CJ

849 18.863 Dosimetry (Internal-Bioassay) Reports
Dose Tracking Reports 55

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DOSE TRACKING

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TAZ

Printed Name	A. Scott	Time In	1530						
Z number	176367	Time Out	1640						
Group or Employer	C.W.	Reading In (A)	3.7						
Dosimetry ID number	34813	Reading Out(B)	3.9						KS
Date	11/19/02	Exposure for Entry(B-A)	.2						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	D. Torivio	Time In	1530						
Z number	170066	Time Out	1640						KS
Group or Employer	C.W.	Reading In	28.1						
Dosimetry ID number	34698	Reading Out	29.3						
Date	11/19/02	Accumulated Exposure	1.2						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 006

Printed Name	HAL RUTLAND	Time In	1345					
Z number	190588	Time Out	1430					
Group or Employer	MOTACORP	Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date 8/12/02	8-12-02	Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	SCOTT KERR	Time In	1345					
Z number	~~190398~~ 190389	Time Out	1530					
Group or Employer	MOTA	Reading In						
Dosimetry ID number		Reading Out						
Date	8-12-02	Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	DAVID S. HEILMAN	Time In	1400					
Z number	190386	Time Out	1440					
Group or Employer	WD3	Reading In						
Dosimetry ID number		Reading Out						
Date 8-12-02	8-12-02	Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: Rx HEAD PLATFORM

Printed Name	Z#	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
DONOVAN TORIVIO	170066	CORE NABE	HSR-1-02 008-TA2	✓	10-9-02/ 1100	34698	0			
TIM HOGAN	141566	CORE NABE	HSR-1-02 -008-TA2	✓	10-9-02/ 1100	34824	0			
ADAM SCOTT	176767	CORE NABE	HSR-1-02 008-TA2	✓	10/9-02 1102	34813	0			

7/1/99

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-007-TA2

Printed Name	Ron Stutsman	Time In	1430					
Z number		Time Out	1505					
Group or Employer	WD3	Reading In (A)	0					
Dosimetry ID number	7327	Reading Out(B)	3.4					
Date	8-13-02	Exposure for Entry(B-A)	3.4					
Allowable Exposure for this job		Total Exposure for this job	3.4					

Printed Name	Darryl Stafford	Time In	1430					
Z number		Time Out	1505					
Group or Employer	LANL	Reading In	0					
Dosimetry ID number	8953	Reading Out	7					
Date	8-13-02	Accumulated Exposure	7					
Allowable Exposure for this job		Total Exposure for this job	7					

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-002-TA2

Printed Name	Mark Granus	Time In	1430					
Z number		Time Out	1505					
Group or Employer	WD3	Reading In (A)	0					
Dosimetry ID number	8440	Reading Out(B)	12.7					
Date	8-13-02	Exposure for Entry(B-A)	12.7					
Allowable Exposure for this job		Total Exposure for this job	12.7					

Printed Name	Jon Coleman	Time In	1430					
Z number		Time Out	1505					
Group or Employer	WD3	Reading In	0					
Dosimetry ID number	7329	Reading Out	9.4					
Date	8-13-02	Accumulated Exposure	9.4					
Allowable Exposure for this job		Total Exposure for this job	9.4					

Printed Name	Bruce Moffatt	Time In	1430					
Z number		Time Out	1505					
Group or Employer	WD3	Reading In	0					
Dosimetry ID number	8418	Reading Out	15.6					
Date	8-13-02	Accumulated Exposure	15.6					
Allowable Exposure for this job		Total Exposure for this job	15.6					

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: OWR 8/27/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
KERR, S	190389	mota	006		8/27/02	8440	0	2.6	2.6	
Heilman, D	190356	SEC	006		8/27/02	7361	0	2.4	2.4	
Rutland, H	H0566	mota	006		8/27/02	8168	0	2.6	2.6	

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 006 8/27/02

Printed Name	Kerr, Scott	Time In	1330					
Z number	190389	Time Out	1445					
Group or Employer	Mota	Reading In (A)	0					
Dosimetry ID number	8440	Reading Out(B)	2.6					
Date	8/27/02	Exposure for Entry(B-A)	2.6					
Allowable Exposure for this job		Total Exposure for this job	2.6					

Printed Name	Heilman, Dave	Time In	1330					
Z number	190386	Time Out	1445					
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	7361	Reading Out	2.4					
Date	8/27/02	Accumulated Exposure	2.4					
Allowable Exposure for this job		Total Exposure for this job	2.4					

Printed Name	Rutland, Hal	Time In	1330					
Z number	190588	Time Out	1443					
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	8968	Reading Out	2.6					
Date	8/27/02	Accumulated Exposure	2.6					
Allowable Exposure for this job		Total Exposure for this job	2.6					

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: OLDR 8/28/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
DeNSard, D	190586	mota	006		8/28/02	8980	0	1.2	1.2	
BROWN, E	190385	SEC	006		8/28/02	8937	0	1.2	1.2	
KERR, D	190381	mota	006		8/28/02	8968	0	2.6	2.6	

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 006 8/28/02

Printed Name	DaNSaRD, DaN	Time In	1000					
Z number	190586	Time Out	1100					
Group or Employer	mota	Reading In (A)	0					
Dosimetry ID number	8980	Reading Out(B)	1.2					
Date	8/28/02	Exposure for Entry(B-A)	1.2					
Allowable Exposure for this job		Total Exposure for this job	1.2					

Printed Name	BROWN, E	Time In	1000					
Z number	190385	Time Out	1100					
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	8937	Reading Out	1.2					
Date	8/28/02	Accumulated Exposure	1.2					
Allowable Exposure for this job		Total Exposure for this job	1.2					

Printed Name	Kerr, Scott	Time In	1000					
Z number	190389	Time Out	1100					
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	8968	Reading Out	2.6					
Date	8/28/02	Accumulated Exposure	2.6					
Allowable Exposure for this job		Total Exposure for this job	5.2					

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: ECOC 6/29/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
KERR, S	190459	mota	006		6/29/02	8940	0	5	5	
Heilman, D	190386	SEC.	006		6/29/02	8971	0.0	0.1	0.1	
Rutland, H	190588	mota	006		6/29/02	8984	0	4	4	

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 006 5/29/02

Printed Name	Kerr, Scott	Time In	1300					
Z number	190389	Time Out	1715					
Group or Employer	Mota	Reading In (A)	0					
Dosimetry ID number	8440	Reading Out(B)	5.0					
Date	5/29/02	Exposure for Entry(B-A)	5.0					
Allowable Exposure for this job		Total Exposure for this job	10.2					

Printed Name	Heilman, Dave	Time In	1300					
Z number	190356	Time Out	1415					
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	8471	Reading Out	0.7					
Date	5/29/02	Accumulated Exposure	0.7					
Allowable Exposure for this job		Total Exposure for this job	3.1					

Printed Name	Rutland, Hal	Time In	1300					
Z number	190588	Time Out	1415					
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	8984	Reading Out	4					
Date	5/29/02	Accumulated Exposure	4					
Allowable Exposure for this job		Total Exposure for this job	6.6					

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: OWR 8/30/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
KERR, S	190389	Mota	OOG		8/30/02	8968	0	4.2	4.2	
HIELMAN, D	190386	SEC	OOG		8/30/02	8971	0	1.2	1.2	
RUTLAND, H	190588	MOTA	OOG		8/30/02	8937	0	4.0	4.0	

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 006 / 8/30/02

Printed Name	Kerr, Scott	Time In	1330					
Z number	190389	Time Out	1445					
Group or Employer	Mota	Reading In (A)	0					
Dosimetry ID number	8968	Reading Out(B)	4.2					
Date	8/30/02	Exposure for Entry(B-A)	4.2					
Allowable Exposure for this job		Total Exposure for this job	14.4					

Printed Name	Helman, Dave	Time In	1330					
Z number	190386	Time Out	1445					
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	8971	Reading Out	1.2					
Date	8/30/02	Accumulated Exposure	1.2					
Allowable Exposure for this job		Total Exposure for this job	4.3					

Printed Name	Rutland, Hal	Time In	1330					
Z number	190588	Time Out	1445					
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	8937	Reading Out	4.0					
Date	8/30/02	Accumulated Exposure	4.0					
Allowable Exposure for this job		Total Exposure for this job	18.6					

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: OWR 9/3/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
KERR, S	190384	MOTA	006		9/3/02	8937	0	1.8	1.8	
Heilman, D	190386	MOTA	006		9/3/02	8971	0	2.6	2.6	
Rutland, H	190588	Mota	006		9/3/02	8968	0	2.6	2.6	

DOSE TRACKING REPORT

RWP or SOP #: 006 9/3/02

Printed Name	Kerr, Scott	Time In	1000					
Z number	190389	Time Out	1100					
Group or Employer	Mota	Reading In (A)	0					
Dosimetry ID number	8937	Reading Out(B)	1.8					
Date	9/3/02	Exposure for Entry(B-A)	1.8					
Allowable Exposure for this job		Total Exposure for this job	16.2 1.8 WPW					

Printed Name	Heilman, David	Time In	1000					
Z number	190386	Time Out	1100					
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	8971	Reading Out	2.6					
Date	9/3/02	Accumulated Exposure	2.6					
Allowable Exposure for this job		Total Exposure for this job	6.9 2.6 WPW					

Printed Name	Rutland, Hal	Time In	1000					
Z number	190588	Time Out	1100					
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	8968	Reading Out	2.6					
Date	9/3/02	Accumulated Exposure	2.6					
Allowable Exposure for this job		Total Exposure for this job	13.2 2.6 WPW					

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: CC2142 9/4/02

Printed Name	Z#	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
KERR, S	190389	Mota	006		9/4/02	8931	0	2.3	2.3	
HEILMAN, D	190386	SEC	006		9/4/02	8971	0	0.7	0.7	~~DID NOT ENTER~~ 9/4/02
RUTLAND, H	190588	Mota	006		9/4/02	8968	0	1.5	1.5	
DAMSARD, D	190586	Mota			9/4/02	8984	0			DID NOT ENTER
KERR, S	190389	Mota	011		9/4/02	8931	0	2.6	2.6	
HEILMAN, D	190386	SEC	011		9/4/02	8971	0	1.7	1.7	
RUTLAND, H	190588	Mota	011		9/4/02	8968	0	2.6	2.6	
DAMSARD, D	190586	Mota	011		9/4/02	8984	0			DID NOT ENTER

DOSE TRACKING REPORT

RWP or SOP #: OOG 9/4/02

Printed Name	Kerr, Scott	Time In	1000	1530				
Z number	190389	Time Out	1045	1430				
Group or Employer	Mota	Reading In (A)	0	0				
Dosimetry ID number	8937	Reading Out(B)	2.3	2.6				
Date	9/4/02	Exposure for Entry(B-A)	2.3	2.6				
Allowable Exposure for this job		Total Exposure for this job	18.5 2.3 [illegible]	21.2 2.6 [illegible]				21.2

Printed Name	Heilman	Time In	1000	1330				
Z number	190386	Time Out	1045	1430				
Group or Employer	SEC	Reading In	0	0				
Dosimetry ID number	8971	Reading Out	0.1	1.7				
Date	9/4/02	Accumulated Exposure	0.1	1.7				
Allowable Exposure for this job		Total Exposure for this job	7.0 0.1 [illegible]	9.3 1.7 [illegible]				9.3

Printed Name	Rutland, H	Time In	1000	1330				
Z number	190568	Time Out	1045	1430				
Group or Employer	Mota	Reading In	0	0				
Dosimetry ID number	8968	Reading Out	1.5 [illegible]	2.6				
Date	9/4/02	Accumulated Exposure	1.5	2.6				
Allowable Exposure for this job		Total Exposure for this job	14.7 1.5 [illegible]	17.3 2.6 [illegible]				17.3

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: DWR 09/05/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Kerr, S	190389	Meta	011		09/05/02	8931	0	N/A	N/A	Dosimeter DIED while in Area new Dosim. ISSUED
Heilman, D	190386	SEC	011		09/05/02	8971	0	1.3	1.3	
Rutland, H	190388	Meta	011		09/05/02	81680	0	1.7	1.7	
Kerr, S	190389	Meta	011		09/05/02	7345	0	2.1	2.1	NEW Dosim. ISSUED

DOSE TRACKING REPORT

RWP or SOP #: C11 09/05/02

Printed Name	Kerr, Scott	Time In	0900	1230				
Z number	190389	Time Out	1040	1315				
Group or Employer	mota	Reading In (A)	0	0				
Dosimetry ID number	8937	Reading Out(B)	0.3	0.5				
Date	9/5/02	Exposure for Entry(B-A)	0.8	0.5				
Allowable Exposure for this job	.110 R	Total Exposure for this job	21.9	22.4				22.4

Printed Name	Heilman, Dave	Time In	0900	1230				
Z number	190386	Time Out	1040	1315				
Group or Employer	SEC	Reading In	0	0				
Dosimetry ID number	8971	Reading Out	0.3	1.4				
Date	9/5/02	Accumulated Exposure	0.3	1.4				
Allowable Exposure for this job	.110 R	Total Exposure for this job	9.6	11.0				11.0

Printed Name	Rutland, Hal	Time In	0900	1230				
Z number	190588	Time Out	1040	1315				
Group or Employer	mota	Reading In	0	0				
Dosimetry ID number	8968	Reading Out	1.0	1.2				
Date	9/5/02	Accumulated Exposure	1.0	1.2				
Allowable Exposure for this job	.110R	Total Exposure for this job	18.3	19.5				19.5

51.9

110.
51.9
58.1

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 011 9/6/02

Printed Name	Kerr, S	Time In						
Z number	190389	Time Out						
Group or Employer	Mota	Reading In (A)	0					
Dosimetry ID number	8937	Reading Out(B)	3.2					
Date	9/6/02	Exposure for Entry(B-A)						
Allowable Exposure for this job	58.1	Total Exposure for this job						

Printed Name	Heilman, D	Time In						
Z number	190384	Time Out						
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	8971	Reading Out	4.1					
Date	9/6/02	Accumulated Exposure						
Allowable Exposure for this job	58.1	Total Exposure for this job						

Printed Name	Rutland, H	Time In						
Z number	190588	Time Out						
Group or Employer	Mota	Reading In						
Dosimetry ID number	8968	Reading Out	0					
Date	9/6/02	Accumulated Exposure	5.2					
Allowable Exposure for this job	58.1	Total Exposure for this job						

DID NOT ENTER

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: CWR 9/6/02 DID NOT ENTER

Printed Name	Z#	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Kerr, S	190389	Mota	011		9/6/02	8137	0	3.2	3.2	
Helman, D	190386	SEC	011		9/6/02	8171	0	4.1	4.1	
Rutland, H	190328	Mota	011		9/6/02	8168	0	5.2	5.2	

7/1/99

ESH-1 Form 06-01-1

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: OU2 9/11/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Kerr, S	190389	Mota	11		1100 9/10/02	8931	0.0	0.8	0.8	
Heilman, D	190386	SEC	11		1100 9/10/02	8971	0.0	0.4	0.4	
Rutland, H	190388	Mota	11		1100 9/10/02	8968	0.0	0.1	0.1	
Kerr, S	190389	Mota	11		9/10/02	8937	0.0	20.6	20.6	
Heilman, D	190386	SEC	11		9/10/02	8971	0.0	13.2	13.2	
Rutland, D	190588	Mota	11		9/10/02	8937	0.0	16.5	16.5	
Speatham, R.			11		9/10/02	8440	0.0	5	5	
STAHR J.			11		9/10/02	7361	0.0	5	5	

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: Mill 9/11/02

									TOTAL
Printed Name	Kerr, S	Time In	1100	1400					
Z number	190389	Time Out	1230	1500					
Group or Employer	Mota	Reading In (A)	0	0					
Dosimetry ID number	8937	Reading Out(B)	0.8	20.6					
Date	9/10/02	Exposure for Entry(B-A)	0.8	20.6					
Allowable Exposure for this job	58.1	Total Exposure for this job	0.8	20.6					21.4

									TOTAL
Printed Name	Heilman, D	Time In	1100	1400					
Z number	190386	Time Out	1230	1530					
Group or Employer	SEC	Reading In	0	0					
Dosimetry ID number	8971	Reading Out	0.4	13.2					
Date 9/10/02		Accumulated Exposure	0.4	13.2					
Allowable Exposure for this job	58.1	Total Exposure for this job	0.4	13.2					13.6

									TOTAL
Printed Name	Rutland, H	Time In	1100	1400					
Z number	190588	Time Out	1230	1530					
Group or Employer	Mota	Reading In	0	0					
Dosimetry ID number	8968	Reading Out	0.1	16.5					16.6
Date	11/10/02	Accumulated Exposure	0.1	16.5					
Allowable Exposure for this job	58.1	Total Exposure for this job	0.1	16.5					16.6

51.6

58.1
51.6
6.5

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: Rx Bldg OWR 9/12/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Kerr, S	190389	Mota	11		9/12/02	8937	0	N/R		DID NOT ENTER
Heilman, D	190386	SEC	11		9/12/02	8971	0	1.6		
Rutland, H	190588	Mota	11		9/12/02	8968	0	1.6		
Dobbard, D	190	mota	11		9/12/02			3.8	3.8	

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 11 9/12/01

Printed Name	Kerr, S	Time In	1415					
Z number	190389	Time Out	1645					
Group or Employer	Mota	Reading In (A)	0					
Dosimetry ID number	0937	Reading Out(B)	1.6					
Date	9/12/02	Exposure for Entry(B-A)	1.6					
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	Hallman, D	Time In	1415					
Z number	190386	Time Out	1645					
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	8971	Reading Out	1.6					
Date	9/12/02	Accumulated Exposure	1.6					
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	Rutland, H	Time In	1415					
Z number	190588	Time Out	1645					
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	8968	Reading Out	2.1					
Date	9/12/02	Accumulated Exposure	2.1					
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 11 9/12/02

Printed Name	DAHSARD, D	Time In	1415					
Z number		Time Out	1645					
Group or Employer		Reading In (A)	0					
Dosimetry ID number		Reading Out(B)	3.8					
Date		Exposure for Entry(B-A)	3.8					
Allowable Exposure for this job		Total Exposure for this job	3.8					

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: OWR Rx Bldg 9/13/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Kerr, S	190389	Mota	11		0730 9/13/02	8937	0	8.7		
Heilman, D	190386	SEC	11		0730 9/13/02	8971	0	6.2		
Rutland, H	190588	Mota	11		0730 9/13/02	8968	0	3.7		

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 11 9/13/02

Printed Name	Kerr, S	Time In	0730					
Z number	190589	Time Out	1030					
Group or Employer	Mota	Reading In (A)	0					
Dosimetry ID number	8937	Reading Out(B)	5.2					
Date	9/13/02	Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	Heilman, D	Time In	0730					
Z number	190386	Time Out	1030					
Group or Employer	~~Mota~~ SEC	Reading In	0					
Dosimetry ID number	190386	Reading Out	4.1					
Date	9/13/02	Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	Rutland, H	Time In	0730					
Z number	190588	Time Out	1030					
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	8968	Reading Out	3.6					
Date	9/13/02	Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: RWP 11, 9/16/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Rutland, H	190588	Mktc	11		9/16/02 1245	8468	0	20.9	20.9	
Helman, D	~~190588~~ ~~SSC~~	SSC	11		9/16/02 1245	8471	0	34.4	34.4	
Granus, M			11		9/16/02 1245	8418	0	98.8	98.8	

DOSE TRACKING REPORT

RWP or SOP #: 11 9/16/02

Printed Name	Kerr, S	Time In	1300					
Z number	190	Time Out						
Group or Employer	mota	Reading In (A)	0					
Dosimetry ID number	9937	Reading Out(B)						
Date	9/16/02	Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	Heilman, D	Time In	1300					
Z number	190	Time Out						
Group or Employer	SEC	Reading In	0					
Dosimetry ID number	9971	Reading Out						
Date	9/16/02	Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name	Rutland, H	Time In	1300					
Z number	190588	Time Out						
Group or Employer	Mota	Reading In	0					
Dosimetry ID number	~~7327~~ 8968	Reading Out						
Date	9/16/02	Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: 11 9/16/02

Printed Name	GRANUS, M	Time In	1300					
Z number		Time Out	0					
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: RWP 11 9/17/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Kerr, S	190389	~~H6~~ Nobe	11		9/17/02	8937	0			Did not enter
Heilman, D	190386	~~H6~~ SEC	11		9/17/02	8971	0	52.6		
Rutland, H	~~H0588~~	~~Nota~~ ~~190588~~	11		9/17/02	8968	0	3.5		
Dansard, D	~~190388~~	~~H6~~ nota	11		9/17/02	7327	0	1.3		
Brown, E	190385	~~H6~~ SEC	11		9/17/02	7345	0	8.9		
Summers, K	191324 ~~190388~~	SEC	11		9/17/02	8930	0	55.1		
Harris, C	191800	SEC	11		9/17/02	7316	0	28.1		
Craft, E	191325	SEC	11		9/17/02	8984	0			DID NOT ENTER
Przybyski, M	190412		11		9/17/02	8953	0	8.2		

RSS

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location RWP 11 9/17/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Moffett, B	190159		11		9/17/02	7345	0	6.3		
Tentaint, R	191947	mota	11		9/17/02	8440	0	102.7		
Stahr, J			11		9/17/02	8937	0	5.2		

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: RWS 13, 9/19/02

Printed Name	Z#	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue 9/19/02	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
~~Trautcunt~~, R	191947	Mota	13		9/18/02	8440	0	25.8	25.8	
~~Dansard, D~~	~~190586~~	~~Mota~~	~~13~~		~~9/19/02~~	~~7327~~	~~0~~	~~0.7~~		DID NOT ENTER
KERR, S	190389	Mota	13		9/19/02	8937	0	~~4.6~~ 9.6	9.6	
HELMAN, D	190586	SEC	13		9/19/02	8671	0	4.8	4.8	
RUTLAND, H	190588	Mota	13		9/19/02	8168	0	7.9	7.9	
~~Summers~~ K	191314	SEC	13		9/19/02	8930	0	43.4	43.4	
~~BROWN, E~~	~~190585~~	~~SEC~~	~~13~~		~~9/19/02~~	~~7345~~	~~0~~			DID NOT ENTER
HARRIS, C	191800	SEC	13		9/19/02	7316	0	13.3 14.9	28.2	
~~Swetnam, R~~			~~13~~		~~9/18/02~~	~~8184~~	~~0~~			DID NOT ENTER

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: _____

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
SE[illegible], T	N/A	Crane Service	13		9/19/02	8413	0	3.4	3.4	
CARLSON, J	190921	WD3	13		9/19/02	8418	0	19.7 47.3	67*	
COLEMAN, J	~~[illegible]~~	SEC	13		9/19/02	7345	0	93.9	93.9	
~~FENEMA, J~~ (CWW)	~~—~~	~~Mota~~	~~13~~		~~9/19/02~~	~~7327~~	~~0~~			DID NOT ENTER
SCHNELL, G	191316	SEC	13		9/19/02	8984	0	12	12	
FENEMA, J		mota	13		9/19/02	7327	0	2.5	2.5	
CARLSON, J.	190921	WD3	13		9-19-02	8418	0	30.9	92.9* ~~30.9~~ ~~[illegible]~~ SH 9-19-02	
PRZYBYSKI, M	190412	WD3	13		9-19-02	8953	0	80.4	80.4	

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: _____ 9/20/02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
KERR, S	140284	Metric	13		9/20/02 1300	E937	0	0.8		
TOUCHET, R	141947 ~~141366~~ WCE	Metric	13		9/20/02 1300	E440	0	0.9		
Richland, H	140588	Metric	13		9/20/02 1300	E968	0	0.9		
Redmond, D	MC3E6	SEC	13		9/20/02 1300	E871	0	0.9		
DeNeuzil, D	MC5EL	Metric	13		9/20/02 1300	E416	0	0.3		

DOSE TRACKING REPORT

RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: RX Bldg. 9-21-02

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Elaine Brown	190385	RCT	011		0700 9-21-02	7345	1.1	1.6	.5	
HAL RUTLAND	190588 ~~1903 CB~~	MOTA	011		0700 9-21-02	8968	0	8.2	8.2	
Scott Kerr	190389	MOTA	011		0700 9-21-02	8937	0	6	6	
DAN DANSARD	190588	MOTA	011		0700 9-21-02	7327	.3	.7	.4	
Kirk Summers	191324	RCT	011		0700 9-21-02	8930	0	7	7	
BOB TOUTAINT	191947	MOTA	011		0700 9-21-02		0	1.2	1.2	

DOSE TRACKING REPORT

RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: 9/23/02 Rwy 13

Printed Name	Z#	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Rutland, H	PA588	Mota	013		9/23/02	2968	0	4.2	4.2	
Reust, J		Mota	013		9/23/02	8413	0	51.3	51.3	
Kerr, S	190384	Mota	013		9/23/02	8937	0	21.3	21.3	
Hallman, D	PA386	SEC	013		9/23/02	8971	0	3.2	3.2	
Harris, C	191900	SEC	013		9/23/02	7316	0	9.6	9.6	
Summers, K	191324	SEC	013		9/23/02	8830	0	9.2	9.2	
Brown, E	190385	SEC	013		9/23/02	7345	0	15.5	15.5	
Przybyen M.	190442	WGI	013		9/23/02	~~7329~~ 6953	0	24.3	24.3	
Fenema, J		Mota	013		9/23/02	7327	0	33.2	33.2	

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: K-X-116 10/2

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Milliken, K		mota	008		0800 10/02/02	8440	0	5.7	5.7	
Rutland, H	190588	mota	008		0800 10/02/02	8968	0	4.2	4.2	
Kerr, Scott	140587	mota	008		1030 10/02/02	8137	0	3.6	3.6	

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: TA-2 OWR

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Tommie L. Jones	191043	S.W.	004		10-2-02 1300	Siemens 8984	.2	2.6	2.4	
Florantino Stanley	148146	S.W.	004		10-2-02 1300	Siemens 7316	.2	1.9	1.7	
Tommie L. Jones	191043	S.W.	004		10-3-02 0730	Siemens 8984	-0-	1.1	1.1	
Florantino Stanley	148146	S.W.	004		10-3-02 0730	Siemens 7316	-0-	3.1	3.1	
Elaine Brown	190385	S.E.C.	004		10-3-02 0730	Siemens 8440	-0-	.3	.3	

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: Rx Hd Rwp 16

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
MILKEN, K		mota	16		10/9/02	8930	0	2.2	2.2	
PRZYBYS, M	140912	WD3	16		10/8/02	8853	0	2.3	2.3	

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: Rx Hd 10/4

Printed Name	Z#	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments
Marty Przybyski	190412	WGI	016		10-4-02 1050	SIEMENS 008953	0	24.9	24.9	
John Carlson	190921	FRAM	016		10-4-02 1050	Siemens 008930	0	26.9	26.9	

DOSE TRACKING REPORT

(RWP) or SOP #: HSR-1-02-008-TA2

Printed Name	D. Torivio	Time In	1330					
Z number	170006	Time Out	1640	10-10	10-11			
Group or Employer	Cerrnado	Reading In (A)	Ø	2.3	5.1			
Dosimetry ID number	34695	Reading Out(B)	2.3	5.1	7.7			
Date	10-7-02	Exposure for Entry(B-A)						
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	Tim Hogan	Time In	1330	10-10	10-11			
Z number	141566	Time Out	1640					
Group or Employer	Cerrnado	Reading In	Ø	0.8	6.2			
Dosimetry ID number	34824	Reading Out	0.8	6.2	8.7			
Date	10-9-02	Accumulated Exposure						
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	ADAM SCOTT	Time In	1330					
Z number	176367	Time Out	1640					
Group or Employer	Cerrnado	Reading In	Ø					
Dosimetry ID number	34813	Reading Out	2.4					
Date	10-9-02	Accumulated Exposure						
Allowable Exposure for this job	50	Total Exposure for this job						

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	D. TORIVO	Time In	0705					
Z number	170066	Time Out	1300					
Group or Employer	CORONADO	Reading In (A)	16.0					
Dosimetry ID number	34675	Reading Out(B)	17.1					
Date	10-25-02	Exposure for Entry(B-A)	1.1					
Allowable Exposure for this job	50 mR	Total Exposure for this job	17.1					

Printed Name	ADAM SCOTT	Time In	0705					
Z number	176367	Time Out	1300					
Group or Employer	CORONADO	Reading In	14.3					
Dosimetry ID number	34813	Reading Out	15.2					
Date	10.25 02	Accumulated Exposure	0.9					
Allowable Exposure for this job	50 mR	Total Exposure for this job	15.2					

Printed Name	JOHN CONLEY	Time In	0905					
Z number	182455	Time Out	1300					
Group or Employer	SOUTHWEST	Reading In	0.0					
Dosimetry ID number	34658	Reading Out	1.4					
Date	10-25-02	Accumulated Exposure	1.4					
Allowable Exposure for this job	50 mR	Total Exposure for this job	1.4					

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	Robert Livingston	Time In	0700					
Z number	192794	Time Out	1700					
Group or Employer	MOTA	Reading In (A)	4.5					
Dosimetry ID number	00035519	Reading Out(B)	8.6					
Date	10-26-02	Exposure for Entry(B-A)	4.1					
Allowable Exposure for this job	Collective 250 mrem	Total Exposure for this job	4.1					

Printed Name	SCOTT KERR	Time In	0700					
Z number	190389	Time Out	1700					
Group or Employer	MOTA	Reading In	6.2					
Dosimetry ID number	00035532	Reading Out	6.2					
Date	10-26-02	Accumulated Exposure	0					
Allowable Exposure for this job	Collective 250 mrem	Total Exposure for this job	0					

Printed Name	SHAWN LAURENT	Time In	0700					
Z number	192795	Time Out	1700					
Group or Employer	MOTA	Reading In	4.5					
Dosimetry ID number	00035544	Reading Out	4.5					
Date	10-26-02	Accumulated Exposure	0					
Allowable Exposure for this job	Collective 250 mrem	Total Exposure for this job	0					

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	D. TERINO	Time In	0800					
Z number	170066	Time Out	1620					
Group or Employer	CORONADO	Reading In (A)	17.1					
Dosimetry ID number	34698	Reading Out(B)	21.2					
Date	10-28-02	Exposure for Entry(B-A)	4.1					
Allowable Exposure for this job	50	Total Exposure for this job	21.2					

Printed Name	A. SCOTT	Time In	0800					
Z number	176367	Time Out	1600					
Group or Employer	CORONADO	Reading In	15.2					
Dosimetry ID number	34813	Reading Out	~~16.5~~ DSA	17.5				
Date	10-28-02	Accumulated Exposure	~~0.7~~ DSA	1.7				
Allowable Exposure for this job	50	Total Exposure for this job	~~16.5~~ DSA	17.5				

Printed Name	H. RUTLAND	Time In	1140					
Z number	190558	Time Out	1330					
Group or Employer	MCTA	Reading In	8.8					
Dosimetry ID number	35469	Reading Out	9.0					
Date	10-28-02	Accumulated Exposure	0.2					
Allowable Exposure for this job		Total Exposure for this job	0.2					

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	S. KERR	Time In	0920					
Z number	190389	Time Out	1615					
Group or Employer	MOTA	Reading In (A)	9.4					
Dosimetry ID number	35532	Reading Out(B)	10.9					
Date	10-29-02	Exposure for Entry(B-A)	1.5					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	D. DANJARD	Time In	0920					
Z number	190586	Time Out	1645					
Group or Employer	MOTA	Reading In	10.8					
Dosimetry ID number	35415	Reading Out	11.7					
Date	10-29-02	Accumulated Exposure	.9					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TAZ

Printed Name	D. TORIVIO	Time In	0710					
Z number	170066	Time Out	1630					
Group or Employer	CORONADO	Reading In (A)	21.4					
Dosimetry ID number	34698	Reading Out(B)	22.2					
Date	10-29-02	Exposure for Entry(B-A)	0.8					
Allowable Exposure for this job	50	Total Exposure for this job	22.2					

Printed Name	A. SCOTT	Time In	0710					
Z number	176367	Time Out	1615					
Group or Employer	CORONADO	Reading In	17.6					
Dosimetry ID number	34813	Reading Out	17.8					
Date	10-29-02	Accumulated Exposure	0.2					
Allowable Exposure for this job	50	Total Exposure for this job	17.8					

Printed Name	H. RUTLAND	Time In	0920					
Z number	190588	Time Out	1145					
Group or Employer	MOTA	Reading In	9.4					
Dosimetry ID number	35469	Reading Out	10.1					
Date	10-29-02	Accumulated Exposure	1.3					
Allowable Exposure for this job	50	Total Exposure for this job						

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	SHAWN LAURENT	Time In	0750					
Z number	192795	Time Out	1645					
Group or Employer	MOTA	Reading In (A)	6.5					
Dosimetry ID number	OCC 35544	Reading Out(B)	7.5					
Date	10-29-02	Exposure for Entry(B-A)	1					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	R. LIVINGSTON	Time In	0750					
Z number	192794	Time Out	1645					
Group or Employer	MOTA	Reading In	11.6					
Dosimetry ID number	35519	Reading Out	13.1					
Date	10-29-02	Accumulated Exposure	2.5					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	T. FENEMA	Time In	1750					
Z number	191503	Time Out	1330					
Group or Employer	MOTA	Reading In	4.0					
Dosimetry ID number	35496	Reading Out	4.3					
Date	10-29-02	Accumulated Exposure	0.3					
Allowable Exposure for this job	50	Total Exposure for this job	0.3					

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	S. LAURENT	Time In	0925						
Z number	192795	Time Out							
Group or Employer	MOTA	Reading In (A)	8.1						
Dosimetry ID number	35544	Reading Out(B)	8.6						
Date	10-30-02	Exposure for Entry(B-A)							
Allowable Exposure for this job		Total Exposure for this job	.5						

Printed Name	R. LIVINGSTON	Time In	0925						
Z number	192794	Time Out							
Group or Employer	MOTA	Reading In	13.6						
Dosimetry ID number	35519	Reading Out	14.1						
Date	10-30-02	Accumulated Exposure							
Allowable Exposure for this job		Total Exposure for this job	.5						

Printed Name	D. TORINO	Time In	0925						
Z number	170306	Time Out							
Group or Employer	CORONADO	Reading In	23.2						
Dosimetry ID number	34698	Reading Out	23.9	KB					
Date	10-30-02	Accumulated Exposure	0.3 .7	KB					
Allowable Exposure for this job		Total Exposure for this job	↓						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	A. Scott	Time In	0925					
Z number	176367	Time Out						
Group or Employer	Coronado	Reading In (A)	19.3					
Dosimetry ID number	34813	Reading Out(B)	19.7					
Date	10-30-02	Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job	.4					

Printed Name	H. Rutland	Time In						
Z number		Time Out	VOID					
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure	ENTRY					
Allowable Exposure for this job	—	Total Exposure for this job					10-30-02	

Printed Name	S. Kerr	Time In	0925					
Z number	190339	Time Out						
Group or Employer	MOTA	Reading In	11.0					
Dosimetry ID number	35532	Reading Out	11.2					
Date	10-30-02	Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job	.2					

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	D. DANARD	Time In	0925						
Z number	190586	Time Out							
Group or Employer	MOTA	Reading In (A)	12.3						
Dosimetry ID number	35415	Reading Out(B)	13.0						
Date	10-30-02	Exposure for Entry(B-A)							
Allowable Exposure for this job		Total Exposure for this job	~~+3.0~~ +0.7 KR						

Printed Name		Time In							
Z number		Time Out							
Group or Employer		Reading In							
Dosimetry ID number		Reading Out							
Date		Accumulated Exposure							
Allowable Exposure for this job		Total Exposure for this job							

Printed Name		Time In							
Z number		Time Out							
Group or Employer		Reading In							
Dosimetry ID number		Reading Out							
Date		Accumulated Exposure							
Allowable Exposure for this job		Total Exposure for this job							

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019 - TA2

Printed Name	ALAB HINKLE	Time In	7:30					
Z number	181965	Time Out						
Group or Employer	S.A.I.	Reading In (A)	4.8					
Dosimetry ID number	DD 534693	Reading Out(B)	5.1					
Date	5/31/02	Exposure for Entry(B-A)	.3					
Allowable Exposure for this job		Total Exposure for this job	.3					

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TAZ

Printed Name	J. LAURENT	Time In	0700					
Z number	192795	Time Out						
Group or Employer	MCTA	Reading In (A)	8.7					
Dosimetry ID number	35544	Reading Out(B)	11.5					
Date	10-31-02	Exposure for Entry(B-A)	2.8					
Allowable Exposure for this job		Total Exposure for this job	2.8					

Printed Name	R. LIVINGSTON	Time In	0700					
Z number	~~MOTA~~ 192794	Time Out						
Group or Employer	MOTA	Reading In	14.5					
Dosimetry ID number	35519	Reading Out	15.9					
Date	10-31-02	Accumulated Exposure	1.4					
Allowable Exposure for this job		Total Exposure for this job	1.4					

Printed Name	H LUTCAND	Time In	0700					
Z number	190588	Time Out						
Group or Employer	MCTA	Reading In	11.0					
Dosimetry ID number	35489	Reading Out	11.7					
Date	10/31/02	Accumulated Exposure	.7					
Allowable Exposure for this job		Total Exposure for this job	.7					

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TAZ

Printed Name	S. KERR	Time In	0700					
Z number	Z90369	Time Out						
Group or Employer	MOTA	Reading In (A)	11.5					
Dosimetry ID number	HS 35532	Reading Out(B)	12.9					
Date	10-31-02	Exposure for Entry(B-A)	1.4					
Allowable Exposure for this job		Total Exposure for this job	1.4					

Printed Name	D. DANSARD	Time In	0655					
Z number	190586	Time Out						
Group or Employer	MOTA	Reading In	13.4					
Dosimetry ID number	H 35415	Reading Out	16.5					
Date	10-31-02	Accumulated Exposure	3.1					
Allowable Exposure for this job		Total Exposure for this job	3.1					

Printed Name	JAL RUTLAND	Time In						
Z number	190588	Time Out						
Group or Employer	MOTA	Reading In	11					
Dosimetry ID number	H 35489	Reading Out						
Date	10-31-02	Accumulated Exposure		7				
Allowable Exposure for this job		Total Exposure for this job						

REPEAT ENTRY DH 10-31-02

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	S. LAURENT	Time In	0700						
Z number	192795	Time Out	1700						
Group or Employer	MOTA	Reading In (A)	0						
Dosimetry ID number	35549	Reading Out(B)	2.1						
Date	11/1/02	Exposure for Entry(B-A)	2.1						
Allowable Exposure for this job	50	Total Exposure for this job	2.1						

Printed Name	R. LIVINGSTON	Time In	0700						
Z number	192794	Time Out	1700						
Group or Employer	MOTA	Reading In	0						
Dosimetry ID number	35519	Reading Out	2.7						
Date	11/1/02	Accumulated Exposure	2.7						
Allowable Exposure for this job	50	Total Exposure for this job	2.7						

Printed Name	J. COLLEE	Time In	0700						
Z number		Time Out	1700						
Group or Employer	SAI	Reading In	0						
Dosimetry ID number		Reading Out	.5						
Date	11/1/02	Accumulated Exposure	.5						
Allowable Exposure for this job	50	Total Exposure for this job	.5						

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	S. KERR	Time In	0700					
Z number	190389	Time Out	1700					
Group or Employer	MOTA	Reading In (A)	0					
Dosimetry ID number	35532	Reading Out(B)	.9					
Date	11/1/02	Exposure for Entry(B-A)	.9					
Allowable Exposure for this job	50	Total Exposure for this job	.9					

Printed Name	D. RANSRD	Time In	0700					
Z number	190586	Time Out	1700					
Group or Employer	MOTA	Reading In	0					
Dosimetry ID number	35415	Reading Out	.5					
Date	11/1/02	Accumulated Exposure	.5					
Allowable Exposure for this job	50	Total Exposure for this job	.5					

Printed Name	H. RUTLAND	Time In	0700					
Z number	190588	Time Out	1700					
Group or Employer	MOTA	Reading In	0					
Dosimetry ID number	35489	Reading Out	.5					
Date	11/1/02	Accumulated Exposure	.5					
Allowable Exposure for this job	50	Total Exposure for this job	.5					

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-D2-019-TA2

Printed Name	S. LAURENT	Time In 0630	0630					
Z number	192795	Time Out						
Group or Employer	MOTA	Reading In (A)	2.1					
Dosimetry ID number	35594	Reading Out(B)	3.5					
Date	11/2/02	Exposure for Entry(B-A)	1.4					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	R. LIVINGSTON	Time In	0630					
Z number	192794	Time Out						
Group or Employer	MOTA	Reading In	2.7					
Dosimetry ID number	35519	Reading Out	3.4					
Date	11/2/02	Accumulated Exposure	.7					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	H. RUTLAND	Time In	0630					
Z number	905BB	Time Out						
Group or Employer	MOTA	Reading In	.5					
Dosimetry ID number	35489	Reading Out	1.5					
Date	11/2/02	Accumulated Exposure	1					
Allowable Exposure for this job	50	Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-02-1-019-TA2

Printed Name	LAVATO	Time In	0915						KS
Z number	192394	Time Out	1630						
Group or Employer	SAI	Reading In (A)	7.7						
Dosimetry ID number	34697	Reading Out(B)	8.1						
Date	11/7/02	Exposure for Entry(B-A)	.4						
Allowable Exposure for this job	50	Total Exposure for this job	.4						

Printed Name	Mark Mountain	Time In	0700					
Z number	~~193023~~ 193023	Time Out	1430					
Group or Employer	MOTA	Reading In	4.7					
Dosimetry ID number	35510	Reading Out	5.8					
Date	11-9-02	Accumulated Exposure	1.1					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	DAVID BALL	Time In	0700					
Z number	193024	Time Out	1430					
Group or Employer	MOTA	Reading In	4.1					
Dosimetry ID number	35624	Reading Out	5.9					
Date	11-9-02	Accumulated Exposure	1.8					
Allowable Exposure for this job	50	Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	DANA WILLIAMS	Time In	0700						
Z number	178110	Time Out	1500						
Group or Employer	WD3	Reading In (A)	1.9						
Dosimetry ID number	35508	Reading Out(B)	6.0						
Date	11-9-02	Exposure for Entry(B-A)	4.1						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	Mark Mountain	Time In	0700						
Z number	193023	Time Out	1645						
Group or Employer	MOTA	Reading In	6.3						
Dosimetry ID number	35510	Reading Out	8.8						
Date	11-11-02	Accumulated Exposure	2.5						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	DAVID BALL	Time In	0700						
Z number	193024	Time Out	1645						
Group or Employer	MOTA	Reading In	6.5						
Dosimetry ID number	EB 11-03 ~~35510~~ 35624	Reading Out	9.3						
Date	11-11-02	Accumulated Exposure	3.2						
Allowable Exposure for this job	50	Total Exposure for this job							

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	FLORATINO STANLEY	Time In	1105						
Z number	148146	Time Out	1200						
Group or Employer	S.W.	Reading In (A)	4.5						
Dosimetry ID number	35480	Reading Out(B)	4.6						
Date	11-9-02	Exposure for Entry(B-A)	.1						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	CALAB HINKLE	Time In	1110						
Z number	1870620	Time Out	1450						
Group or Employer	S.W	Reading In	9.8						
Dosimetry ID number	34693	Reading Out	10.2						
Date	11-9-02	Accumulated Exposure	.4						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	STEVE BLACKWELL	Time In	1120						
Z number	193252	Time Out	1450						
Group or Employer	SEC	Reading In	0						
Dosimetry ID number	8937 Temp.	Reading Out	.2						
Date	11-9-02	Accumulated Exposure	.2						
Allowable Exposure for this job	50	Total Exposure for this job							

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	Daniel Ortiz	Time In	0700					
Z number	192477	Time Out	1426					
Group or Employer	S.W.	Reading In (A)	8.0					
Dosimetry ID number	34624	Reading Out(B)	9.1					
Date	11-9-02	Exposure for Entry(B-A)	1.1					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	Bob Toutoint	Time In	0700					
Z number	191947	Time Out	1430					
Group or Employer	MOTA	Reading In	2.8					
Dosimetry ID number	35537	Reading Out	3.6					
Date	11-9-02	Accumulated Exposure	1.2					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	Mario Vargas	Time In	0735					
Z number	181351	Time Out	1420					
Group or Employer	S.W.	Reading In	~~0~~					
Dosimetry ID number	PN 7329 TEMP.	Reading Out	1.0					
Date	11-9-02	Accumulated Exposure	1.0					
Allowable Exposure for this job	50	Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	John Conley	Time In	0700					
Z number	182455	Time Out	1545					
Group or Employer	S.W.	Reading In (A)	5.6					
Dosimetry ID number	34658	Reading Out(B)	7.1					
Date	11-9-02	Exposure for Entry(B-A)	1.5					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	ELAINE BROWN	Time In	0700					
Z number	190385	Time Out	1500					
Group or Employer	SEC	Reading In	4.0					
Dosimetry ID number	35608	Reading Out	4.7					
Date	11-9-02	Accumulated Exposure	.7					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	HAL RUTLAND	Time In	0700					
Z number	190588	Time Out	1400					
Group or Employer	MOTA	Reading In	8.9					
Dosimetry ID number	35469	Reading Out	8.9					
Date	11-9-02	Accumulated Exposure	0					
Allowable Exposure for this job	50	Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	MARK MOUNTAIN	Time In	0700					
Z number	193023	Time Out	1630					
Group or Employer	MOTA	Reading In (A)	9.0					
Dosimetry ID number	35510	Reading Out(B)	9.4					
Date	11-12-02	Exposure for Entry(B-A)	.4					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	DAVID BALL	Time In	0700					
Z number	193024	Time Out	1630					
Group or Employer	MOTA	Reading In	9.4					
Dosimetry ID number	35624	Reading Out	9.8					
Date	11-12-02	Accumulated Exposure	.4					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	ELAINE BROWN	Time In	0800					
Z number	190385	Time Out	1630					
Group or Employer	SEC	Reading In	5.9					
Dosimetry ID number	35608	Reading Out	6.1					
Date	11-12-02	Accumulated Exposure	.2					
Allowable Exposure for this job	50	Total Exposure for this job						

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	HAL RUTLAND	Time In	0700					
Z number	190588	Time Out	1630					
Group or Employer	MOTA	Reading In (A)	10.4					
Dosimetry ID number	35469	Reading Out(B)	10.8					
Date	11-12-02	Exposure for Entry(B-A)	.4					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	DAN DANSARD	Time In	0845					
Z number	190586	Time Out	1630					
Group or Employer	MOTA	Reading In	11.1					
Dosimetry ID number	35415	Reading Out	12.4					
Date	11-12-02	Accumulated Exposure	1.3					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	BOB TOUTAINT	Time In	1100					
Z number	191947	Time Out	1630					
Group or Employer	MOTA	Reading In	5.3					
Dosimetry ID number	35537	Reading Out	~~8.0~~	6.9	EAB 11-12-02			
Date	11-12-02	Accumulated Exposure	1.6	1.6	11-12-02 EAB			
Allowable Exposure for this job	50	Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	BOB TOUTAINT	Time In	0700						
Z number	191947	Time Out	1630						
Group or Employer	MOTA	Reading In (A)	7.2						
Dosimetry ID number	35537	Reading Out(B)	11.6						
Date	11-13-02	Exposure for Entry(B-A)	4.4						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	ELAINE BROWN	Time In	0700						
Z number	190385	Time Out	1700						
Group or Employer	SEC	Reading In	6.4						
Dosimetry ID number	35604	Reading Out	6.7						
Date	11-13-02	Accumulated Exposure	.3						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	HAL RUTLAND	Time In	0700						
Z number	190588	Time Out	1700						
Group or Employer	MOTA	Reading In	10.9						
Dosimetry ID number	35469	Reading Out	12.3						
Date	11-13-02	Accumulated Exposure	1.4						
Allowable Exposure for this job	50	Total Exposure for this job							

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA-2

Printed Name	Kevin Milliken	Time In	1130					
Z number	19502	Time Out	1630					
Group or Employer	MoTA	Reading In (A)	6.0					
Dosimetry ID number	35561	Reading Out(B)	6.8					
Date	11-12-02	Exposure for Entry(B-A)	.8					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	Kevin Milliken	Time In	0700					
Z number	19502	Time Out	1630					
Group or Employer	MoTA	Reading In	6.8					
Dosimetry ID number	35561	Reading Out	17.1					
Date	11-13-02	Accumulated Exposure	10.3					
Allowable Exposure for this job	50	Total Exposure for this job						

Printed Name	Shawn Laurent	Time In	0700					
Z number	19795	Time Out	1630					
Group or Employer	MoTA	Reading In	7.3					
Dosimetry ID number	35544	Reading Out	17.8					
Date	11-13-02	Accumulated Exposure	10.5					
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR1-02-019-TA-2

Printed Name	Daniel ORTIZ	Time In	1300						
Z number	192477	Time Out	1630						
Group or Employer	S.W.	Reading In (A)	10.9						
Dosimetry ID number	34624	Reading Out(B)	11.1						
Date	11-13-02	Exposure for Entry(B-A)	.2						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	Joe Lavato	Time In	1300						
Z number	192394	Time Out	1630						
Group or Employer	S.W.	Reading In	10.7						
Dosimetry ID number	34697	Reading Out	11.0						
Date	11-13-02	Accumulated Exposure	.3						
Allowable Exposure for this job		Total Exposure for this job							

Printed Name	K. Milliken	Time In	0700						
Z number	191502	Time Out	1200						
Group or Employer	MOTA	Reading In	17.1						
Dosimetry ID number	35561	Reading Out	17.8						
Date	11/14/02	Accumulated Exposure	.7						
Allowable Exposure for this job	50	Total Exposure for this job							

KZ

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-019-TA2

Printed Name	S. LAURENT	Time In	0700						KV
Z number	192795	Time Out	1200						
Group or Employer	MOTA	Reading In (A)	17.8						
Dosimetry ID number	35544	Reading Out(B)	18.5						
Date	11/14/02	Exposure for Entry(B-A)	.7						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name	B. TOUSSAINT	Time In	1230						KV
Z number	191947	Time Out	1400						
Group or Employer	MOTA	Reading In	12.0						
Dosimetry ID number	35537	Reading Out	13.2						
Date	11/14/02	Accumulated Exposure	1.2						
Allowable Exposure for this job	50	Total Exposure for this job							

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

DOSE TRACKING REPORT

RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: _____

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: _____

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments

Attachment 1

SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: _____

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments

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SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: _____

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments

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SUPPLEMENTAL DOSIMETRY ISSUE SHEET

Location: _____

Printed Name	Z #	Group or Employer	RWP or SOP #	✓ this block if dose tracking report initiated	Date and Time of Issue	Dosimeter Type/ ID #	Initial Reading (mR)	Final Reading (mR)	Total Exposure (mR)	Comments

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
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Allowable Exposure for this job		Total Exposure for this job						

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Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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RWP or SOP #: _____

Printed Name		Time In						
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Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
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Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
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Allowable Exposure for this job		Total Exposure for this job						

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Allowable Exposure for this job		Total Exposure for this job						

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Group or Employer		Reading In						
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Date		Accumulated Exposure						
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Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
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Printed Name		Time In						
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Group or Employer		Reading In (A)						
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Date		Accumulated Exposure						
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Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
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Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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Z number		Time Out						
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Date		Accumulated Exposure						
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Dosimetry ID number		Reading Out						
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Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
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RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number.		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

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RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

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RWP or SOP #: _____

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In (A)						
Dosimetry ID number		Reading Out(B)						
Date		Exposure for Entry(B-A)						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

INALYS Kit Recipient List

pplemental Dosimetry Issue SHEET (Blanks)

S4510 KIT RECIPIENT LIST 30 Aug 0

[redacted]tion Point : HOME Schedule Date : 30-AUG-02

[redacted]ian : STELMACK SHIRLEY
:ernate Custodian : VALDEZ MAXINE D
ırier :

t mber	Name	Z Number	Group	Schedule Date	Analyte	Type of Sch	Kit Recvd	Kit Return	Cond	Comments
267	GOMEZ RENE	147436	FWO-CGRP	30-AUG-02	U	B				
266	HARRIS CRAIG	191800	FWO-CGRP	30-AUG-02	U	B				

)URIER:

its distributed
o this distribution
oint.

nitials/Date

Kits Returned to CST-3

[redacted]rials/Date

CUSTODIAN:

Kits received at this distribution point.

Initials/Date

Kit recipient list has been Completed and kits can be returned by courier.

Initials/Date

[redacted]tion Point : HOME Schedule Date : 22-AUG-02

[redacted]odian : STELMACK SHIRLEY
ternate Custodian : VALDEZ MAXINE D
urier :

t mber	Name	Z Number	Group	Schedule Date	Analyte	Type of Sch	Kit Recvd	Kit Return	Cond	Comments
8786	BROUGHTON DENNIS E	191045	FWO-CGRP	22-AUG-02	U	B				
8791	CRAFT EARNEST	191325	FWO-CGRP	22-AUG-02	U	B				
8784	FENNEMA JAMES	191503	FWO-CGRP	22-AUG-02	U	B				
8785	MILLIKEN KEVIN	191502	FWO-CGRP	22-AUG-02	U	B				
8788	SCHNELL GERALD L	191326	FWO-CGRP	22-AUG-02	U	B				
8789	SUMMERS KIRK	191324	FWO-CGRP	22-AUG-02	U	B				
8787	WEEKS THEODORE C JR	191329	FWO-CGRP	22-AUG-02	U	B				
78790	WOOD WYATT	191501	FWO-CGRP	22-AUG-02	U	B				

COURIER:

[redacted]s distributed to this distribution point.

Initials/Date

Kits Returned to CST-3

Initials/Date

CUSTODIAN:

Kits received at this distribution point.

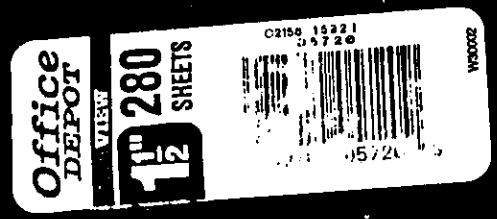
Initials/Date

Kit recipient list has been Completed and kits can be returned by courier.

Initials/Date

[redacted]

EXTREMETRY DOSIMETRY



EXTR. DOSIM. PAPER WORK

CIRCULATED

OWR-WI-5.0-RAD
Revision-~~Draft~~ 0

WORK INSTRUCTION PACKAGE COVER SHEET 9/9/02

Work instruction Title Thermal Column Graphite Stringer Ports and Content Removal

Work instruction Number OWR-WI-5.0-RAD

Prepared by: Ted Weeks

General Description of Work to be Performed The removal of sample facilities, graphite stringers and any and all unexpected material.

Approvals:

Responsible Manger _____ 9/9/02 Date Waste Manager _____ (if req.) Date

HP Manger _____ 9/9/02 Date HSO _____ 9-9-02 Date

Project Supt _____ 9/09/02 Date Project Manager _____ Date

Pre-Job Brief Attendance

Subject _____ Date Given: _____

ATTENDEES:

PRINT NAME	SIGNATURE	Z NUMBER

Thermal Column Graphite Stringer Ports Content Removal

Scope of work

The thermal column graphite stringer ports include the removal of the sample facilities and the graphite stringers and steel shielding plugs, and as permitted by Radcon, any and all unexpected material. If unexpected material is present, management and/or Radcon may deem conditions too radiologically severe to continue at which time the removal shall stop and be placed into to a radilogically safe condition as determined by Radcon. Otherwise, radiological conditions permitting the RCT may authorize removal activity to continue. The graphite is nuclear grade (contrary to the beam tubes) and should present no significant activity from the graphite itself.

Purpose

The purpose is the removal of the sample facilities and there contents for disposal and the removal of the graphite stringer blocks to determine the radiological status of the ports and the graphite stringers, Empty graphite stringers shall be replaced.

Work Execution Plan

1.0 Assemble all tools and equipment in ready-to-use conditions.

2.0 Prepare the thermal column graphite stringer port area.

- 2.1 Determine size of the work area and rope it off, size may be adjusted as necessary during the port content removal.
- 2.2 Cover the work area with Herculite this will included walls and floor in the material handling area.
- 2.3 Install Radcon controls and equipment as necessary.
- 2.4 Install HEPA vacuum at bioshield in close proximity to the work zone for the remove of components.
- 2.5 Start the HEPA exhauster.

STOP **Signature Authorization to Proceed:**

Radcon Engineer: _____

MOTA Proj. Mgr: _____

3.0 Utilizing hand tools commence removal of component either graphite block or sample points. The RCT shall be monitoring the work area for radiological condition changes and air quality during component removal from the thermal column graphite stringer ports.

3.1 The RCT will stop work if changing radiological conditions warrants.

NOTE: **Work shall stop if contact reading reach or exceed 10 R/hr or general area of 1.5 R/hr.**

3.2 If work is stopped by the RCT work may only be resumed by authorized signature of the RCT.

Work resumption authorization signature if required

RCT: _____

4.0 All components removed from the thermal column graphite stringer ports shall be monitored by the RCT for disposition. Item for disposal shall be packaged as soon as practical for maintaining general housekeeping requirements.

4.1 Graphite shielding blocks shall be stored neatly and radiologically safe for returning to the port after the information gathering is complete.

Job Hazards Checklist
Specific Controls Attachment

Foot Hazards will be controlled by:

A. Component design and review of special tools.
B. Hard toe shoes are required

Thermal Hazards

Expected heat stress conditions will be continuously monitored by safety officer and "stay times" directed as appropriate.

Respiratory Hazard

Control measures are the wearing of either MSA dust respirator or full face mask as directed by the RCT See RWP.

Radiation Hazard

Controlled by shielding as necessary and continuous monitoring by radiological control personnel.

Posting

Necessary and provided by Radcon and safety representative.

Tools, Equipment and Supplies

I. Tools

1. T-Handle Pull Rod
2. Pull rod centering disk
3. Plug transition bridges
4. Elevator platform lift cradles
5. 2 liquid fixative swab tools
6. 1 fixative sprayer
7. Video cameras, tripod and 2 monitors
8. Velometer
9. HD ratchet wrench extension and 6-point socket welded on it
10. HD ratchet wrench with out-of-beam handle
11. Tool for attaching to liner flange preparatory to withdrawal
12. Shielding plug for liner with Attached Handle
13. Mix of tools and box
14. 2 HDG clamps
15. Flash light
16. Garden sprayer

II. Equipment

1. Two HEPA Vacs (500 CFM)
2. Fork lift truck
3. Lift platform
4. One HEPA Ventilator (15,000 CFM)

III. Supplies

1. Particulate fixative solution
2. Shipping containers
3. Bags for bag-out transfers
4. Swabbing material
5. Herculite
6. Six mill plastic for bag-out sleeve fabrication (Prep. in advance)
7. Flex hose to fit Vac and Beam Port Vent
8. Toweling-Cotton material or clean diaper waste
9. Duct tape

JOB HAZARDS CHECKLIST WI NO: OWR-WI-5.0-RAD

ITEM		YES	NO	SPECIFIC CONTROLS
VISION HAZARDS: particles, chemicals, temperatures, vapors		X		SAFETY GLASSES will be WORN
NOISE HAZARDS: hand or power tools, equipment in area			X	
HEAD HAZARDS: falling objects, bump hazards, electrical		X		HARD HATS will be WORN
FOOT HAZARDS: falling, rolling objects, sharp objects		X		Hard toe shoes shall be warn
FACE HAZARDS: sparks, splash, particles			X	
RESPIRATORY: dusts, fumes, oxygen deficiency, toxic gas, other			X	
LEAD HAZARDS: dust, fumes			X	
ASBESTOS HAZARDS: insulation, abatement activities			X	
LOCKOUT/TAGOUT: electrical, machinery, piping systems; pneumatic systems; tanks, sumps, other: _____			X	
HAND HAZARDS: sharps, temperatures, hazardous substances			X	
FALL HAZARDS: anchor points, prior to use equipment inspection, floor or wall openings, uneven surface, trip hazards			X	
MATERIAL HANDLING: slings, prior to use equipment inspection, lifting, rigging, fork trucks, pinch points			X	
THERMAL HAZARDS: heat/cold			X	
CONFINED SPACE HAZARDS:			X	
RESCUE HAZARDS/RESCUE PLAN: access, layout, stage equipment for rescue			X	
CHEMICAL EXPOSURE HAZARDS: review MSDSs, HMIS label			X	

FIRE HAZARDS: Welding Grinding Burning Flammable Materials Explosion Hazards			X	
ACCESS HAZARDS: Scaffolds, layout of work area, ladders			X	
ELECTRICAL HAZARDS: Assured Grounding Protection, GFCI			X	
COMMUNICATION DIFFICULTIES: radio, speakers			X	
INTERFACE WITH OTHER DEPARTMENTS: Security Impact Radiation Protection Impact Operations Impact QA Health and Safety Other:		X		Radcon shall be present for this evolution to monitor for changing radiological conditions as items are removed.
RADIATION HAZARDS:				
POSTING NEEDED: (Barricades, signs)				

Notes/Comments: _____

_____

_____

Completed by: _____ Date: _____
Supervisor

Reviewed by: _____ Date: 9-5-02
Health and Safety Representative

Work Completed this Shift:

Additional Comments or Notes:

Daily Activity Plan

Title: _____

WI No: _____

Supervisor _____

Competent Person(s)

Fall Protection: ☐ _____
Excavations: ☐ _____
Confined Space: ☐ _____
Rigging: ☐ _____
Scaffolding: ☐ _____
Lead / Silica: ☐ _____

Activities:

Small Tools, Materials & Equipment:
(or attach list)

1: _____
2: _____
3: _____
4: _____
5: _____
6: _____
7: _____
8: _____

Reference Permits:

RWP: ☐ _____
Lead Permit: ☐ _____
Fire Permit: ☐ _____
Confined Space: ☐ _____
Postings: ☐ _____
Environmental: ☐ _____
LO/TO: ☐ _____
Other: ☐ _____

Hazards / Special Safety Requirements:

Daily Check List	Yes	No	Sign-Off	Hazards	Yes	No
Job Hazard Check List				Ventilation		
Lockouts / Tag-Outs				Double Eye		
Rigging Inspection				Hand / Finger		
Systems Protected				Fall Protection		
ALARA Review				Housekeeping		
				Communication		
				Radiological		

Pre-Job Brief Attendance

Subject _____ Date Given: _____

ATTENDEES:

PRINT NAME	SIGNATURE	Z NUMBER

OCUMENT/DISTRIBUTION SHEET
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[redacted]ONTRACT 41968-000-02-CJ

850 24.070.05 RAD Worker Permits
RAD Worker Permits 168

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Los Alamos
National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-02-008-TA 2.
Effective 8/8/02 Expires 11/8/02

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus	WD3	780-0355	NA	TA2-OWR-101

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	OWR-WI-RP-1.0	NA	8-12-02	08-23-02

Work to be performed:

Workers to remove lead blanket sheilding and aluminum plate to provide access to reactor hatch.

Workers will replace most of lead sheilding after aluminum plate is removed to provide dose reduction for RCT's and MOTA for camera inspection.

RCT's will take remote dose readings in the vessel using a RO-7. A remote video camera will then be lowered into the vessel for inspection of internals and possible dose contributors. RCT's will take a sample of loose radioactive materials. LANL RCT's will sample potential beryllium containing materials. All samples will be handled according to the work instructions. Workers will then replace remaining lead sheilding after hatch in closed.

Are nonradiological hazards involved? Yes ☒ No ☐ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	TBD / NA	TBD / NA	TBD / NA
Beta/gamma	TBD / NA	TBD / NA	TBD / NA
Tritium		TBD / NA	

External Dose Rate (mrem/hr in work area)

Beta + gamma	250 / 50
Neutron	NDA / NDA
Total (β + γ + n)	250 / 50

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

<100 DAC TBD Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (printed name)	Signature	Z Number	Date
Jonathan Coleman		190383	8-9-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☒ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☒ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: Applies to all workers while hatch is open *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☒ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☒ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☐ Routine work ☒ Special radiological work
Estimated person-hours for job Sheilding-4hrs/Camera-4hrs
Estimated /measured working dose rates 50mr/hr / 250mr/hr
Estimated collective dose 1.2 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. Workers will wear respiratory protection when hatch is intially opened. This requirement may be downgraded when it is determined that no airborne hazard exists.

2. No unathorized workers will be allowed in the building when the hatch is open.

3. All work over the open hatch will be limited to neccessary tasks only. Dose rates around the hatch could exceed 600 mr/hr. Do not work in radiation field over hatch without RCT direction.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Jonathan Coleman		190383	8-9-02

APPROVALS

1. Manager Mark Granus	Signature	Z Number 190158	Date 8/9/02
2. RCT supervisor Bruce Moffatt	Signature	Z Number 190159	Date 8/9/02
3. Other *(job title/printed name)* Martin Peifer HSR-1 Team Leader	Signature	Z Number 108821	Date 8-9-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)			External Dose Rate (mrem/hr in work area)	
Alpha	nda / nda	nda / nda	nda / nda			Beta + gamma	2500 / 50
Beta/gamma	na / na	5k / 2k	5k / 2k			Neutron	na / na
Tritium		na / na				Total (β + γ + n)	2500 / 2500

Airborne Radioactivity <0.1 DAC MFP Isotope ☐ Estimated or ☒ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Jonathan Coleman		190383	9-4-02

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☒ CAM results
- ☒ Job-specific air monitoring
- ☒ Pre-job survey data
- ☒ Post-job survey data
- ☒ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☒ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☐ Yes *(Add attachment if necessary)* ☒ No

Task was done for

ALARA actions taken and results:

Use of long Poles and TV Cameras to Conduct inspection.

Problems encountered:

None

Recommendations for future similar jobs:

Use Cameras + HEPAs.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT ~~supervisor~~ *(printed name)*	Signature	Z Number	Date
R. Duchesne	RONALD SWETNAM	190160	8/20/02

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National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-002-TA2		TA-2-OWR-101

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
19058	M. GRANUS	WD2		8/13/02	1415
190159	Bruce Moffett	WD3		8/13/02	1410
190160	RON SWETNAM	WDB		8/13/02	1410
113569	David STAFFORD	LANL		8/13/02	1420
190585	HAL RUTLAND	MOTA		8/14/02	0750
190389	SCOTT M. KERR	MOTA		08/14/02	0751
191325	ERNEST CRAFT	SEC		8/19/02	1500
190385	Elaine Brown	SEC		8.2002	0740
111329	TED WEEKS	MOTA		8/29/02	9:40
191329	Kirk Summers	SEC		9/4/02	0930
190386	D SHERMAN	WD3		9-17-02	0925
191947	RH TOUTAINT	MOTA		9/25/02	0925
191800	CRAIG HARRIS	SEC		9/25/02	1030
Conducted by:			Date:		

HPAL SUBMITTAL FORM

SAMPLE DESCRIPTION

ample Date/Time: 8/14/02 1145 No. Of Samples: 4

Bldg: 1

ICT: J. Coleman Z Number: 190383

ICT Signature: MS: M769

Phone/Fax: 786-0362

SAMPLE TRACKING NUMBER

ESH-1 SAMPLE TRACKING

22011223

SAMPLE PRIORITY STATUS

TYPE OF SAMPLE SUBMITTED

☐ Smear ☐ LAS ☐ Oils ☐ Liquid ☐ Soil ☐ Solid

☐ CAM ☐ Air Sample ☒ Nasal Swipe ☐ Wound

☐ Stack

☐ Special/Type:

REMARKS

ANALYSIS REQUESTED

☒ Gross (check the appropriate box) ☒ Alpha ☒ Beta ☐ Gamma

☐ Gamma Spec ☐ Alpha Spec ☒ Liquid Scint

☐ Nuclide:

Relinquished by	Date	Time	Received by	Date	Time
Printed Name					
Signature					
Z Number					
Printed Name					
Signature					
Z Number					
Printed Name					
Signature					
Z Number					
Printed Name					
Signature					
Z Number					
Printed Name					
Signature					
ber					

HPAL SUBMITTAL FORM

SAMPLE DESCRIPTION

Sample Date/Time: 8-14-02 No. Of Samples: 4
TA: Z Bldg: 1
RCT: J. Coleman Z Number: 190383
RCT Signature: [signature] MS: M769
Phone/Fax: 780-0362

SAMPLE TRACKING NUMBER

ESH-1 SAMPLE TRACKING

22011223

TYPE OF SAMPLE

☐ Smear ☐ Tritium Smears ☐ Oils ☐ Liquid ☐ Soil
☐ CAM ☐ Air Sampler ☒ Nasal Swipe ☐ Solid
☐ Special / Type:

ANALYSIS REQUESTED

Gross: ☒ Alpha ☒ Beta ☐ Gamma
☐ Alpha Spec ☐ Beta Analysis ☐ Gamma Spec. ☒ Liquid Scintillation Counting
☐ Nuclide:

COMMENTS

Occurrence No.:
Incident No.:
RWP No.: HSR-1-02-007-TA2

NASAL SWIPES

	Name	Z Number	Group	Respirator Yes/No	Date	Time
1	Jonathan Coleman	190383	BEC	Y	8-14-02	1145
2	Hal Ruthand	190588	MOTA	Y	8-14-02	1145
3	Darril Stafford	113569	HSR-1	Y	8-14-02	1145
4	Bruce Moffatt	190159	WO3	Y	8-14-02	1145
5						
6						
7						
8						
9						
10						

LIQUID / WOUND / OTHER SAMPLES

	Description	Sample ID No.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

CAM FILTERS / AIR SAMPLES

	Location	Sample On		Sample Off	
		Date	Time	Date	Time
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

HPAL ANALYSIS REPORT FORM

FILE: 22011223

SAMPLE DESCRIPTION	ANALYSIS REQUESTED	RCT
	TC1 at TA-50	
Sample Date: 8/19/2002	Nasal Swipe	Name: John Jameso
TA: 2	LLD (cpm): Alpha = 13 Beta= 13	TA: 53
BLDG: 1	Analyst: Joe Lopez	MS: H815

Sample ID #	Alpha Activity dpm	2*sigma %	Beta Activity dpm	2*sigma %
1	NDA/NDA	NDA/NDA	NDA/NDA	NDA/NDA
2	NDA/NDA	NDA/NDA	NDA/NDA	NDA/NDA
3	NDA/NDA	NDA/NDA	NDA/NDA	NDA/NDA
4	NDA/NDA	NDA/NDA	NDA/NDA	NDA/NDA

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National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-02-003-TA2
Effective 8-12-02 Expires 11-12-02

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
M. Granas	WD3	780-0355	N/A	TA-2-OWR-101

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	OWR-WI-1.0	N/A	8/13/02	9/04/02

Work to be performed:

Remove spectrometer and lab hoods in support of Omega West reactor decontamination and decommission.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	10 / 3
Neutron	NDA / NDA
Total (β + γ + n)	10 / 3

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

NDA DAC TBD Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
D. S. Heilman	D. S. Heilman	190386	8-12-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ **Requires ESH-5/JSFT (JCNMM) approval*

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☐ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☒ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☐ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☒ Other: See note #1

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements Estimated person-hours for job 12
ALARA Review Checklist Estimated /measured working dose rates 5 mR/Hr
attached: ☐ Yes ☒ No Estimated collective dose 0.060 person-rem
☐ Routine work ☐ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) RCT to perform radiation and loose surface contamination surveys on all newly exposed areas.

2) RCT to perform loose surface contamination survey for Alpha whenever gross removable Beta-Gamma is found.

3) If whole body doserates exceed 500mR/Hr, RCT to instruct workers to place work area in safe configuration and leave area pending further ALARA review.

4) RCT to perform air sampling for water evaporation if surface contamination is discovered on oil.

Completed by RCT *(printed name)*	Signature	Z Number	Date
D. S. Heilman	D. S. Heilman	190386	8-12-02

APPROVALS

1. Manager M. Granas	Signature	Z Number 190158	Date 8/12/02
2. RCT supervisor B. Moffatt	Signature	Z Number 190159	Date 8/12/02
3. Other *(job title/printed name)* M. Peifer HSR-1 Team Leader	Signature	Z Number 108821	Date 8-12-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-003-TA2	N/A	TA2-OWR-101

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190588	HAL RUTLAND	MOTA	Hal Rutland	8/12/02	1115
190398	SCOTT KERR	MOTA	Scott Kerr	08-12-02	1116
190386	DAVID S. HEILMAN	WD3	David S. Heilman	8-12-02	1116
190412	MARK L. PRZYBYSKI	LGI	Mark L. Przybyski	8-12-02	1116
190383	Jonathan Coleman	SEC/WD3	Jonathan Coleman	8-12-02	1116
190384	W M ZIEGLER	SEC	W M Ziegler	8/12/02	1600
190385	Elaine Brown	SEC/WD3	Elaine Brown	8-15-02	0900
110010	Darrik Stafford	LANL	Darrik Stafford	8-15-02	10:30
190094	Chelsea Leckus	PLES&RC	Chelsea Leckus	8/15/02	1030
190159	Bruce Moffett	WD3	Bruce Moffett	8/19/02	0700
191325	ERNEST CRAFT	SEC	Ernest Craft	8/19/02	1500
120634	Adrian Romero	Dura-K	Adrian Romero	8/19/02	1530
190586	D. D.ANSARD	MOTA	D. D. Ansard	8 27 02	0800
191800	CRAIG HARRIS	SEC	Craig Harris	8/29/02	0800
Conducted by:			Date:		

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☑ Dose tracking report
☑ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☑ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☑ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Need for detailed drawings of components

ALARA actions taken and results:

None

Problems encountered:

Oil flash while segmenting Reducer

Recommendations for future similar jobs:

more detailed Planing

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWATNAM	Signature	Z Number 90160	Date 3/20/03

Los Alamos
National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-02-006-TA-2
Effective 8-23-02 Expires 12-23-02

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Grapos	WD3	780-0355	NA	TA2-OWR-101

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	OWR-WI-3.0-Rad	NA	08-19-02	12-19-02

Work to be performed:

Remove plugs and identify any experimental or waste material present in West Beam Port.

RCT's will survey for contamination after each plug is pulled and a fixative applied if neccessary.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	<200 / <200	<200 / <200	
Beta/gamma	TBD / TBD	<10000 / <10000	<10000 / <10000	
Tritium		NA / NA		

External Dose Rate (mrem/hr in work area)

Beta + gamma	SEE /
Neutron	ATTACH / MENT
Total (β + γ + n)	#1 /

Identify anticipated radionuclides:

MFP / UNKNOWN

Airborne Radioactivity

TBD DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (printed name)	Signature	Z Number	Date
Jonathan Coleman		190383	8-23-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: 8/22/02

Respiratory Requirements ☐ None ~~☒ ESH-5 respirator card~~ ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☒ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☒ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☐ Routine work ☒ Special radiological work

Estimated person-hours for job SEE
Estimated /measured working dose rates ATTACHMENT
Estimated collective dose #1 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. RCT's will monitor dose rates and contamination levels after each plug is removed.

2. RCT's will be stationed outside the building to monitor for possible elevated dose rates as the plugs are pulled from beam port.

3. If any experimental or waste material is found in the beam port, the shield plugs will be replaced until further assessment and planning can be done.

4. If no experimental or waste material is found in the beam port, and radiological conditions permit, then workers may continue with removal of beam port sleeve.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Jonathan Coleman		190383	8-23-02

APPROVALS

1. Manager Mark Granus	Signature	Z Number 190158	Date 8/26/02
2. RCT supervisor Bruce Moffatt	Signature	Z Number 190159	Date 8-23-02
3. Other *(job title/printed name)* Marty Peiffer	Signature	Z Number 108821	Date 8.23.02
4. Other *(job title/printed name)*	Signature	Z Number	Date

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	NDA / NDA	NDA / NDA	NDA / NDA	
Beta/gamma	N/A / N/A	25K / 5K	40K / 10K	
Tritium		NA / NA		

External Dose Rate (mrem/hr in work area)

Beta + gamma	450 / 20
Neutron	NA / NA
Total (β + γ + n)	450 / 20

Airborne Radioactivity <0.1 DAC MFP Isotope ☐ Estimated or ☒ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Dave Heilman	DS Heilman	190386	9-4-02

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☑ CAM results
- ☑ Job-specific air monitoring
- ☑ Pre-job survey data
- ☑ Post-job survey data
- ☑ Extremity dose data
- ☐ Special dosimetry results
- ☑ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☑ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☑ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Ventilation was used to control Contamination

ALARA actions taken and results:

temp shielding and TV Camera long tools

Problems encountered:

lack of information concerning items in Port

Recommendations for future similar jobs:

More Planning

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
DS HEILMAN	DS Heilman	190386	9-4-02
Reviewed by RCT supervisor *(printed name)*	Signature	Z Number	Date
WOTNAM	Pevelnam	190160	8/20/03

Los Alamos
NATIONAL LABORATORY

Appendix 3C
ALARA Review Checklist

Job/Operation Title		
Inspection of OWR West Beam Port		
Purpose of Job/Operation		
Inspection of OWR West Beam Port		
RWP/HCP No.	Job/Operation Contact Mark Granus	SJ Ticket/WO No OWR-WI-3.0-Rad

Yes	No	Procedures
X		Prepare special radiological procedures?
X		Include radiological control hold points?
	X	Review abnormal and emergency procedures?
X		Identify where signatures or verifications are needed?
X		Establish success or completion criteria?
X		Develop pre-job collective dose estimate?
X		Apply special waste minimization, control, or disposal?
X		Establish detailed schedule for task sequencing/personnel entries?
		Engineering
X		Make special use of existing engineering controls?
	X	Develop new engineering controls?
	X	Install temporary/permanent shielding? (Include load/stress concerns.)
		Worker Preparation
	X	Provide special radiological training?
	X	Use mockups, walkdowns, or dry runs?
	X	Optimize worker efficiency (comfort vs. exposure)?
X		Use photos/drawings/video for pre-job briefing/training?
X		Select most highly skilled/qualified workers?
		Job Setup
X		Prestage materials or tools?
X		Prefabricate parts/materials?
X		Install special services (power, water, air, ventilation)?
X		Post ALARA waiting/rest areas and hot spots?
		Contamination Control
X		Use contamination curbing, floor covering, fencing?
	X	Use tents/glove boxes/containments?
	X	Use catch trays/drainlines?
X		Use HEPA vacuums?
X		Install local ventilation?
X		Use special protective clothing/devices?
X		Implement special hot particle controls?
X		Wet or fix loose contamination?
		Exposure Control
	X	Flush contaminated lines?
	X	Decontaminate area? (Optimize decontamination dose vs. job dose.)
	X	Allow for decay before entry?
X		Use special, remote, or robotic tools?
	X	Can a high-dose source be removed?
X		Require special monitoring (for example, CAMS, ARMS, continuous coverage)?
	X	Move some work to low or no exposure areas?
	X	Can work crew be reduced w/o increasing total dose?
	X	Is there unnecessary work that can be eliminated?
X		Use remote, integrating, or real-time dose tracking?
X		Use remote audio/visual communications?
	X	Use worker time limits?
X		Is there a useful ALARA technique for this job not mentioned above? Document on back of form.

List detailed recommendations on back. Attach any special analyses/worksheets (date and sign).
If ALARA recommendation implementation cost is about $50K or more, provide cost-benefit analysis.

Appendix 3C
ALARA Review Checklist-Cont.

List ALARA recommendations for job identified on reverse side.

Refer to RWP andWork Instruction for recommendations.

Prepared by Jonathan Coleman Date 8-22-02

Attach all supporting review documentation to this form and file with the RWP/HCP package.

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Changes to the RWP
(to be completed by the RCT)

RWP Number: HSR-1-02-006-TA-2 **Change Number:** 001

State reason for changes (such as changes in radiological conditions, scope, or type of work)
Scope of Work : Inspection & Removal of Material From West, North & South Beam Ports

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair boo es)
☐ Anti-C Gloves ☐ Booties ☐ Other: Rubber Shoe Covers

Respirator Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☒ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: HEPA ventilation required *Requires ESH-5/JSFT (JCNNM) appr al

Dosimetry Requirements ☐ None ☒ WB dosimeter ☒ Supplemental dosimeter ☐ Alarming dosim er
☒ Extremit dosimeter ☐ Spec al neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special bioanalysis ☐ Whole-body count ☐ Other:

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job nd
☐ Intermittent coverage ☐ Personnel before leaving job ☒ Equipment and tools before removal
☒ Self-fr king ☒ Continuous coverage ☒ RCT monitor doffing of anti-Cs
☐ Other:

Training Requirements ☐ RWI ☒ RWII ☐ Other:

ALARA Requirements
ALARA Review Checklist attached: ☒ yes ☐ no
☐ Routine work ☒ Special radiological work

Estimated person-hours for job 5.5
Estimated /measured working dose rates 20
Estimated collective dose .110 person-rem

UPDATED RADIOLOGICAL CONDITIONS (to be completed by the RCT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached ma:

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	TBD / TBD	N/A / N/A	N/A / N/A
Beta/gamma	TBD / TBD	N/A / N/A	N/A / N/A
Tritium		N/A / N/A	

External Dose Rate (mrem/hr in work area)

Beta + gamma	20 /
Neutron	0 /
Total (β + γ + n)	20 /

Airborne Radioactivity <.1 DAC MFP Isotope ☐ Estimated or ☐ Meas.

Completed by RCT/HPT (printed name)	Signature	Z Number	Date
Dave Heilman			

APPROVALS (requires same level of approval as original RWP)

	Signature	Z Number	Date
1. Manager JIM STAHLE		190381	29 aug 02
2. RCT supervisor Bruce Moffatt		190159	8/29/02
3. Other (job title/printed name) ANLRCT Sup. - MARTY PEIFER		16882	5/29/02
4. Other (job title/printed name)			

Instructions for Completing the RWP Change Form

ALARA/Radiological Protection Requirements (to be completed by the RCT)

1. Use the change form for different phases of the work activity, different crafts or changes in radiological conditions. The change form may be initiated at the start of a job, such as when it is known that different crafts need different radiological protection requirements. Major changes in work scope or radiological conditions require that a new RWP be completed.
2. State the reason for the changes (such as changes in radiological conditions or scope or type of work).
3. Complete according to the instructions on the RWP form.
4. Complete ALARA Review Checklist if required.

West Beam Tube and Contents Removal

Scope of Work

The West Beam Port activity includes the removal of shielding plugs, the identification of experimental or waste material if present, and as permitted by Radcon, the removal of such unexpected materials, the removal of the graphite plug and liner, and the replacement of the shielding plugs and face plate. If unexpected materials are present, management may deem conditions too radiologically severe to continue and order an immediate return of shield plugs, pending assessment and preplanning.

Purpose

The purpose is to determine as-is conditions of the port and liner components to facilitate removal plans for remaining experimental ports and facilities.

Work Execution Plan

1.0 Assemble all tools and equipment in ready-to-use condition. (See equipment and supplies check list.)

2.0 Prepare beam port work area.

2.1 Delineate work area and rope it off.

2.2 Within the work area, rope off the estimated beam zone, to be adjusted later by Radcon, as work progresses.

2.3 Cover floor with Herculite in plug handling area.

2.4 Install Radcon controls and equipment.

2.5 Install HEPA vacuum at bioshield step level and connect to beam port vent line.

2.6 Start HEPA exhauster.

2.7 Position surface-protected support platform against the bioshield at proper elevation to receive the beam port cover plate.Lock casters.

INSPECTION OF THE OMEGA WEST REACTOR WEST BEAM PORT

The Omega West Reactor West Beam Port consists of a 6" diameter 5' long aluminum dry tube aligned with the west side of the reactor core. The outer portion of the beam tube consists of a 12" blank flange, a 12" diameter 18" thick concrete shield plug and an inner 10" diameter 18" thick concrete plug. Attached to the outer shield plug area is a 4" vertical pipe 9' long extending to the mezzanine level of the reactor. The 6" portion of the beam port has a graphite cylinder in it of unknown length. There are also historic indications that a test rig may still be present in the beam tube.

The objective of the inspection of the west beam port is to determine the amount and radiological condition of the material that may be present in the beam tube, the dose rates present at various locations in the beam tube and the contamination levels that are present in the beam tube. This information will be used to establish plans to remove all of the beam tubes from the reactor.

The beam port inspection will consist of the following steps:

1. Connect a HEPA vacuum cleaner to the 4" vertical vent pipe attached to the outer 12" shield plug housing of the beam port. This vacuum cleaner will provide an air flow into the face of the beam port of 70 to 75 CFM. The surface area of the beam port is 0.75 square feet. The face velocity of the beam port with the outer 12" shield plug removed will be 90 to 100 FPM. This will provide for loose surface contamination control. Additional HEPAs in the range of 500 CFM to 5,000 CFM will be available in the event additional contamination control is required.

2. Standard radiological controls will be established in the work area consisting of roping off and posting the area, placing contamination control material on the floor and bioshield area of the work area.

3. Electronic alarming dosimeters and extremity dosimetry will be used by personnel conducting the inspection.

4. Until contamination levels and airborne activity levels are established respiratory protection equipment will be used.

5. Long handled tools and transport devices will be used to remove and transport the beam port shield plugs.

6. Once the inner and outer shield plugs are removed a temporary shield plug will be inserted into the 6" beam tube to lower the radiation level in the working area of the beam port face.

7. A remotely operated TV camera and recording device will be used to conduct the inspection of the open beam port.

8. Extendable high range dose rate instruments will be used to determine dose rates at various locations in the beam tube.

9. In the event elevated loose surface contamination levels are encountered the contamination will be fixed to the surface of the beam tube or beam tube shield plugs.

10. Personnel traffic around the work area will be limited when the beam port shield plugs are removed.

11. Only the outer shield plug and blank flange will be replaced at the end of the inspection assuming a future entry into beam port to remove liner.

The expected radiological dose rate at the face of the beam port, with both shield plugs removed, are expected to be in the range of 7 to 10 Rem/Hr. This estimated dose rate will be from Co-60 containing components in the reactor having dose rates in the range of 400 to 900 Rem/Hr as measured during the reactor internal inspection on 8/12/02. The working dose rate on either side of the beam port out of the radiation beam is estimated to be 8 to 15 mr/hr. The loose surface contamination levels in the work area will be maintained below 10,000 DPM. On 8/20/02 smearable levels and dose rates were taken in the 4" vertical vent pipe and found to be at background levels.

Man Rem estimate to inspect West Beam Port

Remove outer blank flange				
15 min	3 people	0.01 mr/hr	0.0075	mr
Remove Outer Shield Plug				
30 min	3 people	10.0 mr/hr	15.000	mr
Fix surface contamination if required in outer plug				
15 min	1 person	10.0 mr/hr	2.500	mr
Remove Inner Shield Plug				
30 min	3 people	100.0 mr/hr	150.0	mr
Camera inspection of Beam Tube				
30 min	2 people	10 mr/hr	10.0	mr
Replace outer Shield Plug				
30 min	3 people	100 mr/hr	150.0	mr
Replace Blank Outer blank Flange				
15 min	3 people	10.0 mr/hr	7.5	mr
Cleanup work area				
60 min	3 people	1.0 mr/hr	3.0	mr

Total estimated Man Rem 0.338

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National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-0006-TA2	001	TA2-DWR-101

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
113569	Donald Stafford	HSR-1		8/27/02	10:00
190389	Scott Kerr	HSR-1		08-27-02	1215
190588	Hal Rutland	HSR-1		8-27-02	1215
190396	David S. Herman	WD3		8-27-02	1215
190385	Elaine Brown	RCT/WD3		8-27-02	1215
190159	Bruce Moffett	WD3		8/27/02	1215
190381	Jim Stauer	WD3		8/29/02	1205
191325	Ernest Craft	SEC		8/29/02	1205
190586	D. Dangard	MOTA		8-29-02	1230
190412	[illegible]	UCI		8/29/02	1245
190385	Elaine Brown	RCT/WD3		8/29/02	1245
190921	John A. Carlson	WD3		9/5/02	3:03
191324	Kirk Summers	SEC		9/4/02	1015
Conducted by:			Date:		

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-006-TA2	002	TA2-OWR-101

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190385	Elaine Brown	RCT/WD3	Elaine Brown	8/29/02	1345
190412	MARTIN L PATTERSON	WCE	[illegible]	8/29/02	1245
113769	David STORM	LANL	[illegible]	8/29/02	1240
190586	D. DANSARD	MOTA	[illegible]	8/29/02	1234
190389	S. LERR	MOTA	[illegible]	08/29/02	1230
190588	Hal Rutland	MOTA	[illegible]	8/29/02	1230
191378	TED WEEKS	MOTA	[illegible]	8/29/02	1245
Conducted by:			Date:		

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-006-TAZ

Printed Name	Scott Kerr	Time In	1306					
Z number	190389	Time Out	1345					
Group or Employer	MOTA	Reading In (A)	0					
Dosimetry ID number		Reading Out(B)	14.1					
Date	8/29/02	Exposure for Entry(B-A)	14.1					
Allowable Exposure for this job		Total Exposure for this job	14.1					

Printed Name	D. DAVIS	Time In	1306					
Z number	190586	Time Out	1345					
Group or Employer	MOTA	Reading In	0					
Dosimetry ID number		Reading Out	2.8					
Date	8/29/02	Accumulated Exposure	2.8					
Allowable Exposure for this job		Total Exposure for this job	28					

Printed Name	Elaine Brand	Time In	1306					
Z number	190385	Time Out	1345					
Group or Employer	SEC	Reading In	0					
Dosimetry ID number		Reading Out	1.1					
Date	8/29/08	Accumulated Exposure	1.1					
Allowable Exposure for this job		Total Exposure for this job	1.1					

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: HSR-1-02-006-TA2

Printed Name	HAL ROTLAND	Time In	1306					
Z number	190588	Time Out	1345					
Group or Employer	MOTA	Reading In (A)	0					
Dosimetry ID number		Reading Out(B)	3.3					
Date	8/29/02	Exposure for Entry(B-A)	3.3					
Allowable Exposure for this job		Total Exposure for this job	3.3					

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Printed Name		Time In						
Z number		Time Out						
Group or Employer		Reading In						
Dosimetry ID number		Reading Out						
Date		Accumulated Exposure						
Allowable Exposure for this job		Total Exposure for this job						

Attachment 2 (EXAMPLE)

DOSE TRACKING REPORT

RWP or SOP #: _____

Printed Name		T In			
Z number		T Out			
Group or Employer		R ding In (A)			
Dosimetry ID number		R ding Out(B)			
Date		E. sure for E (B-A)			
Allowable Exposure for this job		To al Exposure fo his job			

Printed Name		T In			
Z number		T Out			
Group or Employer		R ding In			
Dosimetry ID number		R ding Out			
Date		A mulated E sure			
Allowable Exposure for this job		T Exposure fo is job			

Printed Name		T In			
Z number		T Out			
Group or Employer		R ding In			
Dosimetry ID number		R ding Out			
Date		A mulated E sure			
Allowable Exposure for this job		T Exposure fo is job			

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)			
Alpha	<MDCR	<MDA	<MDA	<MDA	<MDA	<MDA
Beta/gamma	N/A	>500K	>500K	>500K	>500K	>500k
Tritium			<MDA	<MDA		

External Dose Rate (mrem/hr in work area)		
Beta + gamma	500	10
Neutron	N/A	N/A
Total (β + γ + n)	500	10

Airborne Radioactivity <.01 DAC Co60 Isotope ☐ Estimated or ☒ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☒ Job-specific air monitoring
- ☒ Pre-job survey data
- ☒ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☒ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☒ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☒ Yes *(Add attachment if necessary)* ☐ No

Due to high exposure rates encountered during removal of material in beam ports the use of fabricated long handled tools should be explored more fully prior to the commencement of work.

H3 should be expected when opening beam ports. H3 has an affinity to being attached to graphite. Smearable levels of 100K dpm / 100 cm2 were encountered.

ALARA actions taken and results:

Individuals had lead blankets made ready at job work area to shield high rad material as it was being removed.

Cameras were employed to evaluate beamports prior to the removal of any material from ports

High contamination material was bagged as it was removed to reduce spread of contamination in work area.

High radiation material was transferred to nearby liners as it was removed to reduce work area exposure rates.

Problems encountered:

Beam port material did not easily disassembly based on design drawings resulting in a need for on the spot solutions to facilitate the break down of components in the ports.

Graphite material which was expected to be easily sectioned upon removal proved more difficult break up than anticipated.

Recommendations for future similar jobs:

During the removal of the first ports higher than expected dose rates were encountered and as a result the work plan was modified to account for these increased rates. Future planning should anticipate abnormally high fields and be ready to implement practices to deal with these exposures.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	2/5/03
Reviewed by RCT supervisor *(printed name)*	Signature	Z Number	Date
R SWETNAM	R Swetnam	190160	2/5/03

Form 2055, 12/22/00 MARTY PEIFER Marty Peifer 108821 Page 3 of 4 2/5/03

Los Alamos
National Laboratory

ESH-1 USE ONLY 9-3-02 Jane
Permit Number HSR-1-02-~~005~~ 008 - TA2
Effective 9-3-02 Expires 12-3-02

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus	WD3	780-0355	NA	TA2 ALL

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	OWR-WI-2.0-Rad	NA	09-15-02	12-15-02

Work to be performed:

Remove and package the piping, ventilation system and misc. contaminated/non-contaminated equipment connected to or located inside the reactor building and all associated buildings at the Omega West D & D site.

Are nonradiological hazards involved? Yes ☒ No ☐ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☐ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☒ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	NDA / NDA	<20 / <20	<200 / <200	
Beta/gamma	NDA / NDA	<1000 / <1000	<1000 / <1000	
Tritium		NA / NA		

External Dose Rate (mrem/hr in work area)

Beta + gamma	0.5 / 0.1
Neutron	NDA / NDA
Total (β + γ + n)	0.5 / 0.1

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

TBD DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (printed name)	Signature	Z Number	Date
Jonathan Coleman		190383	8-21-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: See special instruction 2.

Respiratory Requirements ☐ None ☒ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☒ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: See special instruction 3. *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☐ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: See special instruction 4.

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☒ Intermittent coverage ☒ Personnel before leaving job ☐ Equipment and tools before removal
☒ Self-frisking ☐ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☒ Other: See special instruction 4.

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☐ Yes ☒ No
☒ Routine work ☐ Special radiological work

Estimated person-hours for job 100
Estimated /measured working dose rates 0.5
Estimated collective dose .050 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. RCT's will survey all areas before removal work begins.
2. If removal work is done in a CA, then level 1 dress will be required.
3. If cutting, welding, grinding, or paint stripping is done on any components respiratory protection will be required, if RCI deems necessary. 10-11-02
4. RCT's may require additional dosimetry or monitoring requirements if neccessary.

Completed by RCT (printed name)	Signature	Z Number	Date
Jonathan Coleman		190383	8-21-02

APPROVALS

1. Manager Mark Granus	Signature	Z Number 190158	Date 8/21/02
2. RCT supervisor Bruce Moffatt	Signature	Z Number 190159	Date 8/21/02
3. Other (job title/printed name) Martin Peller	Signature	Z Number 108821	Date 8-20-02
4. Other (job title/printed name)	Signature	Z Number	Date

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
00825 HSR-1-02-~~005~~ - TA2	0	TA2 - ALL

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
141544	T. i A Dogan	C.W.	~~TAD~~	9/9/02	8:00
176367	Adam Scott	C.W.	Adam Scott	9/9/02	8:00
170066	Donovan Torivio	C.W.	Donovan Torivio	9/9/02	8:00
190386	DS Heilman	WD3	DS Heilman	9-17-02	1440
191947	Robert H Trattner	WD-3	Robert H Trattner	9/17/02	1428
190584	Hal Rutland	WD-3	Hal Rutland	9/17/02	1438
190389	Scott Kerr	WD-3	Scott Kerr	9/17/02	1429
191501	Wyatt Wood	SEC	Wyatt Wood	9/24/02	1255
191502	Kevin R Milliken	WD3	Kevin R Milliken	10/2/02	0752
191325	Ernest D. Craft	SEC	Ernest D. Craft	10/4/02	0755
170066	Donovan Torivio	C.W.	Donovan Torivio	10.9.02	10:55
141544	T. i Hogan	C W	~~TAD~~	10/9/02	10:55
176367	Adam Scott	C.W.	Adam Scott	10/9/02	10:55
190160	Ron Swetnam	WD3	R Swetnam	10/9/02	1240
190385	Elaine Brown	SEC	Elaine Brown	10-10-02	1245
191800	Craig Harris	SEC	Craig V Harris	10/10/02	1400
Conducted by:			Date:		

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope _____ ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☐ Job-specific air monitoring
- ☑ Pre-job survey data
- ☑ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☐ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Need for detailed documented Survey of work area

ALARA actions taken and results:

None

Problems encountered:

Needed more details in smear Survey

Recommendations for future similar jobs:

more Surveys to document release of area.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)*	Signature	Z Number	Date
S. WELTMAN		190760	3/20/08

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National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-012	001	FERMI Room OUR - RMA

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190386	DS Heimund	SEC	DS Heimund	10-11-02	1350
120634	Adrian T Romero	Duratek		10/11/02	1355
190588	HAL RUTLAND	MOTA	Hal Rutland	10/11/02	1355
190586	DAN DANSARD	MOTA		10-11-02	1355
190389	Scott KERR	MOTA		10-11-02	1355
1734	Mary Jane Wink	Duratek	MJ Wink	10-11-02	1355
190385	ELAINE BROWN	SEC	Elaine Brown	10/11/02	1400
Conducted by:			Date:		

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ESH-1 USE ONLY
Permit Number HSR-1-02-011-TA2
Effective 9-4-02 Expires 12-4-02

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Ted Weeks	WD3	NA	NA	TA2-OWR-101

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	OWR-WI-4.0-Rad	NA	9-3-02	12-3-02

Work to be performed:

Remove plugs and identify any experimental or waste material present in Thru-Ports, Instrument Ports, and Thermal Ports.

RCT's will survey for contamination after each plug is pulled and a fixative applied if neccessary.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	TBD / TBD	TBD / TBD	TBD / TBD
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / TBD	

External Dose Rate (mrem/hr in work area)

Beta + gamma	20 / 20
Neutron	NA / NA
Total (β + γ + n)	20 / 20

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

<0.1 DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Jonathan Coleman	9-4-02	190383	9-4-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: Rubber Shoe Covers

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☒ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: HEPA Ventilation Required *Requires ESH-5/JSFT (JCNMM) approval*

Dosimetry Requirements ☐ None ☒ WB dosimeter ☒ Supplemental dosimeter ☐ Alarming dosimeter
☒ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☒ Self-frisking ☒ Continuous coverage ☒ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☐ Routine work ☒ Special radiological work
Estimated person-hours for job 5.5
Estimated /measured working dose rates 20
Estimated collective dose .110 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. RCT's will monitor dose rates and contamination levels after each plug is removed.

2. RCT's will be stationed outside the building to monitor for possible elevated dose rates as the plugs are pulled from beam ports.

3. If any experimental or waste material is found in the beam port that exceeds 10 R/hr the material will be left in the port and the shield plugs will be replaced.

4. Work will be suspended if general area dose rates exceed 250 mr/hr, or 2 R/hr extremity dose rate.

5. IF FISSION CHAMBER IS ENCOUNTERED CONTACT LANL PROJECT REPRESENTATIVE BEFORE PROCEEDING. MP

Completed by RCT *(printed name)*	Signature	Z Number	Date
Jonathan Coleman		190383	9.4.02

APPROVALS

1. Manager Mark Granus	Signature	Z Number 190158	Date 9/4/02
2. RCT supervisor Bruce Moffatt	Signature	Z Number 190159	Date 9/4/02
3. Other *(job title/printed name)* Marty Pelfer (HSR-1 Team Leader)	Signature	Z Number 108821	Date 9-4-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

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Changes to the RWP
(to be completed by the RCT)

RWP Number: HSR-1-2-011-TA-2 Change Number: 001

State reason for changes (such as changes in radiological conditions, scope, or type of work)
Due to historical data, respiratory protection requirements have been downgraded.

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: Rubber shoe covers

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: *Requires ESH-5/JSFT (JCNNM) approval*

Dosimetry Requirements ☐ None ☒ WB dosimeter ☒ Supplemental dosimeter ☐ Alarming dosimeter
☒ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other:

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☒ RCT monitor doffing of anti-Cs
☐ Other:

Training Requirements ☐ RW I ☒ RW II ☐ Other:

ALARA Requirements
ALARA Review Checklist attached: ☒ yes ☐ no
☐ Routine work ☒ Special radiological work
Estimated person-hours for job 5.5
Estimated /measured working dose rates 20
Estimated collective dose .110 person-rem

UPDATED RADIOLOGICAL CONDITIONS (to be completed by the RCT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	20 / 20
Neutron	NA / NA
Total (β + γ + n)	20 / 20

Airborne Radioactivity <0.1 DAC MFP Isotope ☐ Estimated or ☒ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Jonathan Coleman		190383	9-4-02

APPROVALS (requires same level of approval as original RWP)

	Signature	Z Number	Date
1. Manager Mark Granus		190158	9/4/02
2. RCT supervisor Bruce Moffatt	For B Mo	190159	9/4/02
3. Other *(job title/printed name)* Marty Peifer		108821	9-4-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

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Changes to the RWP
(to be completed by the RCT)

RWP Number: HSR-1-2-011-TA2 Change Number: 002

State reason for changes (such as changes in radiological conditions, scope, or type of work)
Remove dose limits on sources from thermal ports, dose rates for work area can not exceed hold points #4.

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: Rubber shoe covers

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ *Requires ESH-5/JSFT (JCNNM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☒ Supplemental dosimeter ☐ Alarming dosimeter
☒ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☒ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ yes ☐ no
☐ Routine work ☒ Special radiological work

Estimated person-hours for job 10
Estimated /measured working dose rates 20
Estimated collective dose ~~200~~ 800 person-rem
9-11-02

UPDATED RADIOLOGICAL CONDITIONS (to be completed by the RCT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	TBD / TBD
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	20 / 20
Neutron	NA / NA
Total (β + γ + n)	20 / 20

Airborne Radioactivity <0.1 DAC MFP Isotope ☐ Estimated or ☒ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Jonathan Coleman		190383	9-12-02

APPROVALS (requires same level of approval as original RWP)

1. Manager Jim Staehr	Signature	Z Number 190381	Date 9/12/02
2. RCT supervisor Bruce Moffatt	Signature	Z Number 190159	Date 9/12/02
3. Other *(job title/printed name)* Marty Peifer	Signature	Z Number 108821	Date 9-12-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

ALARA REVIEW

PURPOSE:

The purpose of this ALARA review is to inspect both through ports and to remove any/all installed equipment from these ports.

BACKGROUND:

The identical evolutions have been performed on the North, South and West beam ports. (The West beam port liner itself was pulled; however, the end weld was 10R/hr on contact, and the liner was re-installed. It was apparent that the end weld on the liner was the source of the high, unexpected rate.) The only expected difference in this evolution from the first three is that these two ports extend completely through the core and must be inspected and cleaned out from both north and south ends.

The inspection and cleanout of the first three ports were completed in an average of one and one-half hours with total exposures ranging from 2.7 mrem to 22 mrem. The dose rate at the surface of each port (when emptied) ranged from 250 to 350 mrem, and the through ports are anticipated to be similar.

Each inspection/clean out has shown a variety of material in each liner, ranging from graphite to aluminum and small amounts of stainless. WD3 is better prepared for surprises and has gained experience in both pre-job planning and pre-job briefing, as well as having backup plans in place for surprise findings. The same technicians, RCTs and management will be directly involved in these evolutions.

ACTION:

The south through ports will be inspected/cleaned out one at a time. Rolling shielding, lead blankets, internal six inch plugs, boundaries and ventilation will be identical to previous ports. Stop work points of 2R/hr to the hands, and 250 mrem/hr whole body will be in place.

The north portion of the ports will be inspected/cleaned out immediately after completion of the south side.

MAN REM ESTIMATES:

Each of the four entries, cleanouts, and closures are expected to be similar to other ports and average 10 mrem total exposure to the crew and a total dose of 40 mrem for this project.

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Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-011	502	TA-2 Rx.

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190386	DAVID S. HEICUND	WD3	DSLH	9-12-02	1350
190381	JIM STAEHR	WD3		9-12-02	1400
191503	JIM FENNEMA	MOTA		9/12/02	1400
190588	HAL RUTLAND	MOTA		9/12/02	1400
190389	SCOTT M. KERR	MOTA		9-12-02	1405
191325	ERNEST D CRAFT	SEC		9/12/02	1410
191947	ROBERT H TOBIAS	MOTA		9/12/02	1410
190586	D. DANSARD	MOTA		9-12-02	1410
191501	WYATT WOOD	SEC		9-12-02	1415
190158	JOHN GRANUS	WD3		9/12/02	1321
190385	Elaine Brown	SEC		9-17-02	0800
191044	Jack Davis	Dynalectron		9/17/02	0815
190412	MARK C PRZYBYSKI	WGI		9/17/02	0817
191800	CRAIG V. HARRIS	SEC		9/17/02	1020
Conducted by:			Date:		

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-011-TA2		TA2 · OWR · 101

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
191325	ERNEST CRAFT	SEC		9/4/02	11:45
190159	Bruce Moffett	WD3		9/4/02	1215
190386	D S HEILMAN	WD3		9/4/02	1220
113567	[illegible]	LANL		9/4/02	1220
190389	Scott KERR	MOTA		09/04/02	1230
190160	RON SWESTHAM	WDS		9/4/02	1240
191503	AMB FENNEMA	MOTA		9/4/02	1240
190588	HAL RUTLAND	MOTA		9/4/02	1250
190586	D. DANSARD	MOTA		9.4.02	1250
191501	W STRUBBE JR	SEC		9/4/02	1252
191324	KIRK SUMMERS	SEC		9/4/02	1250
Conducted by:			Date:		

Form 2056, 12/22/00

ALARA REVIEW 10 September, 2002

Purpose: Inspecting all remaining Ports on the OMEGA WEST Reactor. (Thermal Ports, Instrument Ports and Neutron Spectrometer Ports.)

WD3 believes that the tools, methods and administrative controls ,previously utilized , have proven effective and similar methods will be utilized on these ports. WD3 intends to remove all these ports in the next two weeks.

INSTRUMENT PORTS: The steel plate covering the 6 instrument ports has been removed to Provide access to the ports. The plugs will be removed (one at a time) from the liner, the wires to the detector cut, and a teletector reading taken inside the tube. A remote tool will be used to hook the end of the detector and it will be pulled to within one foot of the liner opening and another dose measurement taken. If the reading is less than 5 R (expected dose rate are 100 to 250 mrem), the instrument will be pulled quickly and placed in a shielded container.

There may be a fission chamber installed in one or more of these ports. If a dose reading while still in the liner exceeds 5R, the plug will be reinstalled and a laydown shield will be designed to enable pulling the source directly into a protective device which will be able to be moved safely.

Total expected dose from all six evolutions is expected to be less than 25 mrem.

THERMAL PORTS: The thermal ports contain nuclear grade graphite (low activity), cadmium clad fission chambers, wires, tubes, and aluminum rabbits, all in varying length tubes, some of which completely cross the thermal column.

Methods of internal removal will be identical, however, the dose rates expected are very low. Separate containers for different materials will be provided such as the case of mixed wastes encountered.

Total dose for all thermal port cleanouts is expected to be 7 mrem.

NEUTRON SPECTROMETER PORTS: These ports are not expected to contain any foreign material or test devices based on discussions with past operators/designers. They will, however, be inspected by rolling the outer plugs out and rolling the inner block in place to inspect. If no material is found, the plugs will be replaced.

The ports are lined up with the Be shield and the dose rate at the openings are expected to be similar to the dose rate at the West beam port or app. 300 mrem/hr. Remote camera and offset mirrors will be used to verify the ports empty. If material is found in a port, work will stop while source rate information is gathered and removal plans are made.

The inspection of these ports is expected to give a total crew dose of app.20 mrem.

ALARA REVIEW 10 September, 2002

Purpose: Inspecting all remaining Ports on the OMEGA WEST Reactor. (Thermal Ports, Instrument Ports and Neutron Spectrometer Ports.)

WD3 believes that the tools, methods and administrative controls ,previously utilized , have proven effective and similar methods will be utilized on these ports. WD3 intends to remove all these ports in the next two weeks.

INSTRUMENT PORTS: The steel plate covering the 6 instrument ports has been removed to Provide access to the ports. The plugs will be removed (one at a time) from the liner, the wires to the detector cut, and a teletector reading taken inside the tube. A remote tool will be used to hook the end of the detector and it will be pulled to within one foot of the liner opening and another dose measurement taken. If the reading is less than 5 R (expected dose rate are 100 to 250 mrem), the instrument will be pulled quickly and placed in a shielded container.

There may be a fission chamber installed in one or more of these ports. If a dose reading while still in the liner exceeds 5R, the plug will be reinstalled and a laydown shield will be designed to enable pulling the source directly into a protective device which will be able to be moved safely.

Total expected dose from all six evolutions is expected to be less than 25 mrem.

THERMAL PORTS: The thermal ports contain nuclear grade graphite (low activity), cadmium clad fission chambers, wires, tubes, and aluminum rabbits, all in varying length tubes, some of which completely cross the thermal column.

Methods of internal removal will be identical, however, the dose rates expected are very low. Separate containers for different materials will be provided such as the case of mixed wastes encountered.

Total dose for all thermal port cleanouts is expected to be 7 mrem.

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The ports are lined up with the Be shield and the dose rate at the openings are expected to be similar to the dose rate at the West beam port or app. 300 mrem/hr. Remote camera and offset mirrors will be used to verify the ports empty. If material is found in a port, work will stop while source rate information is gathered and removal plans are made.

The inspection of these ports is expected to give a total crew dose of app.20 mrem.

ALARA REVIEW 10 September, 2002

Purpose: Inspecting all remaining Ports on the OMEGA WEST Reactor. (Thermal Ports, Instrument Ports and Neutron Spectrometer Ports.)

WD3 believes that the tools, methods and administrative controls ,previously utilized , have proven effective and similar methods will be utilized on these ports. WD3 intends to remove all these ports in the next two weeks.

INSTRUMENT PORTS: The steel plate covering the 6 instrument ports has been removed to Provide access to the ports. The plugs will be removed (one at a time) from the liner, the wires to the detector cut, and a teletector reading taken inside the tube. A remote tool will be used to hook the end of the detector and it will be pulled to within one foot of the liner opening and another dose measurement taken. If the reading is less than 5 R (expected dose rate are 100 to 250 mrem), the instrument will be pulled quickly and placed in a shielded container.

There may be a fission chamber installed in one or more of these ports. If a dose reading while still in the liner exceeds 5R, the plug will be reinstalled and a laydown shield will be designed to enable pulling the source directly into a protective device which will be able to be moved safely.

Total expected dose from all six evolutions is expected to be less than 25 mrem.

THERMAL PORTS: The thermal ports contain nuclear grade graphite (low activity), cadmium clad fission chambers, wires, tubes, and aluminum rabbits, all in varying length tubes, some of which completely cross the thermal column.

Methods of internal removal will be identical, however, the dose rates expected are very low. Separate containers for different materials will be provided such as the case of mixed wastes encountered.

Total dose for all thermal port cleanouts is expected to be 7 mrem.

NEUTRON SPECTROMETER PORTS: These ports are not expected to contain any foreign material or test devices based on discussions with past operators/designers. They will, however, be inspected by rolling the outer plugs out and rolling the inner block in place to inspect. If no material is found, the plugs will be replaced.

The ports are lined up with the Be shield and the dose rate at the openings are expected to be similar to the dose rate at the West beam port or app. 300 mrem/hr. Remote camera and offset mirrors will be used to verify the ports empty. If material is found in a port, work will stop while source rate information is gathered and removal plans are made.

The inspection of these ports is expected to give a total crew dose of app.20 mrem.

ALARA REVIEW 10 September, 2002

Purpose: Inspecting all remaining Ports on the OMEGA WEST Reactor. (Thermal Ports, Instrument Ports and Neutron Spectrometer Ports.)

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Total dose for all thermal port cleanouts is expected to be 7 mrem.

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The ports are lined up with the Be shield and the dose rate at the openings are expected to be similar to the dose rate at the West beam port or app. 300 mrem/hr. Remote camera and offset mirrors will be used to verify the ports empty. If material is found in a port, work will stop while source rate information is gathered and removal plans are made.

The inspection of these ports is expected to give a total crew dose of app.20 mrem.

September 3, 2002

ALARA REVIEW

PURPOSE:

The purpose of this ALARA review is to inspect both through ports and to remove any/all installed equipment from these ports.

BACKGROUND:

The identical evolutions have been performed on the North, South and West beam ports. (The West beam port liner itself was pulled; however, the end weld was 10R/hr on contact, and the liner was re-installed. It was apparent that the end weld on the liner was the source of the high, unexpected rate.) The only expected difference in this evolution from the first three is that these two ports extend completely through the core and must be inspected and cleaned out from both north and south ends.

The inspection and cleanout of the first three ports were completed in an average of one and one-half hours with total exposures ranging from 2.7 mrem to 22 mrem. The dose rate at the surface of each port (when emptied) ranged from 250 to 350 mrem, and the through ports are anticipated to be similar.

Each inspection/clean out has shown a variety of material in each liner, ranging from graphite to aluminum and small amounts of stainless. WD3 is better prepared for surprises and has gained experience in both pre-job planning and pre-job briefing, as well as having backup plans in place for surprise findings. The same technicians, RCTs and management will be directly involved in these evolutions.

ACTION:

The south through ports will be inspected/cleaned out one at a time. Rolling shielding, lead blankets, internal six inch plugs, boundaries and ventilation will be identical to previous ports. Stop work points of 2R/hr to the hands, and 250 mrem/hr whole body will be in place.

The north portion of the ports will be inspected/cleaned out immediately after completion of the south side.

MAN REM ESTIMATES:

Each of the four entries, cleanouts, and closures are expected to be similar to other ports and average 10 mrem total exposure to the crew and a total dose of 40 mrem for this project.

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☑ Job-specific air monitoring
- ☑ Pre-job survey data
- ☑ Post-job survey data
- ☑ Extremity dose data
- ☐ Special dosimetry results
- ☑ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☑ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☑ Pre-job briefing log
- ☑ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Need for detailed drawings and info concerning material in beam Ports

ALARA actions taken and results:

Detailed Planning was done along with dose estimate

Problems encountered:

Little or no information Concerning material and Items in beam Ports

Recommendations for future similar jobs:

need for Shielded Storage areas become a problem.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R WETNIGHT	Signature R Wetnight	Z Number 190160	Date 3/20/03

Los Alamos
National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-02-013-TA2
Effective 9-19-02 Expires 12-19-02

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus	WD3	780-0355	N/A	TA2 West Side O/S Rx Bldg

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	OWR-WI-4.0-Rad	N/A	9/17/02	9/24/02

Work to be performed:

Waste Handling and Packaging of High Rad Materials from Various Rx Ports

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	200 / 200
Neutron	N/A / N/A
Total (β + γ + n)	200 / 200

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

<0.1 DAC MFP Isotope

☐ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

N/A

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Dave Heilman	Dave S. Heil	190386	9-18-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: TBD by RCT *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☒ Supplemental dosimeter ☐ Alarming dosimeter
☒ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☐ Equipment and tools before removal
☒ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☐ Yes ☒ No
☒ Routine work ☐ Special radiological work

Estimated person-hours for job 30
Estimated /measured working dose rates 200 mR/hr Highest
Estimated collective dose ~~.400~~ .900 person-rem 9-19-02

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. Job not to start if inclement weather is apparent.
2. RCTs to establish " Low Dose Waiting Areas" prior to start of work.
3. RCTs will monitor dose rates as materials are moved.
4. Work will be suspended if work area dose rates exceed 500 mR/hr

Completed by RCT *(printed name)*	Signature	Z Number	Date
Dave Hellman		190386	9-18-02

APPROVALS

1. Manager Mark Granus	Signature	Z Number 190158	Date 9/18/02
2. RCT supervisor Bruce Moffatt	Signature	Z Number 190159	Date 9/18/02
3. Other *(job title/printed name)* Marty Peifer	Signature	Z Number 108821	Date 9-18-02
4. Other *(job title/printed name)* John Coleman	Signature	Z Number 190383	Date 9-18-02

INSTRUCTIONS FOR COMPLETING THE RWP FORM

General Information (to be completed by requester)

1. Enter your printed name and signature, group number or organization, telephone number, and mail stop.
2. Enter the work location (technical area, building, and room number).
3. Enter any SOP (safe operating procedure), SJT (small job ticket), or WO (work order) number the RWP will support. Enter NA in any blocks that do not apply.
4. Enter the requested start date and the expected end date.
5. Describe the work to be performed. (Add attachment if necessary. Include enough detail for the RCT to determine the extent of survey needed, radiological protection requirements, and anticipated changes in radiological conditions.)
6. Complete and attach to the RWP a copy of the SJT ES&H Review or a copy of the ES&H Review Service Request/Supplement.
7. Ensure that the RWP is sent to the appropriate RCT or RCT supervisor.

ESH-1 Use Only (to be completed by RCT/HPT or RCT supervisor)

1. Enter the effective date and expiration date after you have read the GENERAL INFORMATION block.
2. Obtain a permit number from your team or field office and enter it in the top block and inform the team or field office of the effective date and expiration date for the RWP.

Pre-Job Radiological Conditions (to be completed by RCT/HPT)

1. Check the box indicating whether the radiological conditions are anticipated or measured. (Conditions inside ducts or pipes typically cannot be measured before breaching those systems. Conditions inside a locked room typically would be measured before work starts in that room.)
2. Indicate whether survey data are shown on an attached map.
3. Enter the survey data to support the RWP. The most recent survey of the area can be used if conditions in that area would remain unchanged. If a survey cannot be performed before the RWP is approved, then estimate the radiological conditions. (A survey must still be performed before the work can start.)
4. Identify radionuclides if possible.
5. Enter data for airborne radioactivity and check box indicating whether data are anticipated or measured.
6. Identify any contamination under paint or on inaccessible surfaces.
7. Mark NA in any blocks that do not apply.
8. Enter your printed name, signature, Z number, and the date.

ALARA/Radiological Protection Requirements (to be completed by RCT)

Indicate Radiological Protection Requirements by checking the appropriate boxes. Use the requirements and guidance specified in the applicable documents (for example, ALARA Review Checklist). Specify whether the work is "routine" or "special." Complete the ALARA Review Checklist if required.

Hold Points/Special Instructions (to be completed by RCT)

1. Indicate any hold points, such as when work must be halted to allow additional surveys or to allow radiological conditions to stabilize. Indicate any special instructions that need to be communicated to the workers (for example, ALARA measures, special work measures)
2. Enter your printed name, signature, Z number, and the date.

Approvals (to be completed by the safety- and environment-responsible line-management chain, RCT supervisor, and other personnel as required)

1. Enter your signature, Z number, group or organization, and the date.

Post-Job Radiological Conditions (to be completed by RCT/HPT)

1. Enter the post-job radiological survey data.
2. Indicate whether survey data are shown on an attached map.
3. Enter data for airborne radioactivity and check box indicating whether data were estimated or measured.
4. Enter your printed name, signature, Z number, and the date.

Review (to be completed by RCT and RCT supervisor)

1. Indicate all associated reports for the RWP by checking the appropriate boxes. (Do not wait to receive the reports before reviewing the RWP.)
2. Indicate if there are "lessons learned" to be conveyed to others. If Yes is checked, briefly explain.
3. Jointly review the RWP for completeness and correctness.
4. Enter your printed name, signature, Z number, and the date.

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-2-013-TA2		TA-2 OLOR Rm 101

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190383	JColeman	WD3		9-19-02	0900
190156	Bruce Moffat	WD3		9/19/02	0900
190921	John Curlson	WD3		9/19/02	0900
191947	R Tuttaint	WD3		9/19/02	0930
191800	CRAIG HARRIS	SEC		9/19/02	0930
	Tony Segura			9/19/2	9:30
191503	JIM FENNEMA	MOTA		9/19/02	9:30
190385	Elaine Brown	SEC		9-19-02	0930
191324	L Summers	SEC		9/19/02	0930
190 374	D S HEILMAN	WD3		9-19-02	0930
190369	Scott Icerr	WD3		09-19-02	0931
190586	D. LANGARD	MOTA		9-19-02	0935
191796	Matt Williams	Jake's		9-19-02	0935
190412	Marcin Jezybyski	WCE		9-19-02	0940
190381	JIM STAEHR	WD 3		9-19-02	0945
Conducted by:			Date:		

Consider the following topics and check the boxes, as appropriate. (To be completed by RCT)

☐ Scope of work to be performed

☐ Radiological conditions of the workplace

☐ Procedural and RWP requirements

☐ Special radiological control requirements

☐ Radiologically limiting conditions, such as contamination or radiation levels that may void the RWP

☐ Radiological control hold points

☐ Communications and coordination with other organizations

☐ Provisions for housekeeping and final cleanup

☐ Emergency response provisions

Scope of Work

Highly radioactive components have been removed from various reactor ports and are stored in shielded containers within building 101. These containers are causing the general area dose rate to be higher than desired and the material will be transferred into an 8-120 cask liner for storage and future shipment to burial. This work instruction covers the movement of the material from building 101 to the 8-120 liner stored outdoors in a shielded area.

Purpose

Transfer radioactive material from building 101 to a shielded cask liner for future shipment.

Work Execution Plan

1.0 Assemble all tools and equipment in ready-to-use condition.

2.0 Prerequisites:

2.1 Delineate work area and rope it off.

2.2 Cover the liner top with polyethylene or Herculite for contamination control

2.3 Place lifting rigging on the liner for future lifting to load the liner in a shipping cask.

2.4 Ensure that all equipment to be used has ample fuel in its tank.

2.6 Liner is placed in the shielded storage area

2.7 Place herculite or polyethylene on the ground where the fork lift will be placing the B12 box for crane lifting. Lay out slings and tag lines for the B12 box rigging so that the fork lift can set the box down on top of the slings.

2.8 Place herculite or polyethylene in the shielded storage area and on top of the shield blocks.

2.9 Stage a B12 or B25 box in the area for placement of lead blankets as they are removed form the radioactive components. Also stage poly bags and rad waste receptacles in the area.

2.10 Place herculite on the floor of building 101 to create a non-contaminated area for the fork lift to operate when moving the B12 box out of the building.

2.11 Install rigging on the steel plate used to cover the shielded storage area.

STOP **Signature Authorizations to Proceed:**

Radcon Engineer: _____

MOTA Proj. Mgr: _____

3.0 Detailed Procedure

3.1 Using the fork lift, move the B-12 box from building 101 to the prearranged location and place it on the rigging. Remove lead only as necessary to allow for the movement of the box and installation of the rigging.

3.2 Lift the B12 box and place it inside the shielded storage facility in close proximity to the 8-120 liner. Hold the box suspended at an appropriate height for two workers to remove lead blankets that are easily accessible at this time. Place the lead blankets on the top of the 8-120 liner. Do not inhibit the access port in the top of the liner.

establish dose rate

3.3 Position the boom lift to allow workers to use long handled tools to lift lead blankets from the B-12 box from a position directly above the box.

3.4 If needed, remove lead blankets from the B-12 box using long handled tools to expose the first component to be transferred.

3.5 Using long handled tools, retrieve the existing lifting sling from the box and attach it to the crane hook.

3.6 Raise the component with the crane and place it in the liner. Record the weight of the component as shown on the cranes load cell indicator.

3.7 Using long handled tools, remove the sling from the crane hook.

3.8 Remove or break the chute that was used to direct the first component into position.

3.9 Repeat the above steps to load all components into the liner. After the first component, a chute will not be needed to place the components into the liner.

3.10 Additional lead may be removed from the B12 box by either remote handling from the man lift or by raising the box up within the shielded storage area and manually removing the lead blankets.

3.11 The last component to be transferred does not have any rigging previously attached. Remove the B12 box from the shielded area and attach rigging to the last component. Lift the component with the crane and transfer it to the liner. Remove the rigging with remote tools.

3.12 Place the cover on the liner and secure.

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☑ Dose tracking report
- ☑ Job-specific air monitoring
- ☑ Pre-job survey data
- ☑ Post-job survey data
- ☑ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Need for detailed Planning

ALARA actions taken and results:

Poor Plan Job task

Problems encountered:

too much management oversight

Recommendations for future similar jobs:

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* SWEENAM	Signature	Z Number 19016	Date 3/30/03

Los Alamos
National Laboratory

ESH-1 USE ONLY

Permit Number HSR-1-02-014-TA2
Effective 9.27.02 Expires 12.27.02

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: *(printed name, signature)*	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus	WD3	780-0355	N/A	TA-2-All

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	9/27/02	12/27/02

Work to be performed:

Core Drilling and Soil Sampling for Charachterization and Final Status Survey Operations

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	TBD / TBD	TBD / TBD	TBD / TBD
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / N/A	

External Dose Rate (mrem/hr in work area)

Beta + gamma	TBD / TBD
Neutron	0 / 0
Total (β + γ + n)	TBD / TBD

Identify anticipated radionuclides:

MFP,Pu239

Airborne Radioactivity

<0.1 DAC TBD Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Earnest Craft		191325	9.27.02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☒ Anti-C Gloves ☒ Booties ☒ Other: TBD by RCT

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☐ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☒ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☒ Self-frisking ☐ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☒ Other: RCT present while performing work

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☐ Yes ☒ No
Estimated person-hours for job: 100
Estimated /measured working dose rates: 5 mR/hr
Estimated collective dose: 0.500 person-rem
☒ Routine work ☐ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. Contamination limits not to exceed 200 dpm/100 cm 2 alpha, or 50,000 dpm/100 cm2 beta/ gamma

Completed by RCT *(printed name)*	Signature	Z Number	Date
Earnest Craft		191325	9.27.02

APPROVALS

1. Manager Mark Granus	Signature	Z Number 190158	Date
2. RCT supervisor Bruce Moffatt	Signature	Z Number 190159	Date 9/27/02
3. Other *(job title/printed name)* Martin J Pefier HRS-1 Team Leader	Signature	Z Number 108821	Date 9/27/02
4. Other *(job title/printed name)*	Signature	Z Number	Date

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)		External Dose Rate (mrem/hr in work area)	
Alpha	<200	<20	____	____	Beta + gamma	N/A / 0.3
Beta/gamma	<1K	<1K	____	____	Neutron	N/A / N/A
Tritium	N/A	N/A			Total (β + γ + n)	N/A / 0.3

Airborne Radioactivity <10% DAC MEP Isotope ☑ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
ERNEST CRAFT	E R Craft	191396	7-27-02

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☐ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☐ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: ____

Lessons learned? ☐ Yes *(Add attachment if necessary)* ☐ No

None

ALARA actions taken and results: No dose

Problems encountered: None

Recommendations for future similar jobs: Very simple task in clean area.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWEETMAN	Signature R Sweetman	Z Number 190160	Date 4/1/03

INSTRUCTIONS FOR COMPLETING THE RWP FORM

General Information (to be completed by requester)

1. Enter your printed name and signature, group number or organization, telephone number, and mail stop.
2. Enter the work location (technical area, building, and room number).
3. Enter any SOP (safe operating procedure), SJT (small job ticket), or WO (work order) number the RWP will support. Enter NA in any blocks that do not apply.
4. Enter the requested start date and the expected end date.
5. Describe the work to be performed. (Add attachment if necessary. Include enough detail for the RCT to determine the extent of survey needed, radiological protection requirements, and anticipated changes in radiological conditions.)
6. Complete and attach to the RWP a copy of the SJT ES&H Review or a copy of the ES&H Review Service Request/Supplement.
7. Ensure that the RWP is sent to the appropriate RCT or RCT supervisor.

ESH-1 Use Only (to be completed by RCT/HPT or RCT supervisor)

1. Enter the effective date and expiration date after you have read the GENERAL INFORMATION block.
2. Obtain a permit number from your team or field office and enter it in the top block and inform the team or field office of the effective date and expiration date for the RWP.

Pre-Job Radiological Conditions (to be completed by RCT/HPT)

1. Check the box indicating whether the radiological conditions are anticipated or measured. (Conditions inside ducts or pipes typically cannot be measured before breaching those systems. Conditions inside a locked room typically would be measured before work starts in that room.)
2. Indicate whether survey data are shown on an attached map.
3. Enter the survey data to support the RWP. The most recent survey of the area can be used if conditions in that area would remain unchanged. If a survey cannot be performed before the RWP is approved, then estimate the radiological conditions. (A survey must still be performed before the work can start.)
4. Identify radionuclides if possible.
5. Enter data for airborne radioactivity and check box indicating whether data are anticipated or measured.
6. Identify any contamination under paint or on inaccessible surfaces.
7. Mark NA in any blocks that do not apply.
8. Enter your printed name, signature, Z number, and the date.

ALARA/Radiological Protection Requirements (to be completed by RCT)

Indicate Radiological Protection Requirements by checking the appropriate boxes. Use the requirements and guidance specified in the applicable documents (for example, ALARA Review Checklist). Specify whether the work is "routine" or "special." Complete the ALARA Review Checklist if required.

Hold Points/Special Instructions (to be completed by RCT)

1. Indicate any hold points, such as when work must be halted to allow additional surveys or to allow radiological conditions to stabilize. Indicate any special instructions that need to be communicated to the workers (for example, ALARA measures, special work measures)
2. Enter your printed name, signature, Z number, and the date.

Approvals (to be completed by the safety- and environment-responsible line-management chain, RCT supervisor, and other personnel as required)

1. Enter your signature, Z number, group or organization, and the date.

Post-Job Radiological Conditions (to be completed by RCT/HPT)

1. Enter the post-job radiological survey data.
2. Indicate whether survey data are shown on an attached map.
3. Enter data for airborne radioactivity and check box indicating whether data were estimated or measured.
4. Enter your printed name, signature, Z number, and the date.

Review (to be completed by RCT and RCT supervisor)

1. Indicate all associated reports for the RWP by checking the appropriate boxes. (Do not wait to receive the reports before reviewing the RWP.)
2. Indicate if there are "lessons learned" to be conveyed to others. If Yes is checked, briefly explain.
3. Jointly review the RWP for completeness and correctness.
4. Enter your printed name, signature, Z number, and the date.

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Pre-Job Briefing Log

RWP Number	Change Number	Location: Rabbit Pool

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
191325	ERNEST CRAFT	HP.		9/27/02	10:4
190596	D. HANSARD	MOTA		9-27-02	1000
Conducted by:			Date:		

Core Drill Operation
OWR D&D

In order to ensure the safe and efficient operation of the electric core drill, the following guidelines shall be followed:

1. Ensure that the drill motor is connected to 30 amp circuit.

2. Check all electrical connection to ensure cords/plugs are not in water.

3. Wear the proper PPE:
   a. Safety Glasses
   b. Face Shield
   c. Hearing Protection
   d. Gloves

4. Drilling Operations.
   a. Keep hands clear of all rotating parts (i.e. core barrel)
   b. Do not exceed the amp rating on meter (20 amps)

5. Core Extraction From Coring Bit
   a. Unplug drill motor prior to removing coring bit.
   b. Remove core bit from drill motor (DO NOT Attempt to extract core from bit while attached to drill motor)
   c. Place wooden dowel in hole at top of bit and tap with hammer/mallet.

6. Core Extraction Form Core Hole
   a. If the core remains in the core hole, move drill motor from over core hole.
   b. Place core extraction tool over core and tap down with mallet.
   c. Remove Extraction tool, with core attached.
   d. Place wooden dowel in hole at top of extraction tool and tap with hammer/mallet.

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ESH-1 USE ONLY

Permit Number HSR-1-2-016-TA2
Effective 10-3-02 Expires 1-3-03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Kevin Milliken Kevin Milliken	MOTA	NA	NA	TA-2 RM 101

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	OWR-WI-7.0-Rad	NA	10-3-02	1-3-03

Work to be performed:

Removal of Control Rod Drive Mechanism and frame from the top of the Reactor.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	150 / 150
Neutron	NA / NA
Total (β + γ + n)	150 / 150

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

<0.1 DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Craig Harris	Craig Harris	191800	10/3/02

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Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-2-016-TA2		TA 2

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190412	MARTY C PIECZYNSKI	WCI		10/4/02	10:30
190921	John A. Carlson	WD3		10/4/02	10:20
191525	ERNEST CRAFT	SEC		10/4/02	10:30
191503	JIM FENNEMA	MOTA		10/4/02	10:30
190381	JIM STAEHL	WD-3		10/4/02	10:30
191502	Kevin R Milliken	MOTA		10/4/02	10:20
190588	HAL RUTLAND	MOTA		10/4/02	10:20
Conducted by:			Date:		

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☐ Job-specific air monitoring
- ☑ Pre-job survey data
- ☑ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☑ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☐ Yes *(Add attachment if necessary)* ☐ No

Good Planning

ALARA actions taken and results: Review of drawings, Posters and Direct observation resulted in a low dose for this task

Problems encountered: None

Recommendations for future similar jobs: None

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R. SWETNAM	Signature R Swetnam	Z Number 190140	Date 4/1/08

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ESH-1 USE ONLY
Permit Number HRS-1-2-017-TA2
Effective 10-3-02 Expires 1-3-03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Kevin Milliken K R Milliken	MOTA	N/A	N/A	TA-2

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	10-3-02	12-3-02

Work to be performed:

Drill hole in vent line for inspection and cutting ,welding for new ventilation hookup.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	.1 / .1
Neutron	N/A / N/A
Total (β + γ + n)	.1 / .1

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

<0.1 DAC MFP Isotope

☒ Expected **or** ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Craig Harris	Craig V Harris	191800	10/3/02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☐ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☒ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☐ Yes ☒ No
☐ Routine work ☒ Special radiological work
Estimated person-hours for job 24
Estimated /measured working dose rates .1 mr/hr
Estimated collective dose .002 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

Before and after any breach of system RCT shall survey area.

Level 1 PPE to be worn during any cutting or welding.

Completed by RCT *(printed name)* Craig Harris	Signature Craig V Harris	Z Number 191800	Date 10/3/02

APPROVALS

1. Manager Jim Staehr	Signature	Z Number 190160	Date 3 Oct 02
2. RCT supervisor Ron Swetnam	Signature	Z Number 190381	Date 10/3/02
3. Other *(job title/printed name)* Marty Peifer	Signature	Z Number 108821	Date 10-3-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

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Changes to the RWP
(to be completed by the RCT)

RWP Number: HSR-1-02-017-TA-2 **Change Number:** 001

State reason for changes (such as changes in radiological conditions, scope, or type of work)
Install saddle valve to reactor 12" ventalation return line to remove water from line

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☒ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: Rain suit

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: Face shield *Requires ESH-5/JSFT (JCNNM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☐ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☒ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☐ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☐ yes ☒ no
☐ Routine work ☒ Special radiological work

Estimated person-hours for job: 1
Estimated /measured working dose rates: .1
Estimated collective dose: .0001 person-rem

UPDATED RADIOLOGICAL CONDITIONS (to be completed by the RCT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	TBD / TBD
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	.1 / .1
Neutron	N/A / N/A
Total (β + γ + n)	.1 / .1

Airborne Radioactivity <0.1 DAC MFP Isotope ☒ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Craig Harris	Craig Harris	191800	10/4/02

APPROVALS (requires same level of approval as original RWP)

	Signature	Z Number	Date
1. Manager Jim Stoehr		190160	10/4/02
2. RCT supervisor Ron Swetnam		190381	10/4/02
3. Other *(job title/printed name)* Marty Peifer		108821	10-4-02
4. Other *(job title/printed name)*		Z Number	Date

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Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-2-017-TA2		TA2

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190588	HAL RUTLAND	MOTA	Hal Rutland	10/3	1408
176367	ADAM SCOTT	CORONADO	Adam Scott	10/3	1409
191800	CRAIG HARRIS	SEC	Craig Harris	10/3/02	1415
190380	DS HELMAN	SEC	DS Helman	10-9-02	1335
Conducted by:			Date:		

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☐ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☑ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Better Job Planing required

ALARA actions taken and results: NO done

Problems encountered:
Water was found in piping. other lines were found in the area one of which released it. The water contained H^3.

Recommendations for future similar jobs: None

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
~~Reviewed by RCT supervisor *(printed name)*~~ R SWETNAM	~~Signature~~	Z Number 190160	Date 9/1/03

1000

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ESH-1 USE ONLY
Permit Number HSR-1-02-018-TA-61
Effective 10/21/02 Expires 01/21/03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus	WD3	N/A	N/A	TA-61

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	10/21/02	01/21/03

Work to be performed:

Soil removal, demolition of stack, removal of underground pipes, and packaging of waste generated by these activities.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	0.6 / 0.6
Neutron	N/A / N/A
Total (β + γ + n)	0.6 / 0.6

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

<0.1 DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (printed name)	Signature	Z Number	Date
Craig Harris	Craig Harris	191800	10/18/02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: TBD by RCT

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: See special instructions 2 **Requires ESH-5/JSFT (JCNMM) approval*

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☐ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements Estimated person-hours for job 100
ALARA Review Checklist Estimated /measured working dose rates 0.6
attached: ☐ Yes ☒ No Estimated collective dose .060 person-rem
☐ Routine work ☒ Special radiological work cwh 10/18/02

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. Job not to start if inclement weather is apparent.

2. If cutting, grinding or welding RCT may upgrade to respirators if necessary.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Craig Harris	Craig V Harris	191800	10/18/02

APPROVALS

1. Manager Mark Granus	Signature	Z Number 190158	Date 10/21/02
2. RCT supervisor Ron Swetnam	Signature R Swetnam	Z Number 190160	Date 10/18/02
3. Other *(job title/printed name)* Marty Peifer	Signature	Z Number 108821	Date 10-21-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

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National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-0018-TA61	0	TA-61

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
172794	Jon Lovato	SAIC	Jon H Lovato	11/5/02	
192477	DANIEL ORTIZ	SAIC	Daniel Ortiz	11/5/02	8:15 a.m.
148146	Floratine Stanley	SAIC	Floratine Stanley	11/5/02	8:17 a.m.
190385	Elaine Brown	SEC	Elaine Brown	11-6-02	1230
M92795	SHAUN CALVERT	MOTA		11-7-02	0900
191502	Kevin R Miller	MOTA	Kevin R Miller	11/14/02	1150
193025	Douglas Eric Barron	FANP	Douglas Eric Barron	1/21/03	1423
Conducted by:			Date:		

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope _____ ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☑ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☑ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☑ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Good Vent Control was established on stack providing good contamination control.

ALARA actions taken and results: No dose

Problems encountered: task was conducted in a remote area requiring temp Power and portable air Comp. Stack was 150 ft long and set up into 4 ft Section

Recommendations for future similar jobs:

Portable Containment should be more flexible.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWEENEY	Signature R Sweeney	Z Number 190160	Date 4/1/03

Los Alamos
National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-02-019-TA2
Effective 10-23-02 Expires 1-23-03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: *(printed name, signature)*	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
M. Granus	WD-3	N/A	M769	2

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	10/22/02	7/01/03

Work to be performed:

General access to Rx Head area for tours, surveys and work not associated with radioactve systems or equipment.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☐ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☒ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)

	Direct	Smear	LAS (large area swipe)
Alpha	NDA / NDA	NDA / NDA	NDA / NDA
Beta/gamma	N/A / NDA	NDA / NDA	NDA / NDA
Tritium		N/A / N/A	

External Dose Rate (mrem/hr in work area)

Beta + gamma	100 / 60
Neutron	N/A / N/A
Total (β + γ + n)	100 / 60

Identify anticipated radionuclides:

N/A

Airborne Radioactivity

NDA DAC N/A Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

None

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
D. S. Heilman		190386	10-22-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☒ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☒ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☐ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☐ Yes ☒ No
☒ Routine work ☐ Special radiological work

Estimated person-hours for job 25
Estimated /measured working dose rates 10
Estimated collective dose 0.250 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

RCT to re-survey area after any alteration of shielding.

Contact Health Physics prior to entry.

Completed by RCT *(printed name)*	Signature	Z Number	Date
D. S. Heilman	DSH	190386	10-22-02

APPROVALS

1. Manager	Signature	Z Number	Date
2. RCT supervisor	Signature	Z Number 190160	Date 10-22-02
3. Other *(job title/printed name)*	Signature	Z Number 103321	Date 10-23-02
4. Other *(job title/printed name)*	Signature	Z Number	Date

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National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-62-0019-TA2	0	TA-2

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
[illegible]	Donovan Torivio	CW		10.25.02	8:56
176367	Adam Scott	Contractor		10/25/02	8:56
K624555	John Conley	SAI		10-25-02	8:57
190385	Elaine Brown	SEC		10-25-02	0900
192794	Robert Livingston	MOTA		10-28-02	1425
190389	Scott Kerr	MOTA		10-28-02	1425
192795	Shawn Lauer	MOTA		10-28-02	1425
[illegible]	Dana Williams	WG11		10/28/02	1515
190588	Hal Rutland	MOTA		10/29/02	1136
191503	Jim Fennema	MOTA		10/29/02	1350 DISO
191060	Chad Hinkle	SAI		10/30/02	7:20
193024	David Ball	MOTA		10-7-02	8:00
193023	Mark Mountain	MOTA		10-07-02	800
192794	Joe Lovato	SAI		10/07/02	9:15
192477	Daniel Ortiz	SAI		10/7/02	9:55
193252	Steve Blackwell	SEC		11/07/02	08:a
191247	RH Tourtellotte	MOTA		11/9/02	0645
181351	Mario Vargas	SAI		11/9/02	7:35
148148	Floratine Stanley	SAI		11/9/02	11:05
191502	Kevin R Milliken	MOTA		11/21/02	1346
~~[illegible]~~ 190651	John L Yarnell	MOTA		12/4/02	1400
Conducted by:			Date:		

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-0019-TA2	0	TA-2

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
141324	K. SUMMERS	SEC		12/10/02	1200
190586	D. DANSARD	MOTA		121302	1250
169743	Ralph Young	JAKAS		12-16-02	0730
120634	Adrian Powell	Dynatech		12/16/02	0735
151044	Jack Rust	Dynatech		12/16/02	0755
Conducted by:			Date:		

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☐ Job-specific air monitoring
- ☐ Pre-job survey data
- ☐ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☐ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☐ Yes *(Add attachment if necessary)* ☑ No

ALARA actions taken and results: None

Problems encountered: None

Recommendations for future similar jobs: None

Very minor RWP used only to establish tour Contact

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWETNAM	Signature R Swetnam	Z Number 190160	Date 4/1/03

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National Laboratory

Radiological Work Permit

ESH-1 USE ONLY

Permit Number HSR-01-02-024-TA2
Effective 11/11/02 Expires ~~01/15/03~~ 2-16-03 MP
11/11/02 KS

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
M. Granus	WD3		M769	TA 2-OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	NA	NA	~~11/11/02~~ MP 12-16-02	~~01/15/03~~ MP 2-16-03

Work to be performed:

Removal of Rx components and supporting activities.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	NDA / NDA	NDA / NDA	NDA / NDA
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / TBD	

External Dose Rate (mrem/hr in work area)

Beta + gamma	300 / 20
Neutron	NA / NA
Total (β + γ + n)	300 / 20

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

TBD DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

Loose surface contamination expected under Rx head.

Completed by RCT/HPT (printed name)	Signature	Z Number	Date
Kirk Summers		191324	11/11/02 11/11/02 KS

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ~~☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)~~ GCD
☑ Lab coat ☐ Skull cap ☐ Hood ☒ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties) ① GCD 12/20/02
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: See notes 1, 2 and 3 of special instructions. *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☒ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☒ Other: Supplemental dosimetry positioning per RCT

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements Estimated person-hours for job 1790
ALARA Review Checklist Estimated /measured working dose rates TBD
attached: ☒ Yes ☐ No Estimated collective dose ~~12.8~~ WP 13.373 person-rem
☐ Routine work ☒ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Respiratory protection required when A/S data warrants or when uncovering suspected highly contaminated surfaces.
2) Reactor ventilation required prior to job start.
3) CAM present for air quality trending.
4) Reference Work Instructions 1.2.1.1-9 for specific work evolution.
5) RCT to verify dose rates on Rx components for disposal characterization.
6) Job coverage to include Tritium monitoring.
7) Daily post-job survey conducted to verify postings and confirm good housekeeping practices.
8) Tyvek may be used as a substitute for 1 layer of PC's GCD 12/20/02 A/S for MH only

Completed by RCT *(printed name)*	Signature	Z Number	Date
Kirk Summers		191324	~~11/11/02~~ 11/11/02 KS

APPROVALS

1. Manager RON SWENSON TNAM	Signature R Swenson	Z Number 190160	Date 11-11-02
2. RCT supervisor MARTY PEIFER	Signature	Z Number 108821	Date 11-11-02 RPC
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)	Direct	Smear	LAS (large area swipe)
Alpha	_____/_____	_____/_____	_____/_____
Beta/gamma	_____/_____	_____/_____	_____/_____
Tritium		_____/_____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	_____/_____
Neutron	_____/_____
Total ($\beta + \gamma + n$)	_____/_____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☐ Job-specific air monitoring
- ☐ Pre-job survey data
- ☐ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☐ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☐ Yes *(Add attachment if necessary)* ☐ No

ALARA actions taken and results:

Problems encountered:

Recommendations for future similar jobs:

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)*	Signature	Z Number	Date

ALARA REVIEW FOR THE REMOVAL OF THE REACTOR INTERNALS FROM THE OMEGA WEST REACTOR

- WORK SCHEDULE FOR THE OWR INTERNALS REMOVAL
- PREPARED COMPONENT SPECIFIC WORK INSTRUCTIONS
- MAN REM ESTIMATES
- ALARA ACTIONS

    1. SHIELDED PLATFORM FOR TOP OF REACTOR
    2. REACTOR VESSEL VENTILATION
    3. REMOTE VIEWING EQUIPMENT
    4. REMOTELY OPERATE TOOLING
    5. MOCKUP TESTING OF TOOLING
    6. COMMUNICATIONS EQUIPMENT
    7. ELECTRONIC DOSIMETERS
    8. RAD PROTECTION INSTRUMENTS
    9. DOSE TRACKING METHODS
    10. CREW ASSIGNMENTS
    11. DETAILED PLANNING AND PRE-JOB BRIEFINGS
    12. DECON CREW
    13. MANAGEMENT OVERSIGHT
    14. WORKING ENVIRONMENT

- ESTABLISHED RWP
- WASTE PACKAGING PLAN

    1. MATERIAL SIZING
    2. WASTE CONTAINER SHIELDING
    3. WASTE CONTAINING ONSITE TRANSPORTATION
    4. WASTE CONTAINER STORAGE

- ROUTINE RADIOLOGICAL SURVEY PLAN

    1. HEPA SYSTEM MONITORING
    2. GENERAL AREA DOSE RATES
    3. GENERAL AREA CONTAMINATION LEVELS

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Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-024-TA2	0	OWR

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
191324	SUMMERS	SEC		11/19/02	1300
193252	BLACKWELL	SEC		12/16/02	0720
190586	D. DANSARD	MOTA		12-16-02	0720
193023	M. MOUNTAIN	MOTA		12.16.02	0720
169743	Ralph Young	JAKES		12-16-02	0720
193024	DAVID BALL	MOTA		12-16-02	0720
192795	SHAWN LAURENT	MOTA		12-16-02	0726
120334	Adrian Romero	DynaTek		12/16/02	0735
191947	RH Toutaint	MOTA		12/16/02	0730
192294	Bob Livingston	MOTA		12/16/02	0730
190412	[illegible]	WCI		12/16/02	0740
191503	JAMES A FENNEMA	MOTA		12/16/02	0740
191044	[illegible]	[illegible]		12/16/02	0740
190588	HAL RUTLAND	MOTA		12/16/02	0740
[illegible]	L. STAFFORD	HSR-1		12/16/02	[illegible]
190389	Scott KERR	MOTA		12-17-02	0748
181554	Michael Dennis	HSR-5		12-17-02	1000
190385	Elaine Brown	SEC		12-17-02	1400
184819	JOSE CEDILLOS	DOE		01/04/03	1305
181019	John Gallegos	DOE		1/6/03	1305
110010	Damitc Stafford	LANL		1/13/03	3:30
Conducted by:			Date:		

Form 2056, 12/22/00

Page 1 of 2

178110 DANA WILLIAMS WHI 1-18-03 8:20

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Pre-Job Briefing Log

RWP Number	Change Number	Location

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190158	M Brown	WD3		1/17/03	0800
190363	J Coleman	WD3		1-18-03	0800
192477	DANIEL ORTIZ	SAE		1-18-03	0800
194163	[illegible]	WC		1-20-03	0700
194164	BRUCE RAYMOND	WCCE		1-20-03	10:30
190924	John Carlson	WD3		1/23/03	14:45
193025	D.E. BARRON	WD3		1/24/03	1446
Conducted by:			Date:		

OWR Man Rem Est Based on Schedule 10/1/02

Item	days	people	hours	total hours	70%	HI dose hours	HI dose rate R/Hr	Mid dose hours	mid dose rate R/hr	low dose hrs	low dose rate	Total dose for task Mrem	RP support	misc support	total Man Rem	Task Status
Remove Rx Tk lid	3	4	10	120	84	8.4	0.15	33.6	0.01	42	0.001	1.638	0.4914	0.01638	2.146	done
Install platform	3	4	10	120	84	8.4	0.15	33.6	0.04	42	0.005	2.814	0.8442	0.02814	3.686	done
Remove Internal vert equip	5	4	10	200	140	0.7	0.05	56	0.005	83.3	0.001	0.3983	0.11949	0.03983	0.558	done
Remove Be reflector	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Beam port liners	6	3	10	180	126	12.6	0.1	50.4	0.005	63	0.001	1.575	0.4725	0.1575	2.205	done
Remove Lead shield	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Fuel racks	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Grid Plate & Base	5	4	10	200	140	7	0.03	56	0.005	77	0.001	0.567	0.1701	0.0567	0.794	working
Remove Thermal Column head	10	6	10	600	420	21	0.025	168	0.005	231	0.001	1.596	0.4788	0.1596	2.234	not started
Remove Debris	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Remove platform	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Plasma Arc Vessel Tank	1	4	10	40	28	1.4	0.01	11.2	0.0025	15.4	0.001	0.0574	0.01722	0.00574	0.080	not started
Remove material from storage ports	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	done
Remove Thermal column graphite	2	6	10	120	84	8.4	0.05	33.6	0.01	42	0.0005	0.777	0.2331	0.0777	1.088	working
Total dose Rx Internals				2060								10.6155	3.18465	0.66087	14.461	

DRAFT

ALARA Activity Review
Summary of Omega West Radiological Work
Removal of OWR Internals

Prepared by Sandra Gogol, HSR-12 Radiological Engineering Team

1.0 Overview

On Tuesday, November 4, 2002 @ 1000 hrs, a meeting was held at Omega West Reactor D&D Site to review the proposed ALARA measures for removal of the inner core of the reactor. MOTA's Radiological and Management Team outlined the process and supporting activities to be performed during this phase of the D & D effort. This document is a review of the ALARA measures to be incorporated in the removal of the OWR internals.

Per LIR 402-702.01, and HSR-1 procedures, any radiological activity that results in a dose greater than 1 person rem must be accompanied by a formal ALARA review. John Bliss, HSR-1 Group Leader, indicated that each of these tasks associated with removal of OWR internals can be covered under one ALARA review. The formal ALARA review will consist of information provided by MOTA, along with an HSR-12 review and a completed ALARA checklist.

A dose assessment was conducted by M. Peifer and presented at the meeting. Dose estimations were based on known dose rates, and historical information. The estimated overall collective dose for completion of these series of tasks is 24.25 person-rem. Approximately 10 people will be conducting the majority of removal operations. The maximum individual dose is expected to be less than 1 rem.

2.0 Meeting Topics

a) Work Schedule for the OWR Internals Removal
b) Reactor Vessel Ventilation
c) Remote Viewing Equipment
d) Remotely Operate Tooling
e) Communications Equipment
f) Electronic Dosimeters
g) Radiation Protection Instruments
h) Dose Tracking Methods
i) Crew Assignments
j) Detailed Planning and Pre-job briefings
k) Decontamination Crew
l) Management Oversight

3.0 Proposed ALARA Activities

ALARA measures were discussed during this meeting, and are covered below:

- Reactor vessel ventilation
  - ❖ Kirk air will do the DOP testing
  - ❖ Breathing zone sampler will be located on the bridge
  - ❖ An AMS-3 will be used as a trend indicator

- Shielded Platform for Top of Reactor
  - ❖ The platform has multiple steel plates. The gap between the lower plates will be adjusted to provide maximum shielding for each operation. HSR-12 calculations indicate that the 6" steel plate will result in a reduction of the 200 mr/hr dose rate to below 5 mrem/hr.

- Remote viewing equipment
  - ❖ Minimum look down with cameras
  - ❖ Camera used during the demo has previously been used during the characterization efforts
  - ❖ A color camera will be used, which should enhance depth perception.
  - ❖ Multiple cameras will be used- multiple area cameras, as well as at least one camera viewing on the waste container

- Mockups
  - ❖ A wire saw located on the end of a pole will be used for removing the bio shield

- Communications
  - ❖ Radios for personnel, including Health Physics and Crane operator (w/wireless headset)

- Electronic Dosimeters / TLDs
  - ❖ HSR-1 and MOTA have been communicating with HSR-4 to emphasize the need for 'quick turnaround' dosimetry. HSR-1 wants to have 10 people on weekly change-out.
  - ❖ HSR-1 will assure the correct placement of TLD badges during removal operations.

- Equipment
  - ❖ AMS-3
  - ❖ RO7
  - ❖ Teletector

- Dose Tracking Methods
  - ❖ Dedicated Health Physics staff
  - ❖ Two individual from Southwest Abatement providing decontamination service as needed.

- Management oversight
  - ❖ Local oversight for each task will be provided

- Additional Equipment to be Used
  - ❖ Four radiant heaters
  - ❖ Spotlight

- Completed RWPs need to be reviewed by Marty Peifer

- Waste Packaging
  - ❖ Waste packages will be located in a shielded location
  - ❖ Radiological hold points have been established for different waste containers to be used.

- HSR-1 Involvement
  - ❖ Marty Peifer, HSR-1 Team Leader or appropriate representative will be present during radiological work

- HEPA Filters
  - ❖ Three individual HEPA units will be installed.
  - ❖ Dose rates will be taken routinely on the HEPA filters
  - ❖ Health Physics is aware of the possibility of blowouts.
  - ❖ Large area smears (LAS) will be conducted in the area.
  - ❖ An RWP has been created for filter change outs
  - ❖ One individual is responsible for routine surveys

4.0 Documentation Reviewed

The following Work Instructions were provided by MOTA for review by the LANL ALARA team:

- 8.0, "Remove Reactor Tank Lid"
- 9.0, "Remove Internal Vertical Equipment, Bridges and Fuel Racks"
- 10.0, "Install Shielded Work Platform"
- 11.0, "Remove thermal column Lead Gamma Shield and Beryllium Assembly"
- 12.0, "Remove Beam Port Liners"
- 14.0, "Remove Grid Plate and Base Assembly"
- 15.0, "Remove lead brick and graphite from Thermal Column Shield Door"
- Dose spreadsheet with dose estimations for each task.

5.0 Recommendations

- IH review

Work Instruction 8.0, "Remove Reactor Lid", removal of vertical ports may necessitate removal from the underside of the reactor lid. My initial concern was confined space entry. Per my conversation with Mike Pannell, it appears that 1) remote operations will not result in workers 'breaking the plane of the confined space, and 2) ventilation has already been installed and is currently running. It was Mike Pannell's recommendation that 10 air exchanges occur prior to removal of vertical ports.

- Tritium Sampling
  Per your email, evaluation of tritium levels is ongoing. Ensure that the RWP covering beryllium removal operation addresses tritium concerns.

- Review of RWPs
  Ensure that Marty Peifer reviews all RWPs for these operations.

6.0 Conclusion

The estimated radiation doses and radiological practices for the workers performing this radiological activity are considered acceptable, when the additional comments stated in section 5.0 of this ALARA Radiological Activity Review Report are considered.

LANL Personnel Present at Radiological Review Meeting
Jim Bland, HSR-12 Radiological Engineering Team
Sandra Gogol, HSR-12 Radiological Engineering Team
Marty Peifer, HSR-1 Omega West Team Leader
Keith Rendell, FWO-CFS, FWO-Construction & Facility Services

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)			
Alpha	<MDCR	<MDA	<MDA	<MDA	<MDA	<MDA
Beta/gamma	N/A	>500K	>500K	>500K	>500K	>500k
Tritium			<MDA	<MDA		

External Dose Rate (mrem/hr in work area)		
Beta + gamma	100000	500
Neutron	N/A	N/A
Total (β + γ + n)	100000	500

Airborne Radioactivity <.01 DAC Co60 Isotope ☐ Estimated or ☒ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☒ Dose tracking report
☒ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☒ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☒ Post-job survey data	☐ Wound count	☒ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☒ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☒ Yes *(Add attachment if necessary)* ☐ No

Due to high personnel exposure RWP was terminated and replaced with HSR-I-03-03. This RWP failed to address and provide direction for notification in the performance of high dose tasks. A stronger policy was needed to ensure proper notification was used when encountering unusually high exposures. Other minor issues concerning job briefs and adequate ventilation were corrected as well

ALARA actions taken and results:

Shielding was used whenever practical to reduce personnel exposure.
Local area monitors were setup to make personnel aware of dose rates in work areas.
Electronic dosimeter was provided to track daily exposure and to audibly warn workers of high dose fields.
Ventilation was over engineered to ensure no airborne contaminants and minimize respirator use.

Problems encountered:

Due to reactor construction some components required disassembly without the use of shielding. This resulted in large expenditures of exposure in order to complete required tasks. Due to age methods of disassembly that would have reduced exposures had to be abandoned and new methods substituted at a cost to personnel exposure. Ventilation was difficult to maintain when cutting resulting in work stopping to repair or increase ventilation

Recommendations for future similar jobs:

Management should evaluate input from their work force in more detail when encountering problems. More individuals from all organizations should be notified when problems occur to ensure the best solutions are used. All responsible parties should be made aware of planned work evolutions and agree on methods to be used.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	2/5/03
Reviewed by RCT supervisor *(printed name)*	Signature	Z Number	Date
RON SWOTNAM		190160	2/5/03

ALTERNATIVE METHODS CONSIDERED BEFORE REMOVING THE GRAPHITE:

- Steel Plate shielding
- Lead Blanket shielding
- Breaking the graphite into small pieces
- Pulling the graphite out in one piece
- Providing water shielding
- Only removing the outer graphite blocks
- Using the wire saw
- High Pressure water

Due to shielding efficiency problems, it was determined that the only way to remove the graphite from the Thermal Column was to use a direct approach without shielding. In order to successfully use a direct approach, specific hold points were established, and intensive work briefings were held with all workers involved, including a graphite removal demonstration. A TV camera was installed to observe the work in the area, and to provide information to workers preparing to enter the area.

It was estimated that 5 Man Rem would be required to remove the graphite. Stop points of 2.5 Man Rem without progress was established along with other stop points. It took 2 hours and 4.1 Man Rem to remove the graphite. At this point it was determined that the Thermal Column head bolts were exposed and could be removed. An estimate of 30 minutes, and 2.5 Man Rem to remove the head bolts without shielding, was made. An evaluation of possible head bolt removal shielding configurations was made, but none were efficient enough to save Man Rem during the removal of the head bolts. It was determined that the most Man Rem efficient, and cost effective method, was the direct approach of removing the head bolts. The same hold points established for the graphite removal were used for the head bolt removal.

The removal of all but 3 head bolts took 30 minutes and 2.5 Man Rem. Three of the head bolts were found to be blocked with graphite. Two of the bolts were cleared of graphite and removed. A third bolt required extensive graphite removal to provide access of remote tooling necessary to remove the bolt. The removal of the last 3 head bolts required 1.7 Man Rem. A total of 4.2 Man Rem was required to remove the Thermal column head bolts.

The Thermal Column head bolt and graphite removal Man Rem total was 8.9 Man Rem; 0.7 Man Rem was required to remove the first 4 feet of graphite. The removal of a small amount of remaining graphite is estimated to require 1 Man Rem. The removal and segmenting of the Aluminum head and the Bismuth shield is estimated to require an additional 1 Man Rem. The removal of the stainless steel flange is estimated to take 1.1 Man Rem. The current total Man Rem estimate for the Thermal column removal is 11 Man Rem. At the estimated 12 Man Rem to complete the Thermal Column removal from inside the Thermal Column, the Man Rem increase is estimated at 7.621 Man Rem from

the original estimate. The original estimated savings resulting from removing the Thermal column from inside the Thermal Column was 8 days schedule reduction. The added cost of 7.621 Man Rem to remove the Thermal Column from inside the Thermal Column is an acceptable ALARA decision.

The Man Rem expended was distributed amongst 12 individuals. For the most part, the individuals involved in the removal of components from the Thermal Column were from the project management staff. The use of this exposure was prudent and would not adversely affect future work activities. The range of the exposure for the task was from 155 mrem to 1081 mrem with an average exposure of 677 mrem. Of the exposed group, only two individuals will be involved in future activities involving high exposure. We do not expect to approach the contractual exposure limit of 2 Rem for any person assigned to the project.

The original Omega West project Man Rem estimate, established in July of 2002, was 40.438, which included 11.59 Man Rem for Thermal Column removal. An October 2002 review of the project Man Rem estimate reduced the Man Rem goal to 28.113. Later in October 2002, a 20 Man Rem project goal was established. Based on the removal of the Thermal Column from inside the Thermal Column, the original Man Rem estimate of 40.438 appears to be more realistic, as it included an 11.59 Man Rem estimate for the removal of the Thermal Column components. An adjusted project goal of 30 Man Rem is now more realistic than the revised 20 Man Rem goal, yet still less than the originally expected total Man Rem of 40.438.

Estimated Man hours by task			hrs/task	70% eff	10% hi dose rate	hi doserate mr/hr	low dose hrs	low dose rate mr/hr	Man Rem
WBS Name	No. Of Techs	Hrs Per Tech	Total Tech Hours						
Install/Test HEPA	4	40	160 32	22.4	2	10			0.02
							11	1	0.011
Bldg 101 Equip Removal	4	80	320						0.05
Remove Tank Lid	4	84	256 120	84	8	300			2.4
Vertical Equip			120	84	8	300			2.4
Install Platform			16	11.2	1	300			0.3
							10	50	0.5
							10	50	0.5
							5	10	0.05
Remove TC Lead	4	36	144 72	50.4	5	150			0.75
							40	1	0.04
Remov BE Ass.			72	50.4	5	300			1.5
							25	10	0.25
							25	10	0.25
Remove BP Liners	4	48	192 192	134.4	13	300			3.9
							67	10	0.67
Remove TC Head	4	80	320 320	224	22	150			3.3
							60	10	0.6
Remove Fuel Racks	4	48	192 32	22.4	2	300			0.6
Grid Plate			160	112	11	300			3.3
							11	10	0.11
							56	10	0.56
Remove TC	4	144	576	403.2	8	300			2.4
					10	150			1.5
					100	20			2
							60	10	0.6
							200	1	0.2
Remove Spectrom.	4	120	480	336			336	0.1	0.033
Fume Hood									0
Remove Airborne Syst.	4	80	320	224	22		22	1	0.022
Emergency Spray							22	1	0.022
Misc. Systems							160	1	0.16
TA 2-89,90	4	32	128	89.6	69		89	0.1	0.009
Upper/Lower Bio Shield	4	520	2080	1456	70	100			7
							1000	1	1
							240	10	2.4
Install/Remove tent	8	200	1600	1120	112	2			0.224
							1008	0.1	0.1
Sub Floor	4	80	320	224			224	0.5	0.112
Final Survey 101	8	24	144	100		2			0.2
Demo 101	4	32	128	90		1			0.09
Abate 101 Roof	3	8	24	17		5			0.085
TOTAL									40.438

[redacted]ated Man Rem for Internals work completed 9.944 OWR Man Re[redacted]ased on Schedule 10/1/02 Actual Man Rem for Internals w[redacted]mpleted 6.799

Item	days	people	hours	total hours	70%	HI dose hours	HI dose rate R/Hr	Mid dose hours	mid dose rate R/hr	low dose hrs	low dose rate	Total dose for task Mrds	RP support	misc support	total Man Rem	Task Status
Remove Rx Tk lid	3	4	10	120	84	8.4	0.15	33.6	0.01	42	0.001	1.638	0.4914	0.01638	2.146	done
Install platform	3	4	10	120	84	8.4	0.15	33.6	0.04	42	0.005	2.814	0.8442	0.02814	3.686	done
Remove internal vert equip	5	4	10	200	140	0.7	0.05	56	0.005	83.3	0.001	0.3983	0.11949	0.03983	0.556	done
Remove Be reflector	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Beam port liners	6	3	10	180	126	12.6	0.1	50.4	0.005	63	0.001	1.575	0.4725	0.1575	2.205	done
Remove Lead shield	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Fuel racks	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Grid Plate & Base	5	4	10	200	140	7	0.03	56	0.005	77	0.001	0.567	0.1701	0.0567	0.794	working
Remove Thermal Column head	10	6	10	600	420	21	0.025	168	0.005	231	0.001	1.596	0.4788	0.1596	2.234	not started
Remove Debris	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Remove platform	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Plasma Arc Vessel Tank	1	4	10	40	28	1.4	0.01	11.2	0.0025	15.4	0.001	0.0574	0.01722	0.00574	0.080	not started
Remove material from storage ports	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	done
Remove Thermal column graphite	2	6	10	120	84	8.4	0.05	33.6	0.01	42	0.0005	0.777	0.2331	0.0777	1.088	working
Total dose Rx Internals				2060								10.6155	3.18465	0.66087	14.461	

Estimated Man Rem for remaining Internals work 4.516

Total estimated Man Rem for Internals work 14.461

ALARA REVIEW FOR THERMAL COLUMN REMOVAL

1. Describe Thermal Column

   A. Aluminum Head
   B. Bismuth Shield
   C. Stainless Steel Flange
   D. Flange Bolts
   E. Flange Lead

2. Thermal Column dose rates

3. Thermal Column contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium

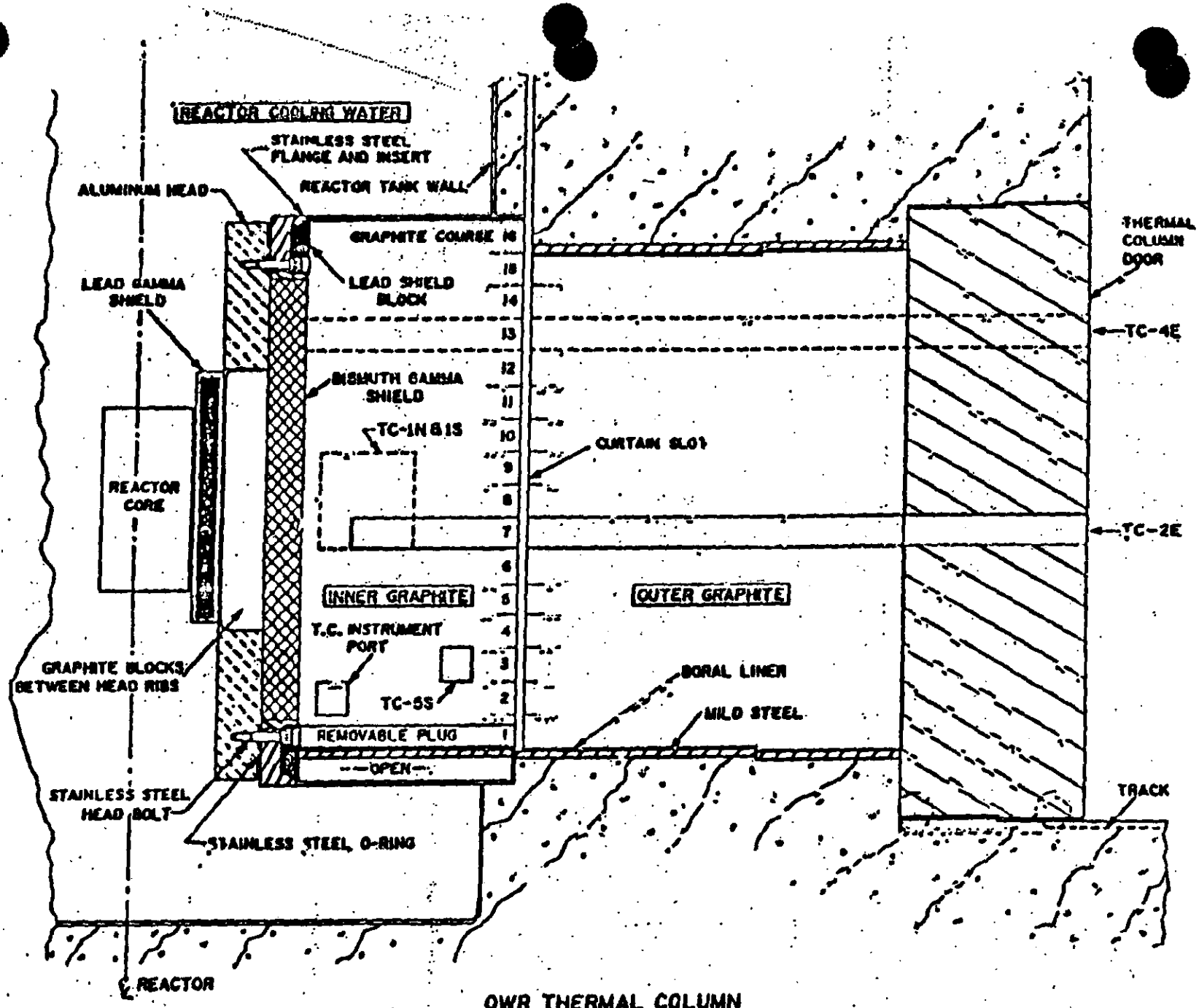
3. Airborne contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium levels

4. Ventilation and contamination Controls

5. Estimated Man Rem 4.379

A.	MOTA	3.650
B.	Management	0.182
C.	RCTs	0.365
D.	Waste Packaging	0.182



OWR THERMAL COLUMN

Los Alamos

Ω-West

Man Rem Estimate for Thermal Column

Task	Duration hours	people assigned	Man Hours	Effective hrs 70%	Low dose rate	Mid dose rate	High dose rate	LDR Man Rem	MDR Man Rem	HDR Man Rem	Man Rem/Task
Install sheilding	3	4	12	8.4	0.005	0.05	0.6	0.021	0.168	0.504	0.693
Remove remaining Graphite	4	2	8	5.6	0.005	0.05	0.6	0.014	0.112	0.336	0.462
Remove remaining Head bolts	4	2	8	5.6	0.05	0.05	0.6	0.14	0.112	0.336	0.588
Remove four segments of lead	1	2	2	1.4	0.05	0.05	0.6	0.035	0.028	0.084	0.147
Rig and remove Al head	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Segment Al head	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Rig and remove Bi shield	1	3	3	2.1	0.01	0.05	0.9	0.0105	0.042	0.189	0.242
Segment Bi sheild	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Remove SS flange	2	4	8	5.6	0.01	0.05	0.6	0.028	0.112	0.336	0.476
Segment SS flange	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Insrall ventilation control items	2	2	4	2.8	0.005	0.02	0.04	0.007	0.0224	0.0112	0.041
Remove sheilding	2	2	4	2.8	0.02	0.04	0.08	0.028	0.0448	0.0224	0.095
Secure Thermal Col area after removal	2	2	4	2.8	0.005	0.01	0.02	0.007	0.0112	0.0056	0.024
Mgr support											0.182
RCT support											0.385
Waste Packaging											0.182
Total											4.379

In ital Man Rem estimate 2.778

NAME Ext	Firm	Z/I	TLD Data	20-Jan
Toutaint, Robert H. 4.5/5.7	MOTA	191947	JAN 13 TLD	853
Ortiz, Daniel	SW	192477	NOV TLD	875.7
Granus, Mark	WD3	190158	NOV TLD	888
Fennema, James	MOTA	191503	NOV TLD	899.4
Kerr, Scott	MOTA	190388	NOV TLD	974.3
Ball, David	MOTA	193024	NOV TLD	1007.7
Laurent, S	MOTA	192795	NOV TLD	1044.2
Przybyski, Marty	WD3	190412	NOV TLD	1048.9
Mountain, Mark	MOTA	193023	NOV TLD	1054.2
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	1065.9
Reust, Jack L.	Duratek	191044	NOV TLD	1068.3
Schnell, Gerald	SEC	191326	NOV TLD	1090.8
Coleman, John	WD3	190383	NOV TLD	1101.2

01/21/03 10:39pm P.010
505 667 3350
MOTA CORP

TA -2 RADIOLOGICAL SURVEY FORM

Survey #	Location
03-OWR-062	OWR
Date / Time	**RCT / Z #**
1/16/02 1430	SUMMERS 191329
RWP #	**RCT Signature**
HSR-1-02-029-TA2	

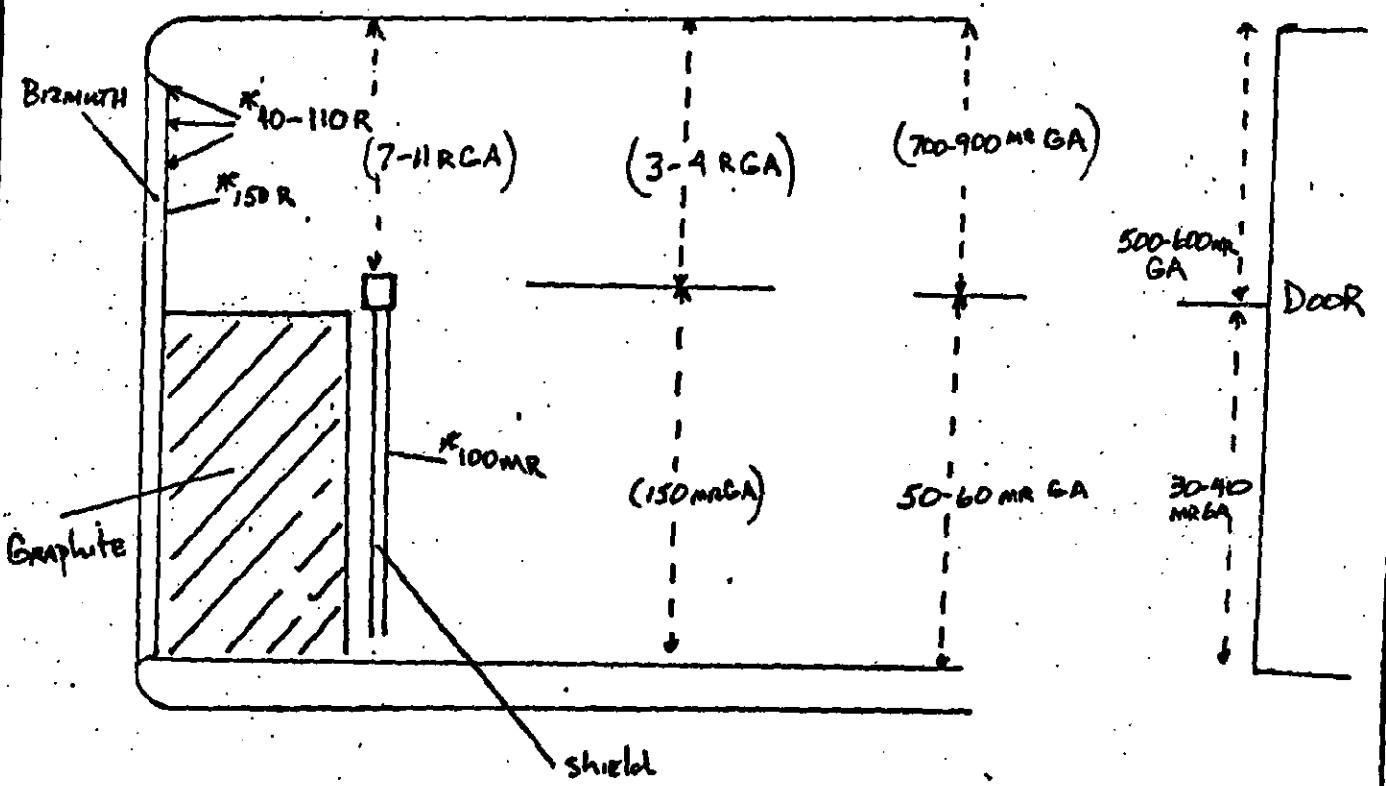
Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose RD20	531	2/7/03	N/A	N/A	.2 mR/hr
βγ			N/A		
α			N/A		

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
	N/A		

THERMO COLUMN



Comments NONE

Reviewed

MOTA CORP 505 667 3360 01/21/03 10:53pm P. 011

NAME Ext	Firm	Z#	TLD Data	
Coleman, John	WD3	190383	NOV TLD	1080.8
Granue, Mark	WD3	190158	NOV TLD	813.9
Przybyski, Marty	WD3	190412	NOV TLD	1005.5
Williams, Dana	WD3	178110	NOV TLD	759.3
Reust, Jack L.	Duratek	191044	NOV TLD	841
Romero, Adrian	Duratek	120634	NOV TLD	490.8
Ball, David	MOTA	193024	NOV TLD	155
Fennema, James	MOTA	191503	NOV TLD	874.1
Mountain, Mark	MOTA	193023	NOV TLD	454.7
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	188.1
Schnell, Gerald	SEC	191326	NOV TLD	610.3
Ortiz, Daniel	SW	192477	NOV TLD	831

TA -2 RADIOLOGICAL SURVEY FORM

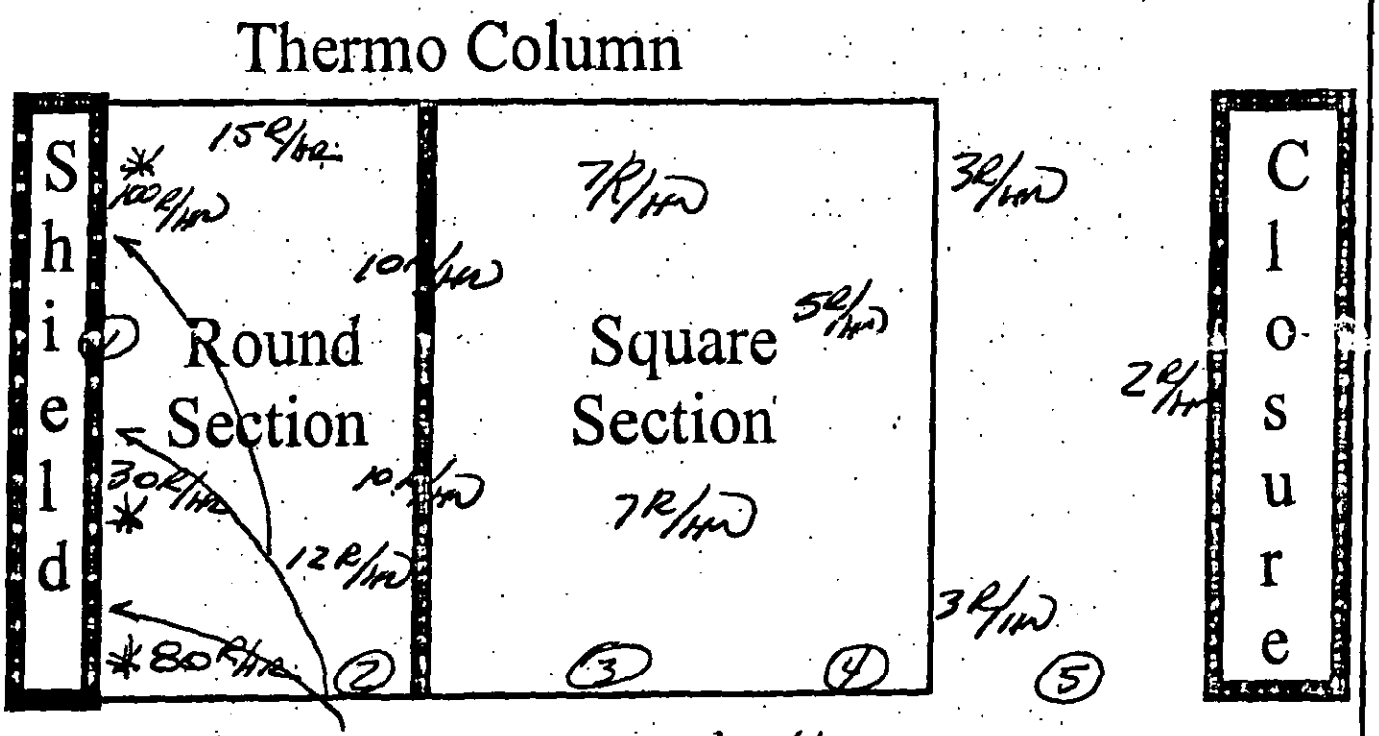
Survey #	Location
03-OWL-086	Inside ThermoColumn
Date / Time	**RCT / Z #**
1-18-03 / 1430	191326
RWP #	**RCT Signature**
HSR-1-02-0024	

Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose 6112B	1613	10/20/03	N/A	N/A	N/A
βγ ESP-1	7428	6/4/03	50	15.5 cm²	400 dpm
α 139	3768	3/21/03	50	47.5 cm²	0 cpm
N/A	N/A	N/A	N/A	N/A	N/A

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
1	surface shield	200K	L20
2	↑	20K	
3		10K	
4	SQR MAP	3K	6
5	↓	2K	L20



Reviewed by

DLS 1/21/03

Comments

MDTA CORP

Los Alamos
National Laboratory

HSR-1-02-26-TH2

ESH-1 USE ONLY

Permit Number ~~HSR-1-02-25a-TH2~~ 25a RLS

Effective 12/17/02 Expires 2/28/03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus RLS For M Granus	WD3	NA	M769	TA2-OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	NA	NA	12/17/02	2/28/03

Work to be performed:

Remove horizontal port liners and size reduce as needed for packaging.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)

	Direct	Smear	LAS (large area swipe)	
Alpha	TBD / TBD	TBD / TBD	TBD / TBD	
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD	
Tritium		TBD / TBD		

External Dose Rate (mrem/hr in work area)

Beta + gamma	10 / 10
Neutron	NA / NA
Total (β + γ + n)	10 / 10

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

TBD DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Kirk Summers		191324	12/17/02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: Rubber shoe covers

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: HEPA ventilation required *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☒ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other:

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other:

Training Requirements ☐ RW I ☒ RW II ☐ Other:

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☐ Routine work ☒ Special radiological work

Estimated person-hours for job 180
Estimated /measured working dose rates TBD
Estimated collective dose 2.2 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) RCT to monitor dose rates and contamination levels as sleeve is removed from port.
2) Radcon to monitor Rx tent perimeter during evolution for possible elevated dose rates.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Kirk Summers		191324	12/17/02

APPROVALS

1. Manager R SWOTNAM	Signature	Z Number 190160	Date 12-17-02
2. RCT supervisor MARTY PEIFER	Signature	Z Number 108821	Date 12-17-02
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☑ CAM results
- ☐ Job-specific air monitoring
- ☐ Pre-job survey data
- ☐ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☐ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

Small particles were found that resulted in low levels of contamination. Two layers of PCs were found to control this problem.

ALARA actions taken and results: None

Problems encountered: low level contamination

Recommendations for future similar jobs: Good vent control. Use material to fix contamination

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWETNAM	Signature R Swetnam	Z Number 190160	Date 4/1/03

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-2582	0	OWR

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
192477	DANIEL ORTIZ	S.A.E	Daniel Ortiz	12.19.02	2:20
190385	Elaine Brown	SEC	Elaine Brown	12802	1420
193023	M. MOUNTAIN	MOTA	Mark Mountain	12.19.02	1425
193024	DAVID W BALL	MOTA	David W. Ball	19-1802	1425
190588	~~JAE~~ RUTLAND	MOTA	Jae Rutland	12/18 02	1425
190586	D DANSARD	MOTA	D Dansard	12182	1430
190389	SCOTT KERR	MOTA	Scott Kerr	12/18/02	1430
191324	SUMMERS	SEC	[illegible]	12/18/02	1430
191947	R A Tourtaint	MOTA	[illegible]	12/19/02	1340
192194	Robert Livingston	MOTA	[illegible]	12/19/02	1340
193262	STEVE BLACKWELL	SEC	[illegible]	12/19/02	1340
120634	Adrian Romero	Wackenhut	[illegible]	12/19/02	1340
[illegible]	[illegible]	LANL	[illegible]	[illegible]	[illegible]
192795	SHAWN LAURENT	MOTA	[illegible]	12/19/02	0800
190586	D. DANSARD	MOTA	D Dansard	1-7-03	0800

Conducted by: [signature] Date: 12/18/02

Los Alamos
National Laboratory

Radiological Work Permit

ESH-1 USE ONLY
Permit Number HSR-1-03-003-TA-2
Effective 1/24/03 Expires ~~3/1/03~~ 5/1/03

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
James Staher	WD3		M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
n/a	n/a	n/a	n/a	1/24/03	3/1/03

Work to be performed:

Removal of reactor components and all supporting activities

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	NDA / NDA	NDA / NDA	NDA / NDA
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / TBD	

External Dose Rate (mrem/hr in work area)

Beta + gamma	300 / 20
Neutron	n/a / n/a
Total (β + γ + n)	300 / 20

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

TBD DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

Loose surface contamination expected under reactor head

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Gerald Schnell		191326	1/25/03

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☒ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: lab coats to be worn outside contaminated areas

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: See notes 1, 2, & 3 of special instructions **Requires ESH-5/JSFT (JCNMM) approval*

Dosimetry Requirements ☐ None ☒ WB dosimeter ☒ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☒ Other: supplemental dosimetry positioning per RCT

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
Estimated person-hours for job: 1790
Estimated /measured working dose rates: TBD
Estimated collective dose: 13.373 person-rem
☐ Routine work ☒ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Respiratory protection required when a/s data warrants or when uncovering highly contaminated surfaces
2) Reactor ventilation required prior to job start and at all times when work is in progress. Work to stop immediately if ventilation is lost or inadequate for work evolution.
3) CAM present for air quality trending.
4) Specific work instructions must be in place for each job evolution worked under this RWP.
5) RCT to verify dose rates on reactor components prior to removal from vessel as well as to provide information for future disposal.
6) Tritium monitoring to be performed during work evolutions on this RWP.
7) Daily post job survey to be conducted to verify postings and inspect housekeeping for work area
8) A daily brief is required prior to commencing work on this RWP. In addition a new brief is required as new work scope is introduced. This brief should include anticipated dose rates, contamination levels, and anticipated exposures to be received. If any of these values are exceeded by 20% work is to be stopped. WD3 and LANL management to be notified.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	

APPROVALS

1. Manager RON SWITNAM	Signature R Switnam	Z Number 190160	Date 1/28/03
2. RCT supervisor MARTY PEIFER	Signature Marty Peifer	Z Number 108821	Date 1/28/03
3. Other *(job title/printed name)* JIM STACEY	Signature Jim Stacey	Z Number 190391	Date 1/28/03
4. Other *(job title/printed name)*	Signature	Z Number	Date

ALARA Review Checklist

Job/Operation Title	Remove OWR Thermal Column
Purpose of Job/Operation	Remove Thermal Column flange and B. Shield
RWP/HCP No.	Job/Operation Contact: S.J. Ticket/WO No.

Yes	No		
			Procedures
✓			Prepare special radiological procedures?
✓			Include radiological control hold points?
✓			Review abnormal and emergency procedures?
✓			Identify where signatures or verifications are needed?
✓			Establish success or completion criteria?
✓			Develop pre-job collective dose estimate?
✓			Apply special waste minimization, control, or disposal?
✓			Establish detailed schedule for task sequencing/personnel entries?
			Engineering
✓			Make special use of existing engineering controls?
	✓		Develop new engineering controls?
✓			Install temporary/permanent shielding? (Include load/stress concerns.)
			Worker Preparation
✓			Provide special radiological training?
✓			Use mockups, walkdowns, or dry runs?
✓			Optimize worker efficiency (comfort vs. exposure)?
✓			Use photos/drawings/video for pre-job briefing/training?
✓			Select most highly skilled/qualified workers?
			Job Setup
✓			Prestage materials or tools?
✓			Prefabricate parts/materials?
✓			Install special services (power, water, air, ventilation)?
			Post ALARA waiting/rest areas and hot spots?
			Contamination Control
✓			Use contamination curbing, floor covering, fencing?
✓			Use tents/glove boxes/containments?
✓			Use catch trays/drainlines?
✓			Use HEPA vacuums?
✓			Install local ventilation?
✓			Use special protective clothing/devices?
✓			Implement special hot particle controls?
✓			Wet or fix loose contamination?
			Exposure Control
		NA	Flush contaminated lines?
✓			Decontaminate area? (Optimize decontamination dose vs. job dose.)
✓			Allow for decay before entry?
✓			Use special, remote, or robotic tools?
✓			Can a high-dose source be removed?
✓			Require special monitoring (for example, CAMS, ARMS, continuous coverage)?
✓			Move some work to low or no exposure areas?
	✓		Can work crew be reduced w/o increasing total dose?
	✓		Is there unnecessary work that can be eliminated?
✓			Use remote, integrating, or real-time dose tracking?
✓			Use remote audio/visual communications?
✓			Use worker time limits?
	✓		Is there a useful ALARA technique for this job not mentioned above? Document on back of form.

List detailed recommendations on back. Attach any special analyses/worksheets (date and sign).

If ALARA recommendation implementation cost is about $50K or more, provide cost-benefit analysis.

Man Rem Estimate for Rema[redacted] Thermal Column Work 1/27/03

Task	Duration hours	people assigned	Man Hours	Effective hrs 70%	Low dose rate	Mid dose rate	High dose rate	LDR Man Rem	MDR Man Rem	HDR Man Rem	Man Rem/Task	with shielding
Install shielding	0.5	2	1	0.7	0.125	1.5	6	0.044	0.42	0.42	0.884	0.884
Remove four segments of lead	0.5	2	1	0.7	0.125	3	6.5	0.044	0.84	0.455	1.339	0.669
Segment Al head	4	2	8	5.6	0.01	0.5	2	0.028	1.12	1.12	2.268	1.134
Segment Bi shield	4	2	8	5.6	0.01	0.5	3	0.028	1.12	1.68	2.828	1.414
Remove SS flange	3	2	6	4.2	0.05	1	5	0.105	1.68	2.1	3.885	1.943
Segment SS flange	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189	0.189
Install ventilation control items	2	2	4	2.8	0.005	0.02	0.04	0.007	0.0224	0.0112	0.041	0.041
Remove shielding	2	2	4	2.8	0.02	0.04	0.08	0.028	0.0448	0.0224	0.095	0.095
Secure Thermal Col area after removal	2	2	4	2.8	0.005	0.01	0.02	0.007	0.0112	0.0056	0.024	0.024
Mgr support											0.226	0.226
RCT support											0.457	0.457
Waste Packaging											0.726	0.726
Total											12.961	6.918

Subj: **Fwd: Formal ALARA Review - Removal/Transfer Thermal Column Activity**
Date: 1/30/03 2:48:58 PM Mountain Standard Time
From: peiferm@lanl.gov
To: olshanjps@aol.com
CC: rswetnam@aol.com
Sent from the Internet (Details)

X-Sender: u110309@esh-mail.lanl.gov
X-Mailer: QUALCOMM Windows Eudora Version 4.3.2
Date: Thu, 30 Jan 2003 08:56:54 -0700
To: rendell_keith@lanl.gov, peiferm@lanl.gov
From: James R Bland <jrbland@lanl.gov>
Subject: Formal ALARA Review - Removal/Transfer Thermal Column Activity
Cc: jfennema@msn.com, bodenstein@lanl.gov, tbuhl@lanl.gov, weisele@lanl.gov, jrbland@lanl.gov, rrangel@lanl.gov

Keith and Marty,

An ALARA Review Meeting was held on Tuesday, January 28, 2003, to discuss the radiological activities being performed on the Omega West D&D Project - Remove and Transfer of the Thermal Column Head. A review of the procedure was performed prior to the meeting by Jim Bland, HSR-12 Radiological Engineering Team, and review the radiological activities, expected dose rates and estimated person-rem by the project, and mitigating features to reduce radiation levels to the workers. During the meeting, items were discussed for clarification or more information to perform a proper ALARA Review.

****

Requirements

1. HSR-1 Procedure ESH-1-06-01.2, External Exposure Control Standards, dated July 1, 1999, the ALARA Review Trigger Levels might be exceeded as projected by the project. It is presently estimated the individual dose and collective dose for this specific task could exceed the 500 mrem whole body EDE and 1 person-rem, respectively. This triggers a requirement for a formal radiological review in accordance with LIR402-700-01.

2. LIR402-700-01, Chapter 3, ALARA Program states the following programs elements must be met for the a high-potential-dose (>5 person-rem collective & >0.5 rem individual) expected for these tasks. The following program elements must be met (this is not a normal LANL facility operation but a D&D project so slight modification are made):
   1. Management Commitment - LANL Project Team and MOTA's management
   2. Training -
   3. Procedures
   4. ALARA goals
   5. Design reviews
   6. ALARA reviews
   7. Cost-benefit analysis - besides dollar savings for a person-rem, the evaluation of installing an engineering control feature needs to evaluated for dose savings.
   8. Performance assessment - (modified since D&D activity) LANL Project Team and LANL Radiation Protection SMEs assist in this assessment and is an ongoing activity.
   9. ALARA Committees and coordinators - since this is a D&D operation - D&D LANL Project Team, LANLs radiation Protection SMEs, and MOTA's Radiation Safety Staff perform this activity
   10. Documentation

ALARA Review Process requires the five-step process for safe work practices

to include the following three parts

1. Pre-job planning and dose estimation. Detail the work and dose estimations. Determine whether a formal ALARA review is required.

2. Implementing ALARA control measures (use ALARA Review Checklist for required ALATA techniques) and dose-tracking. If a review is required, incorporate ALARA measures into the work. Track individual and collective doses and compare to the estimated dose to determine if the ALARA measures are effective.

3. Post-job review. If the actual doses fall outside the range of +/-25% of pre-job estimates, of if significant or successes were learned, then, perform and document a formal post-job review on improvements to optimize doses, for similar future work.

****

ALARA Review Meeting (Tuesday,January 28, 2003 @ 10:00 a.m.)
The following items were discussed for clarification from items outlines in the work procedure at the meeting:

1. Procedure has been updated due to better information on the activities and updated procedure was provided for the ALARA Review.

2. Does the temporary ventilation system used in the work area have a HEPA filter?
   Project Response: yes

3. Is there air sampling being performed in the work area to assist on evaluating the airborne concentration of radioactive materials?
   Project Response: yes

4. Have radiation level hold points been established and a plan what needs to be done if these hold points are reached?
   Project Response:
   Yes, there have established task and individual dose allotments and area radiation field hold points.

5. What determines whether a shield curtain is installed or not and what is the attenuation factor of the shield curtain?
   Project Response:
   The radiation levels of the work area is evaluated and the dose received by installing the curtain vs performing the work without the curtain is assessed and a decision is made. Each layer of the shield curtain has about a 30% reduction.

6. Discussed one of the steps of the procedure which referred to segmenting the bismuth shield using an abrasive wheel cutter on the stainless steel portion.
   Project Response:
   This has been changed in the updated procedure to be a plasma arc cutter.

7. Is the project having appropriate training for the workers to perform tasks efficiently and safely?
   Project Response:
   The project have mock-ups and dry runs to ensure task are performed efficiently and safely.
   In fact, this was being conducting for one of the tasks as we were having the meeting.

8. Discussion of the activity needing to fill out an ALARA Check List, provided in LIR 402-700-01.
   Project Response:
   The project had filled out the ALARA Checklist and provided it for review.

   The only change I would recommend is a yes not no for the item "Develop new engineering controls" because the project has used numerous mitigating features

and continually evaluates the situation to incorporate other features when needed to reduce the radiation field to their worker, i.e., shielding in the reactor deck, shield curtains, ventilation, and containment plus others.

9. A RWP has been developed for this work with the oversight of Marty Peifer, HSR-1 Team Leader for this Project.

****

ALARA Review Conclusion

The project has done an excellent job in planning the work to be performed and estimating the potential radiation doses. The project has implement ALARA radiation dose control measures and plan on having an ongoing evaluation of the radiological situation with the constant tracking of the work area radiation fields and doses to the workers. The project has established hold points to re-evaluate the radiological situation, if needed. A RWP and ALARA Review Checklist were developed for these activities. The project conducts training and mock-up/dry-runs. MOTA have very competent, professional and experienced individuals performing this work with appropriate supervision of activities. The work performed by MOTA has the oversight of Marty Peifer, HSR-1 Team Leader, and Keith Randell, LANL Project Leader with Stan Bodenstein as the Omega West SME.

The project must keep Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader, informed of any significant changes effecting radiation condition or any changes not discussed effecting the radiation dose to the workers or their safety. What is considered significant will be determined by Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader.

****

A formal memorandum will be sent for this ALARA Review incorporating items outlined in this email.

Please contact me, if there are any significant changes to activities discussed for this ALARA review. Again, what is considered significant will be determined by Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader.

Jim Bland
HSR-12 Radiological Engineering Team

****

****

Jim Bland, M.S.
HSR-12 Radiological Engineering Team
(Previously ESH-12 Radiological Engineering Team)
Los Alamos National Laboratory
pager: 996-0664
phone: (505)667-0596
email: jrbland@lanl.gov
Group fax: (505) 667-9726
Group Office: (505) 667-5296

Marty Peifer, Team Leader / Project Leader
HSR-1 / CGRP-D&D
Los Alamos National Laboratory
Los Alamos, New Mexico 87545 MS. M-769
Phone: (505) 665-4342
Pager: (505) 664-6649

Fax: (505) 667-0189
Cellular: 699-1063
E-mail: peiferm@lanl.gov

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-03-003		BREAK TRL

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
194571	PAUL WHEELER	MOTA		2/6/03	0700
194164	BRUCE RAYMOND	CE		8:00	8:00
191947	R H TOUCHAINT	MOTA		1/29/03	0800
169743	Ralph Young	JAMES CRANE		1-29-03	0800
194163	Patrick Kennedy	Cutting		1-29-03	0800
190588	HAL RUTLAND	MOTA		1-29-03	0801
192794	ROBERT LIVINGSTON	MOTA		1-29-03	0802
190586	D DANSARD	MOTA		1-29-03	0803
192795	S. Laurent	MOTA		1-29-03	0804
190389	Scott ISERR	MOTA		01-29-03	0805
193025	Eric Barron	FANP		1/29/03	0805
191503	J A FENNEMA	MOTA		1/29/03	0805
178110	DANA WILLIAMS	WG11		1/29/03	0805
190412	MARK DRZEWIECKI	WG11		1-29-03	0806
191329	SUMMERS	SEC		1/26/03	0810
190385	Elaine Brown	SEC		1-29-03	0810
193252	STEVE BLACKWELL	SEC		1-29-03	0810
194174	John Jackson	SEC		1/29/03	0810
190160	RON SWETNAM	WD3		1/31/03	1500
193023	MARK MOUNTAIN	MOTA		02-04-03	1235
193024	DAVID BALL	MOTA		2/4/03	1235
192795	SHAWN LAURENT	MOTA		02-04-03	1235

Conducted by: C Schnell Date: 1/29/03

From : James R Bland <jrbland@lanl.gov>
To : rendell_keith@lanl.gov, peiferm@lanl.gov
CC : jfennema@msn.com, bodenstein@lanl.gov, tbuhl@lanl.gov, weisele@lanl.gov, jrbland@lanl.gov, rrangel@lanl.gov
Subject : Formal ALARA Review - Removal/Transfer Thermal Column Activity
Date : Thu, 30 Jan 2003 08:56:54 -0700

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****

ALARA Review Conclusion

The project has done an excellent job in planning the work to be performed and estimating the potential radiation doses. The project has implement ALARA radiation dose control measures and plan on having an ongoing evaluation of the radiological situation with the constant tracking of the work area radiation fields and doses to the workers. The project has established hold points to re-evaluate the radiological situation, if needed. A RWP and ALARA Review Checklist were developed for these activities. The project conducts training and mock-up/dry-runs. MOTA have very competent, professional and experienced individuals performing this work with appropriate supervision of activities. The work performed by MOTA has the oversight of Marty Peifer, HSR-1 Team Leader, and Keith Randell, LANL Project Leader with Stan Bodenstein as the Omega West SME.

The project must keep Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader, informed of any significant changes effecting radiation condition or any changes not discussed effecting the radiation dose to the workers or their safety. What is considered significant will be determined by Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader.

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A formal memorandum will be sent for this ALARA Review incorporating items outlined in this email.

Please contact me, if there are any significant changes to activities discussed for this ALARA review. Again, what is considered significant will be determined by Marty Peifer, HSR-1, and Keith Rendell, LANL Project Leader.

Jim Bland
HSR-12 Radiological Engineering Team

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ALARA EVALUATION OF THE THERMAL COLUMN REMOVAL

The initial Thermal Column Head removal plan was to use a wire saw to cut off both the Aluminum Head and the Bismuth head (which has a stainless steel flange). Using the wire saw would have required remote equipment operation approximately 25 feet into the reactor vessel. A mock-up setup of the proposed wire saw operation demonstrated that it would be successful, but with some operational risks. Based on the very high dose rates expected in the area of the Bismuth shield, the operational risk was acceptable but the possibility of additional schedule delays due to wire breakage remained evident.

After the Thermal Neutron ports were emptied, dose rates were taken inside the ports near the Bismuth shield and the stainless steel flange. The dose rate survey indicated 50 R/Hr dose rates in these areas. This dose rate presented an acceptable working condition while using remote tooling inside the Thermal Column for its removal. Drawings of the Thermal Column components were reviewed to determine the methods required to remove the Thermal Column head from inside the Thermal Column. The drawing review demonstrated that the Thermal Column head could be successfully removed from within the Thermal Column.

A Man Rem estimate was made, based on the Thermal head removal time estimate, and the observed dose rates measured inside the Thermal Column. The estimated Man Rem was 4.6 Man Rem, with 4 feet of the graphite removed. (The 4 feet of graphite removal projection was 0.3 Man Rem). The initial Thermal Head Column remote wire saw removal Man Rem estimate was 3.3 Man Rem, which included the removal of the graphite. The wire saw method would take 10 days, with an additional 2 days to remove the graphite from the Thermal Column. Direct removal of the Thermal Column, and interior Thermal Column graphite, was estimated at four days, saving 8 schedule days. The 8 day schedule time difference justified the increase of 1.6 Man Rem to remove the Thermal Column from inside the Thermal column.

Upon entering the Thermal Column, it became apparent that the removal of the Thermal Column graphite was more difficult than expected. Dose rates at 30 inches from the Bismuth Shield were found to be higher than expected. Because of the alignment of the graphite, we realized that Thermal Column head bolt removal from inside the Thermal Column, at 30 inches from the Bismuth shield, may not be possible. Work was stopped to consider more efficient methods for the required tasks, and to determine methods to provide better shielding for work conducted inside the Thermal Column. Numerous shielding methods were considered, but all hindered the removal of the graphite from the Thermal Column. It was estimated that a minimum of 3.5 inches of lead equivalent shielding would be required to adequately shield the work area. The installation alone for field assembled shielding of this magnitude would require more Man Rem to install than the method saved. The installation of any shielding in the Thermal Column would have required an extensive engineering evaluation and inherent procurement and fabrication delays; installation which conformed to the geometry of the Thermal Column would have been very Man Rem intensive as well.

ALTERNATIVE METHODS CONSIDERED BEFORE REMOVING THE GRAPHITE:

- Steel Plate shielding
- Lead Blanket shielding
- Breaking the graphite into small pieces
- Pulling the graphite out in one piece
- Providing water shielding
- Only removing the outer graphite blocks
- Using the wire saw
- High Pressure water

Due to shielding efficiency problems, it was determined that the only way to remove the graphite from the Thermal Column was to use a direct approach without shielding. In order to successfully use a direct approach, specific hold points were established, and intensive work briefings were held with all workers involved, including a graphite removal demonstration. A TV camera was installed to observe the work in the area, and to provide information to workers preparing to enter the area.

It was estimated that 5 Man Rem would be required to remove the graphite. Stop points of 2.5 Man Rem without progress was established along with other stop points. It took 2 hours and 4.1 Man Rem to remove the graphite. At this point it was determined that the Thermal Column head bolts were exposed and could be removed. An estimate of 30 minutes, and 2.5 Man Rem to remove the head bolts without shielding, was made. An evaluation of possible head bolt removal shielding configurations was made, but none were efficient enough to save Man Rem during the removal of the head bolts. It was determined that the most Man Rem efficient, and cost effective method, was the direct approach of removing the head bolts. The same hold points established for the graphite removal were used for the head bolt removal.

The removal of all but 3 head bolts took 30 minutes and 2.5 Man Rem. Three of the head bolts were found to be blocked with graphite. Two of the bolts were cleared of graphite and removed. A third bolt required extensive graphite removal to provide access of remote tooling necessary to remove the bolt. The removal of the last 3 head bolts required 1.7 Man Rem. A total of 4.2 Man Rem was required to remove the Thermal column head bolts.

The Thermal Column head bolt and graphite removal Man Rem total was 8.9 Man Rem; 0.7 Man Rem was required to remove the first 4 feet of graphite. The removal of a small amount of remaining graphite is estimated to require 1 Man Rem. The removal and segmenting of the Aluminum head and the Bismuth shield is estimated to require an additional 1 Man Rem. The removal of the stainless steel flange is estimated to take 1.1 Man Rem. The current total Man Rem estimate for the Thermal column removal is 11 Man Rem. At the estimated 12 Man Rem to complete the Thermal Column removal from inside the Thermal Column, the Man Rem increase is estimated at 7.621 Man Rem from

1050

the original estimate. The original estimated savings resulting from removing the Thermal column from inside the Thermal Column was 8 days schedule reduction. The added cost of 7.621 Man Rem to remove the Thermal Column from inside the Thermal Column is an acceptable ALARA decision.

The Man Rem expended was distributed amongst 12 individuals. For the most part, the individuals involved in the removal of components from the Thermal Column were from the project management staff. The use of this exposure was prudent and would not adversely affect future work activities. The range of the exposure for the task was from 155 mrem to 1081 mrem with an average exposure of 677 mrem. Of the exposed group, only two individuals will be involved in future activities involving high exposure. We do not expect to approach the contractual exposure limit of 2 Rem for any person assigned to the project.

The original Omega West project Man Rem estimate, established in July of 2002, was 40.438, which included 11.59 Man Rem for Thermal Column removal. An October 2002 review of the project Man Rem estimate reduced the Man Rem goal to 28.113. Later in October 2002, a 20 Man Rem project goal was established. Based on the removal of the Thermal Column from inside the Thermal Column, the original Man Rem estimate of 40.438 appears to be more realistic, as it included an 11.59 Man Rem estimate for the removal of the Thermal Column components. An adjusted project goal of 30 Man Rem is now more realistic than the revised 20 Man Rem goal, yet still less than the originally expected total Man Rem of 40.438.

Estimated Man hours by task

WBS Name	No. Of Techs	Hrs Per Tech	Total Tech Hours	hrs/task	70% eff	10% hi dose rate	hi doserate mr/hr	low dose hrs	low dose rate mr/hr	Man Rem
Install/Test HEPA	4	40	160	32	22.4	2	10			0.02
								11	1	0.011
Bldg 101 Equip Removal	4	80	320							0.05
Remove Tank Lid	4	64	256	120	84	8	300			2.4
Vertical Equip				120	84	8	300			2.4
Install Platform				16	11.2	1	300			0.3
								10	50	0.5
								10	50	0.5
								5	10	0.05
Remove TC Lead	4	36	144	72	50.4	5	150			0.75
								40	1	0.04
Remov BE Ass.				72	50.4	5	300			1.5
								25	10	0.25
								25	10	0.25
Remove BP Liners	4	48	192	192	134.4	13	300			3.9
								67	10	0.67
Remove TC Head	4	80	320	320	224	22	150			3.3
								60	10	0.6
Remove Fuel Racks	4	48	192	32	22.4	2	300			0.6
Grid Plate				160	112	11	300			3.3
								11	10	0.11
								56	10	0.56
Remove TC	4	144	576		403.2	8	300			2.4
						10	150			1.5
						100	20			2
								80	10	0.8
								200	1	0.2
Remove Spectrom.	4	120	480		336			336	0.1	0.033
Fume Hood										0
Remove Airborne Syst.	4	80	320		224	22		22	1	0.022
Emergency Spray								22	1	0.022
Misc. Systems								160	1	0.16
TA 2-89,90	4	32	128		89.6	69		89	0.1	0.009
Upper/Lower Bio Shield	4	520	2080		1456	70	100			7
								1000	1	1
								240	10	2.4
Install/Remove tent	8	200	1600		1120	112	2			0.224
								1008	0.1	0.1
Sub Floor	4	80	320		224			224	0.5	0.112
Final Survey 101	6	24	144		100		2			0.2
Demo 101	4	32	128		90		1			0.09
Abate 101 Roof	3	8	24		17		5			0.085
TOTAL										40.438

Estimated Man Rem for internals work completed 9.944 OWR Man Rem Estimated on Schedule 10/1/02 Actual Man Rem for Internals work completed 6.799

Item	days	people	hours	total hours	70%	HI dose hours	HI dose rate R/Hr	Mid dose hours	mid dose rate R/hr	low dose hrs	low dose rate	Total dose for task Mrem	RP support	misc support	total Man Rem	Task Status
Remove Rx Tk lid	3	4	10	120	84	8.4	0.15	33.6	0.01	42	0.001	1.638	0.4914	0.01638	2.146	done
install platform	3	4	10	120	84	8.4	0.15	33.6	0.04	42	0.005	2.814	0.8442	0.02814	3.686	done
Remove internal vert equip	5	4	10	200	140	0.7	0.05	56	0.005	83.3	0.001	0.3983	0.11949	0.03983	0.558	done
Remove Be reflector	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Beam port liners	6	3	10	180	126	12.6	0.1	50.4	0.005	63	0.001	1.575	0.4725	0.1575	2.205	done
Remove Lead shield	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Fuel racks	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Grid Plate & Base	5	4	10	200	140	7	0.03	56	0.005	77	0.001	0.567	0.1701	0.0567	0.794	working
Remove Thermal Column head	10	6	10	600	420	21	0.025	168	0.005	231	0.001	1.596	0.4788	0.1596	2.234	not started
Remove Debris	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Remove platform	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Plasma Arc Vessel Tank	1	4	10	40	28	1.4	0.01	11.2	0.0025	15.4	0.001	0.0574	0.01722	0.00574	0.080	not started
Remove material from storage ports	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	done
Remove Thermal column graphite	2	6	10	120	84	8.4	0.05	33.6	0.01	42	0.0005	0.777	0.2331	0.0777	1.088	working
Total dose Rx Internals				2060								10.6155	3.18465	0.66087	14.461	

Estimated Man Rem for remaining internals work 4.518

Total estimated Man Rem for internals work 14.461

ALARA REVIEW FOR THERMAL COLUMN REMOVAL

1. Describe Thermal Column

   A. Aluminum Head
   B. Bismuth Shield
   C. Stainless Steel Flange
   D. Flange Bolts
   E. Flange Lead

2. Thermal Column dose rates

3. Thermal Column contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium

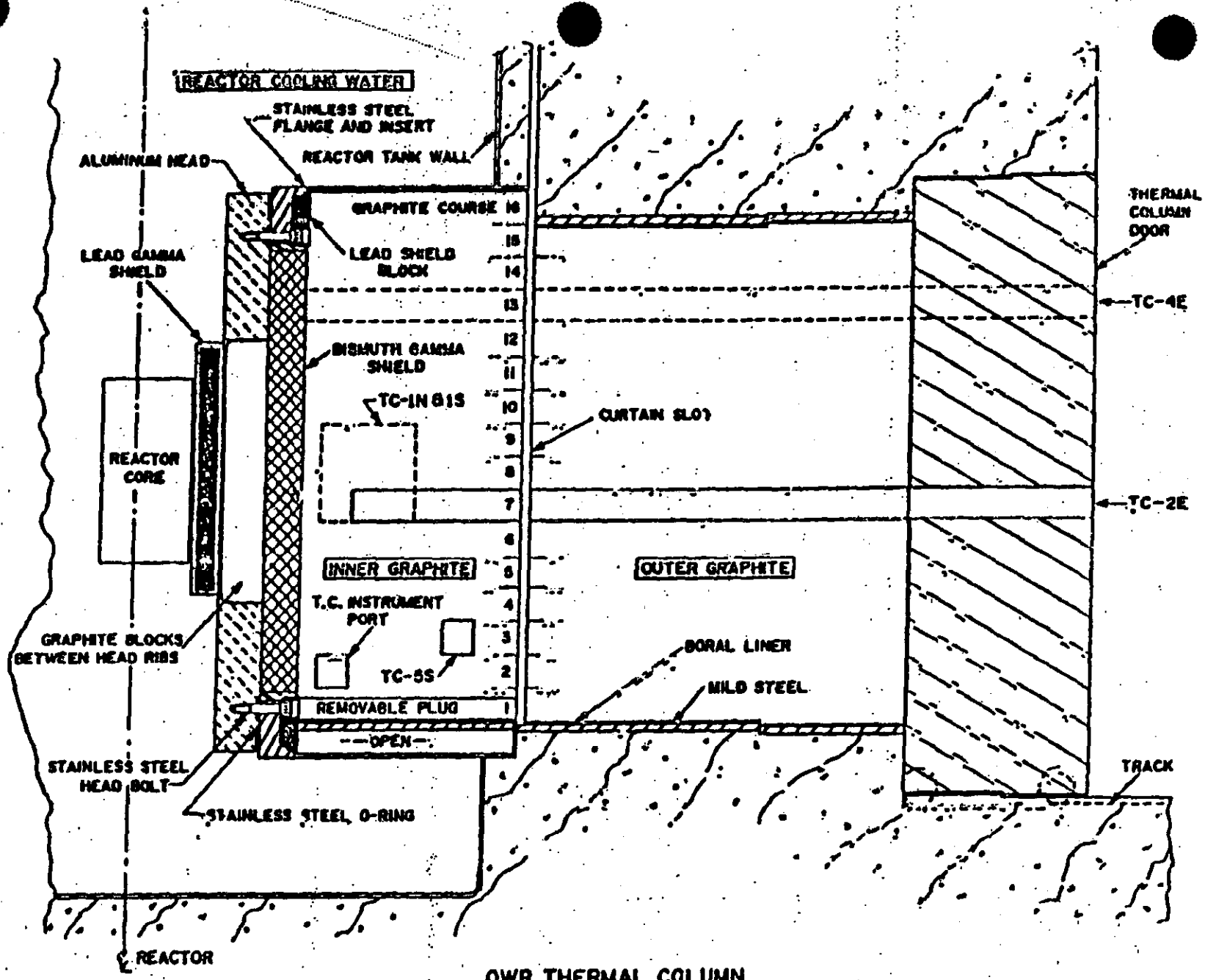
3. Airborne contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium levels

4. Ventilation and contamination Controls

5. Estimated Man Rem 4.379

A.	MOTA	3.650
B.	Management	0.182
C.	RCTs	0.365
D.	Waste Packaging	0.182



OWR THERMAL COLUMN

Los Alamos

Ω-West

Man Rem Estimate for Thermal Column

Task	Duration hours	people assigned	Man Hours	Effective hrs 70%	Low dose rate	Mid dose rate	High dose rate	LDR Man Rem	MDR Man Rem	HDR Man Rem	Man Rem/Task
Install sheilding	3	4	12	8.4	0.005	0.05	0.6	0.021	0.168	0.504	0.693
Remove remaining Graphite	4	2	8	5.6	0.005	0.05	0.6	0.014	0.112	0.336	0.462
Remove remaining Head bolts	4	2	8	5.6	0.05	0.05	0.6	0.14	0.112	0.336	0.588
Remove four segments of lead	1	2	2	1.4	0.05	0.05	0.6	0.035	0.028	0.084	0.147
Rig and remove Al head	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Segment Al head	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Rig and remove Bi sheild	1	3	3	2.1	0.01	0.05	0.9	0.0105	0.042	0.189	0.242
Segment Bi sheild	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Remove SS flange	2	4	8	5.6	0.01	0.05	0.6	0.028	0.112	0.336	0.476
Segment SS flange	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Insrall ventilation control items	2	2	4	2.8	0.005	0.02	0.04	0.007	0.0224	0.0112	0.041
Remove sheilding	2	2	4	2.8	0.02	0.04	0.08	0.028	0.0448	0.0224	0.095
Secure Thermal Col area after removal	2	2	4	2.8	0.005	0.01	0.02	0.007	0.0112	0.0056	0.024
Mgr support											0.182
RCT support											0.365
Waste Packaging											0.182
Total											4.379

In itial Man Rem estimate 2.778

NAME Ext	Firm	Z#	TLD Data	20-Jan
Toutaint, Robert H. 4.5/5.7	MOTA	191947	JAN 13 TLD	853
Ortiz, Daniel	SW	192477	NOV TLD	875.7
Granus, Mark	WD3	190158	NOV TLD	888
Fennema, James	MOTA	191503	NOV TLD	899.4
Kerr, Scott	MOTA	190389	NOV TLD	974.3
Ball, David	MOTA	193024	NOV TLD	1007.7
Laurent, S	MOTA	192795	NOV TLD	1044.2
Przybyski, Marty	WD3	190412	NOV TLD	1048.9
Mountain, Mark	MOTA	193023	NOV TLD	1054.2
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	1065.9
Reust, Jack L.	Duratek	191044	NOV TLD	1068.3
Schnell, Gerald	SEC	191326	NOV TLD	1090.8
Coleman, John	WD3	190383	NOV TLD	1101.2

01/21/03 10:39pm P. 010
505 667 3990
MOTA CORP

TA -2 RADIOLOGICAL SURVEY FORM

Survey #	Location
03-OWR-062	OWR
Date / Time	**RCT / Z #**
1/16/02 1430	SUMMERS M1329
RWP #	**RCT Signature**
HSR-1-02-029-TA2	

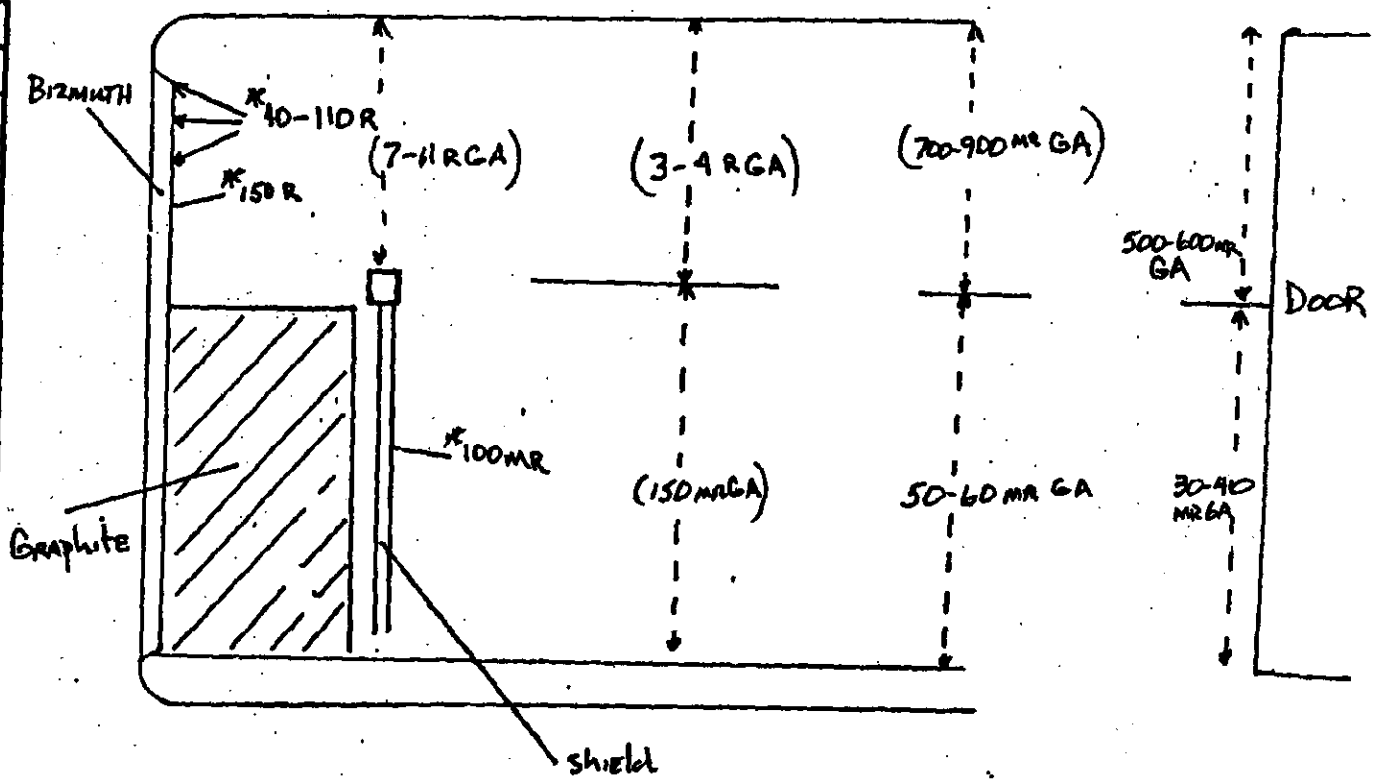
Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose RD20	531	2/7/03	N/A	N/A	.2 MR/hr
βγ			N/A		
α			N/A		

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
	N/A		

Thermo Column



Comments NONE

Reviewed by

NAME Ext	Firm	Z#	TLD Data	
Coleman, John	WD3	190383	NOV TLD	1080.8
Granus, Mark	WD3	190158	NOV TLD	813.9
Przybyski, Marty	WD3	190412	NOV TLD	1005.5
Williams, Dana	WD3	178110	NOV TLD	759.3
Reust, Jack L.	Duratek	191044	NOV TLD	841
Romero, Adrian	Duratek	120634	NOV TLD	490.8
Ball, David	MOTA	193024	NOV TLD	155
Fennema, James	MOTA	191503	NOV TLD	874.1
Mountain, Mark	MOTA	193023	NOV TLD	454.7
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	188.1
Schnell, Gerald	SEC	191326	NOV TLD	610.3
Ortiz, Daniel	SW	192477	NOV TLD	831

TA-2 RADIOLOGICAL SURVEY FORM

Survey #	Location
03-OWR-086	WSide Thermo Column
Date / Time	**RCT / Z #**
1-18-03 / 1430	191326
RWP #	**RCT Signature**
HSR-1-02-0024	

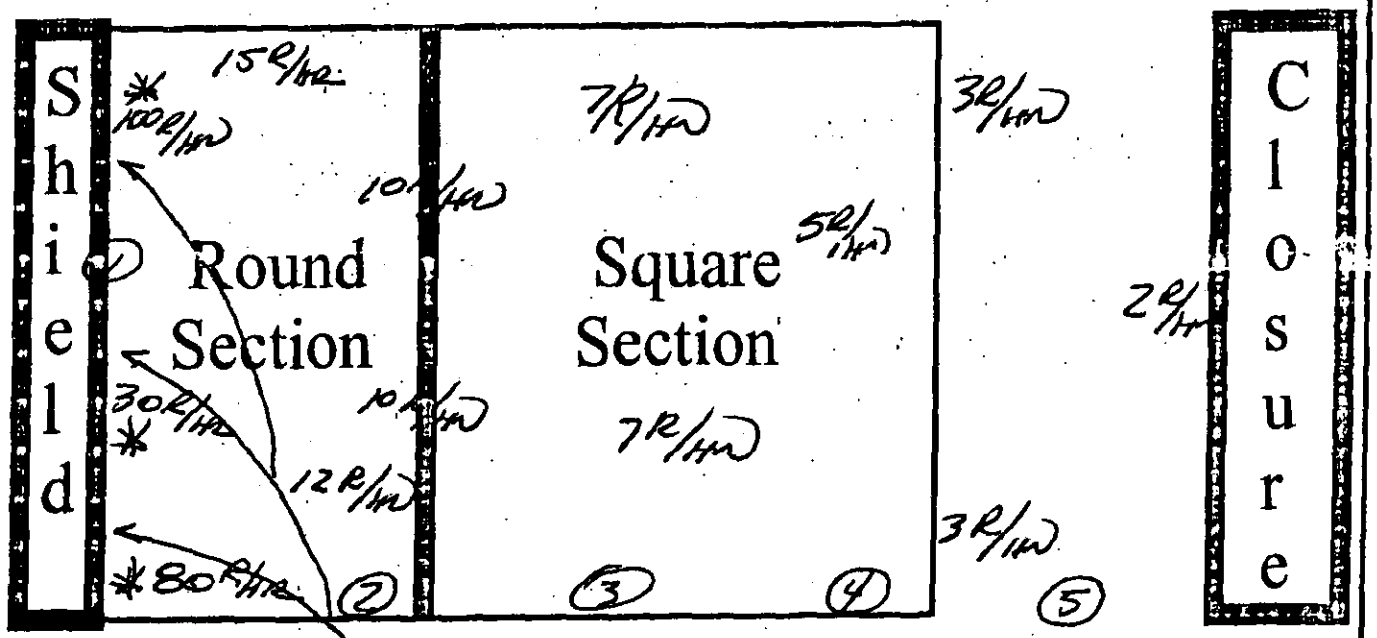
Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose 6112B	1613	10/30/03	N/A	N/A	N/A
βγ ESP-1	7428	6/4/03	50	15.5 cm²	400 dpm
α 139	3768	3/21/03	50	41.5 cm²	0 cpm
N/A	N/A	N/A	N/A	N/A	N/A

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
1	surface Shield	30K	<20
2	↑	20K	
3	SAP	10K	
4	MAP	3K	0
5	↓	2K	<20
	N/A		

Thermo Column



* CONTACT surface of shield

Reviewed by

RLS 1/21/03

Comments

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☐ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☐ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

NO high tech equipment used
Planing could have been better

ALARA actions taken and results:

use of Shielded Platform and Cameras
worked well

Problems encountered:

Poor Planing equipment proposed
did not work well.
Poor information available

Recommendations for future similar jobs:

Pre Plan Better

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
R Swetnam	R Swetnam	190160	9/23/03

Los Alamos
National Laboratory

ESH-1 USE ONLY

Permit Number HSR-1-03-005
Effective 2-12-03 Expires 6-1-03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
James Fennema	WD3	780-0336	M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	2/10/03	5/1/03

Work to be performed:

Reactor Vessel Removal (Reactor Vessel Cut Up, Bioshield Demolition, Vessel removal, Bioshield debris removal and other associated tasks necessary to complete the job task of removal of reactor vessel from tent slab)

Are nonradiological hazards involved? Yes ☒ No ☐ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions (*Record all readings as highest/general area.*) ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	<20 / <20	<20 / <20	<20 / <20
Beta/gamma	>500K / >100K	>500K / >100K	>500K / >500K
Tritium		N/A / N/A	

External Dose Rate (mrem/hr in work area)

Beta + gamma	50000 / 50
Neutron	N/A / N/A
Total (β + γ + n)	50000 / 50

Identify anticipated radionuclides:

Co60

Airborne Radioactivity

<.1 DAC Co60 Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (*printed name*)	Signature	Number	Date
Gerald Schnell		191326	2/7/03

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: see special instructions *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☒ Routine work ☐ Special radiological work
Estimated person-hours for job: 1920
Estimated /measured working dose rates: .5 to 100 mRem/hr
Estimated collective dose: 10 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Ventilation is required whenever air sampling indicates values >.01 DAC. Personnel shall notify Rad Protection of changing work scope that may cause increased airborne to ensure proper ventilation is used.
2) A secondary undress area to be established at exit from tent for contamination control (see attached map)
3) Specific work instructions must be in place for each job evolution worked under this RWP
4) Full face respirator will be used until air data can be trended to indicate air values < .1 DAC
5) RCT to verify dose rates on reactor components as they are exposed during disassembly
6) Daily brief is required prior to commencing work on this RWP. Additional briefings are required during workday as work scope changes. These briefs shall include but not limited to anticipated dose rates, contamination levels, anticipated exposures, and ALARA suggestions. If any of these values are exceeded by 20% work is to be stopped, WD3 and LANL management to be notified.
7) Daily post job survey by an RCT to be conducted to verify postings and housekeeping in area.
8) Outside tent doors can be opened if radiological conditions will ensure airborne levels are maintained <.01 DAC.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	

APPROVALS

1. Manager R SWETNAM	Signature	Z Number 190160	Date 3-10-03
2. RCT supervisor MARTY PEIFER	Signature Marty Peifer	Z Number 108821	Date 3-10-03
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

ALARA Review Checklist

Job/Operation Title	Rx Vessel, Bio-Shield and Debris removal and Packaging		
Purpose of Job/Operation	Remove Rx Vessel and Bio Shield.		
RWP/HCP No. HSR-1-03-005	Job/Operation Contact	SJ Ticket/WO No	

Yes	No		
		Procedures	
✓		Prepare special radiological procedures?	
✓		Include radiological control hold points?	
✓		Review abnormal and emergency procedures?	
✓		Identify where signatures or verifications are needed?	
✓		Establish success or completion criteria?	
✓		Develop pre-job collective dose estimate?	
✓		Apply special waste minimization, control, or disposal?	
✓		Establish detailed schedule for task sequencing/personnel entries?	
		Engineering	
✓		Make special use of existing engineering controls?	
	✓	Develop new engineering controls?	
	✓	Install temporary/permanent shielding? (Include load/stress concerns.)	
		Worker Preparation	
	✓	Provide special radiological training?	
✓		Use mockups, walkdowns, or dry runs?	
✓		Optimize worker efficiency (comfort vs. exposure)?	
✓		Use photos/drawings/video for pre-job briefing/training?	
✓		Select most highly skilled/qualified workers?	
		Job Setup	
✓		Prestage materials or tools?	
✓		Prefabricate parts/materials?	
✓		Install special services (power, water, air, ventilation)?	
		Post ALARA waiting/rest areas and hot spots?	
		Contamination Control	
✓		Use contamination curbing, floor covering, fencing?	
	✓	Use tents/glove boxes/containments?	
✓		Use catch trays/drainlines?	
✓		Use HEPA vacuums?	
✓		Install local ventilation?	
	✓	Use special protective clothing/devices?	
	✓	Implement special hot particle controls?	
✓		Wet or fix loose contamination?	
		Exposure Control	
	✓	Flush contaminated lines?	
✓		Decontaminate area? (Optimize decontamination dose vs. job dose.)	
	✓	Allow for decay before entry?	
✓		Use special, remote, or robotic tools?	
✓		Can a high-dose source be removed?	
✓		Require special monitoring (for example, CAMS, ARMS, continuous coverage)?	
	✓	Move some work to low or no exposure areas?	
	✓	Can work crew be reduced w/o increasing total dose?	
	✓	Is there unnecessary work that can be eliminated?	
✓		Use remote, integrating, or real-time dose tracking?	
✓		Use remote audio/visual communications?	
	✓	Use worker time limits?	
	✓	Is there a useful ALARA technique for this job not mentioned above? Document on back of form.	

List detailed recommendations on back. Attach any special analyses/worksheets (date and sign).

If ALARA recommendation implementation cost is about $50K or more, provide cost-benefit analysis.

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: see special instructions *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☒ Routine work ☐ Special radiological work

Estimated person-hours for job 1920
Estimated /measured working dose rates .5 to 100 mRem/hr
Estimated collective dose 10 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Ventilation to be in use at all times the brock is in operation.
2) A secondary undress area to be established at exit from tent for contamination control (see attached map)
3) Specific work instructions must be in place for each job evolution worked under this RWP
4) Full face respirator will be used until air data can be trended to indicate air values < .1 DAC
5) RCT to verify dose rates on reactor components as they are exposed during disassembly
6) Daily brief is required prior to commencing work on this RWP. Additional briefings are required during workday as work scope changes. These briefs shall include but not limited to anticipated dose rates, contamination levels, anticipated exposures, and ALARA suggestions. If any of these values are exceeded by 20% work is to be stopped. WD3 and LANL management to be notified.
7) Daily post job survey by an RCT to be conducted to verify postings and housekeeping in area.
8) The southwest airlock will be used for material or equipment insertion or removal and as a secondary personnel entrance only. All movement through this airlock must be approved by RCT supervision and monitored by an RCT.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	2/20/03

APPROVALS

1. Manager	Signature	Z Number	Date
2. RCT supervisor K-SWG TEAM	Signature	Z Number 190760	Date 2/20/03
3. Other *(job title/printed name)* LANL H.P. TEAM LEADER / MARY BEARD	Signature	Z Number 108821	Date 2/20/03
4. Other *(job title/printed name)*	Signature	Z Number	Date

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: see special instructions *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☒ Routine work ☐ Special radiological work

Estimated person-hours for job 1920
Estimated /measured working dose rates .5 to 100 mRem/hr
Estimated collective dose 10 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Ventilation to be in use at all times the brock is in operation.
2) A secondary undress area to be established at exit from tent for contamination control (see attached map)
3) Specific work instructions must be in place for each job evolution worked under this RWP
4) Full face respirator will be used until air data can be trended to indicate air values < .1 DAC
5) RCT to verify dose rates on reactor components as they are exposed during disassembly
6) Daily brief is required prior to commencing work on this RWP. Additional briefings are required during workday as work scope changes. These briefs shall include but not limited to anticipated dose rates, contamination levels, anticipated exposures, and ALARA suggestions. If any of these values are exceeded by 20% work is to be stopped. WD3 and LANL management to be notified.
7) Daily post job survey by an RCT to be conducted to verify postings and housekeeping in area.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	2/7/03

APPROVALS

1. Manager Steve Tnam	Signature	Z Number 190160	Date 2/7/03
2. RCT supervisor Marty Peifer	Signature	Z Number 108821	Date 2/7/03
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

Task	Duration hours	people assigned	Man Hours	Effective hrs 70%	Low dose rate	Mid dose rate	High dose rate	LDR Man Rem	MDR Man Rem	HDR Man Rem	Man Rem/Task
Segment Al head	16	3	48	33.6	0.001	0.05	0.1	0.018	0.672	0.168	0.858
Remove/segment SS flange	16	3	48	33.6	0.01	0.025	0.075	0.252	0.084	0.378	0.714
Load Liners	28	5	140	84	0.001	0.05	10	0.067	0.836	0.84	1.743
Segment Rx Wall	16	4	64	44.8	0.001	0.01	0.05	0.029	0.134	0.112	0.276
Remove Rx Debris	8	4	32	22.4	0.001	0.01	0.05	0.015	0.067	0.056	0.138
Coat inner Rx Shell	6	4	24	16.8	0.001	0.01	0.05	0.011	0.050	0.042	0.103
Demo BioShield	300	6	1800	1260	0.0005	0.01	0.1	0.410	4.158	2.52	7.088
Remove Steel	40	3	120	84	0.0005	0.01	0.1	0.034	0.160	0.084	0.277
RCT support	450	4	1800	1080	0.0005	0.005	0.5	0.459	0.807	0.27	1.536
Mgr Support	20	4	80	56	0.0005	0.005	0.05	0.024	0.042	0.0014	0.067
Waste Mgr	450	3	1350	675	0.0005	0.005	0.1	0.287	0.505	0.03375	0.825
Total											13.625

Subj: **Re: ALARA Review Material**
Date: **2/11/03 4:34:46 PM Mountain Standard Time**
From: bodenstein@lanl.gov
To: RSwetnam@aol.com
CC: peiferm@lanl.gov, rendell_keith@lanl.gov, jrbland@lanl.gov, bodenstein@lanl.gov, jimstaehr@hotmail.com, darni@lanl.gov
Sent from the Internet (Details)

Ron,

What time on Thursday?

Stan

Comments:

1) How do you handle the water from the spray used for dust mitigation? Is ice an issue? Is moisture a contamination migration issue?

2) The Clementine foundation is deeper than 2 feet below grade (4.14, 4.15).

3) Emphasize Note 3 to not lose containment due to loaded HEPAs from the dust in this new mode of operation.

4) Consider respirators until a history is developed in this new mode of operation without the vessel ventilation system operating.

5) Will the exhaust fumes from the equipment still be acceptable inside the tent?

6) When do you stop the reactor vessel ventilation? After the segmenting and prior to concrete work?

7) Is the control rod well (the abyss) to be specifically addressed? Coating, removal, etc.

Stan

At 04:43 PM 2/11/2003 -0500, RSwetnam@aol.com wrote:

> All
>
> Attached are 3 documents for the ALARA Review on Thursday, 2/13/03.
>
> Ron Swetnam
> 505 7800357

Stan Bodenstein
Los Alamos National Laboratory
Actinide & Fuels Cycle Technologies
NMT-11, MS G730
Los Alamos, NM 87545
Voice: 505-665-8462, **Fax:** 505-665-4013, **Pager:** 104-2471

Response to ALARA Comments of 2/12/03

The ALARA review is at 0900 2/13/03

1. Water from dust suppression operations will be absorbed with the dust. It will be a fine mist very low volume.

2. The Clementine foundation and underground piping is at 11 to 14 feet. We will remove all piping and concrete down to this level. A general contractual depth is at 2 feet.

3. HEPA filter DPs along with prefilter DP and dose rates are checked daily or more often as required.

4. Respirators will be used until airborne levels can be determined and found to be acceptable. We may continue some form of respiratory protection because of dust conditions in the tent.

5. The equipment exhaust will go through a scrubber plus the air flow through the tent will be 15,000 to 17,000 CFM. The exhaust flow from the equipment will not exceed 1200 CFM.

6. The reactor ventilation will be operating until the outlet recirc piping is removed. All three large HEPA units will operate during the Bioshield demo.

7. When we remove debris from the Rx vessel we will also inspect the Rx sump. Additional material removal will be done from the sump when we reach the floor of the reactor vessel. The sump will be coated when the vessel is coated.

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-03-005	00	Double wide

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
192477	DANIEL ORTIZ	S.W.I	Daniel Ortiz	2-19-03	0630
192296	Debra Gonzales	SAI	Debra Gonzales	2-18-03	6:30
194795	Mary Garcia	SEC	M Garcia	2-18-03	0635
193023	MARK MOUNTAIN	MOTA	Mark Mountain	02-19-03	0635
194571	PAUL WHERRETT	MOTA		2/18/03	635
193024	DAVID BALL	MOTA	David W Ball	2/18/03	635
182455	John Conley	SAI	John Conley	2/18/03	6:35
194730	Billy Eugenio	SEC		2/18/03	0640
194174	John Jackson	SEC		2/18/03	0640
113569	Darrell Stallard	CAL		2/18/03	0641
192744	ROBERT LIVINGSTON	MOTA		2/18/03	0641
190586	D DANSARD	MOTA		2-18-03	0642
191947	R H Fountain	MOTA		2/18/2003	0645
190588	H Rutlan	MOTA		2-18-03	0645
190389	Scott KERR	MOTA		2-18-03	0646
A3253	Dan McDonald	Daltech		2/18/03	6:47
178110	Dana Williams	WG11		2/18/03	6:45
191503	Jim Fennema	MOTA		2/13/03	6:45
340191		WD3		2/18/03	6:50
190383	J. Coleman	WD3		2/18/03	6:50
193025	Eric Barron	WD3	Douglas E Barron	2/18/03	6:51

Conducted by: | **Date:**

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-03-005	00	Double wide

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
190412	MARTY L. PRZYBYLSKI	LANL		2/18/03	0700
169743	Ralph Young	JAKES Const		2/18/03	0702
141566	Tim Dyer	CW		2-20-03	0702
194795	M Garcia	SEC	mgarcia	2-21-03	0718
141589	JD - STALTER	CW		02-21-03	08:15
176367	ADAM SCOTT	CW		02-21-03	8:15
170066	Donovan Torivio	CW		02-21-03	0816
191324	SUMMERS	SEC		2/21/03	0845
190611	Keith Knifer	CW		03.03.03	7:10
194549	R.D.	MOTA		3/03/03	7:20
191044	Jack Frost	Dynatech		3/6/03	8:10
193025	Eric Barron	WD3		3/17/03	0730
195450	WILLIAM P. KING	SEC		3/20/03	0710
110010	Darrick Stafford	LANL		3/31/03	8:21
182040		SAI		4/14/03	2:00
190383	J. Coleman	WD3		4/16/03	0950
Conducted by:			Date:		

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☒ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ **Requires ESH-5/JSFT (JCNMM) approval*

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☐ Routine work ☐ Special radiological work

Estimated person-hours for job: 16
Estimated /measured working dose rates: 100 mRem / hr - 500mRem / hr
Estimated collective dose: 0.5 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

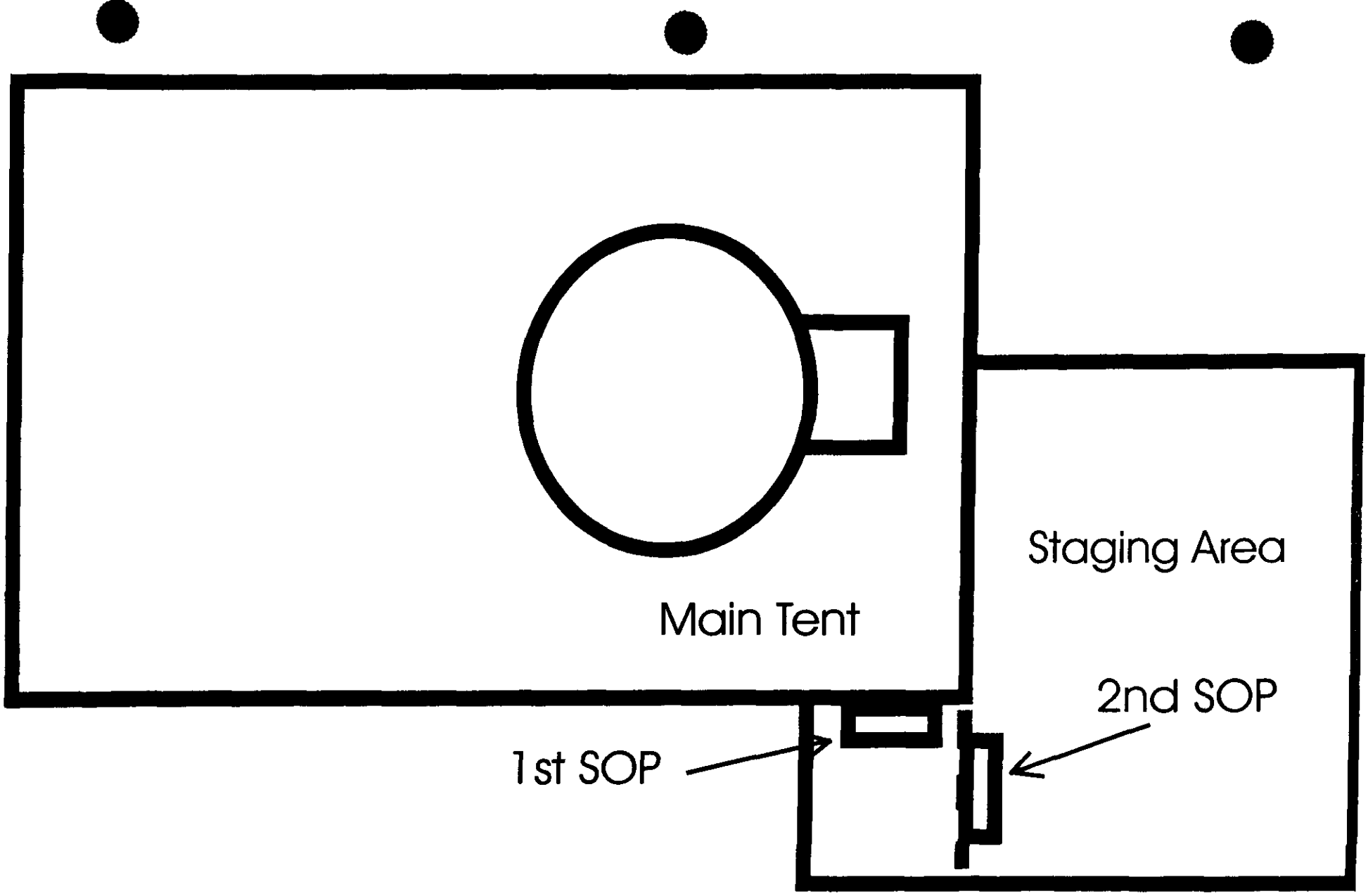
Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. Full mock-up of Be & Pb shield movement required prior to commencing actual evolution.
2. Only personnel participating in the mock-up shall be used during the actual evolution.
3. A detailed work instruction shall be used to provide direction to workers performing the actual evolution. The work instruction shall not be finalized until completion of mock-up training so that the actual transfer and closure will replicate the mock-up.
4. All non-essential personnel shall be moved to low dose areas during the actual transfer of the Be reflector.
5. Site access gates to be monitored to prevent entry on job site during actual shield transfer.
6. 60 foot radiation readings to be collected on exposed Be shield during movement to estimate liner dose rates for off load at TA-54.
7. A detailed briefing shall be held prior to the actual evolution. The briefing shall include but not limited to anticipated dose rates, contamination levels and anticipated exposures. If any of these values are exceeded by 20% work is to be put in a safe condition and stopped. WD3 and LANL management notified prior to recommencing activities.–

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	3/19/03

APPROVALS

1. Manager RON SWETNAM	Signature	Z Number 190160	Date 3/19/03
2. RCT supervisor MARTY PEIFER	Signature	Z Number 108821	Date 3/19/03
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date


Staging Area
Main Tent
2nd SOP
1st SOP

MOVEMENT OF THE Be & Pb SHIELDS

1. The Be and Pb shields are currently stored in a liner with a bolted lid. The liner is stored in an underground storage area.

2. The removal of the Be & Pb shields from the storage liner will be conducted from the underground storage area.

3. Unbolting of the storage liner lid will be done with a long extension rod attached to an electric dive unit. One of the underground storage lids can be used as shielding during the unbolting of the liner lid.

4. Long poles will be used to grapple the slings attached to the Be & Pb shields when attaching the slings to the crane hook.

5. Electronic dosimeters will be set at 25 R/Hr and 100 mr exposure for personnel working near the liner lid.

6. Electronic dosimeters will be used as extremities monitors and will be set at 50 R/hr and 5 Rem.

7. The crane operator's electronic dosimeter will be set at 5 R/hr and 100 mr exposure.

8. The permanent disposal liner for the Be & Pb shields will be installed in the shipping cask with the liner lid removed.

9. Shoring will be installed in the liner followed by the Be shield and the Pb shield.

10. Additional Pb shielding will be placed in the disposal liner prior to installing the liner lid.

11. Impact guns will be used to secure the liner lid to liner.

12. A remotely operated TV camera will be used to overview the transfer operation of the Be and Pb shields.

13. During the transfer of the shields the site will be evacuated.

14. LANL representatives will be notified prior to the transfer so that increases in background radiation levels can be expected.

15. The outer gate to the site will be secured during the transfer.

16. Mockup testing will be done using the permanent storage liner to determine the specific loading sequence and equipment required.

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope _____ ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☐ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☐ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

NO High Tech equipment used Vent System could have been better

ALARA actions taken and results:

dose below projected

Problems encountered:

Co monitor not in Place

Recommendations for future similar jobs:

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWETNAM	Signature R Swetnam	Z Number 190160	Date 4/23/03

Los Alamos
National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-03-6
Effective 3/24/03 Expires 4/24/03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
James Staher	WD3		M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	3/24/03	4/10/03

Work to be performed:

Removal and transfer of Beryllium Reflector and Lead Shield from current liner to final storage liner (this RWP includes all prep work, transfer of additional material to storage liner following Be and Pb shield transfer, closure of storage liner and preparation, closure of transfer cask for shipping to TA-54)

Are nonradiological hazards involved? Yes ☒ No ☐ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☐ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☒ Measured radiological conditions *(Record all readings as highest/general area.)* ☒ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	N/A / N/A	N/A / N/A	N/A / N/A
Beta/gamma	>500K / >500K	>500K / >500K	>500K / >500K
Tritium		TBD / TBD	

External Dose Rate (mrem/hr in work area)

Beta + gamma	>1000 / >1000
Neutron	N/A / N/A
Total (β + γ + n)	>1000 / >1000

Identify anticipated radionuclides:

Co60, H3

Airborne Radioactivity

<.1 DAC Co60 Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

N/A

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Gerald Schnell		191326	3/19/03

From : James R Bland <jrbland@lanl.gov>
To : rendell_keith@lanl.gov, pelferm@lanl.gov
CC : jfennema@msn.com, bodenstein@lanl.gov, tbuhl@lanl.gov, weisele@lanl.gov, jrbland@lanl.gov, rrangel@lanl.gov
Subject : Formal ALARA Review - Removal/Transfer Thermal Column Activity
Date : Thu, 30 Jan 2003 08:56:54 -0700

Keith and Marty,

An ALARA Review Meeting was held on Tuesday, January 28, 2003, to discuss the radiological activities being performed on the Omega West D&D Project - Remove and Transfer of the Thermal Column Head. A review of the procedure was performed prior to the meeting by Jim Bland, HSR-12 Radiological Engineering Team, and review the radiological activities, expected dose rates and estimated person-rem by the project, and mitigating features to reduce radiation levels to the workers. During the meeting, items were discussed for clarification or more information to perform a proper ALARA Review.

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Requirements

1. HSR-1 Procedure ESH-1-06-01.2, External Exposure Control Standards, dated July 1, 1999, the ALARA Review Trigger Levels might be exceeded as projected by the project. It is presently estimated the individual dose and collective dose for this specific task could exceed the 500 mrem whole body EDE and 1 person-rem, respectively. This triggers a requirement for a formal radiological review in accordance with LIR402-700-01.

2. LIR402-700-01, Chapter 3, ALARA Program states the following programs elements must be met for the a high-potential-dose (>5 person-rem collective & >0.5 rem individual) expected for these tasks. The following program elements must be met (this is not a normal LANL facility operation but a D&D project so slight modification are made):
   1. Management Commitment - LANL Project Team and MOTA's management
   2. Training -
   3. Procedures
   4. ALARA goals
   5. Design reviews
   6. ALARA reviews
   7. Cost-benefit analysis - besides dollar savings for a person-rem, the evaluation of installing an engineering control feature needs to evaluated for dose savings.
   8. Performance assessment - (modified since D&D activity) LANL Project Team and LANL Radiation Protection SMEs assist in this assessment and is an ongoing activity.
   9. ALARA Committees and coordinators - since this is a D&D operation - D&D LANL Project Team, LANLs radiation Protection SMEs, and MOTA's Radiation Safety Staff perform this activity
   10. Documentation

ALARA Review Process requires the five-step process for safe work practices to include the following three parts

1. Pre-job planning and dose estimation. Detail the work and dose estimations. Determine whether a formal ALARA review is required.

2. Implementing ALARA control measures (use ALARA Review Checklist for required ALATA techniques) and dose-tracking. If a review is required, incorporate ALARA measures into the work. Track individual and collective doses and compare to the estimated dose to determine if the ALARA measures are effective.

3. Post-job review. If the actual doses fall outside the range of +/-25% of pre-job estimates, of if significant or successes were learned, then, perform and document a formal post-job review on improvements to optimize doses, for similar future work.

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ALARA Review Meeting (Tuesday,January 28, 2003 @ 10:00 a.m.)
The following items were discussed for clarification from items outlines in the work procedure at the meeting:
1. Procedure has been updated due to better information on the activities and updated procedure was provided for the ALARA Review.

2. Does the temporary ventilation system used in the work area have a HEPA filter?
   Project Response: yes

3. Is there air sampling being performed in the work area to assist on evaluating the airborne concentration of radioactive materials?
Project Response: yes

4. Have radiation level hold points been established and a plan what needs to be done if these hold points are reached?
Project Response:
Yes, there have established task and individual dose allotments and area radiation field hold points.

5. What determines whether a shield curtain is installed or not and what is the attenuation factor of the shield curtain?
Project Response:
The radiation levels of the work area is evaluated and the dose received by installing the curtain vs performing the work without the curtain is assessed and a decision is made.
Each layer of the shield curtain has about a 30% reduction.

6. Discussed one of the steps of the procedure which referred to segmenting the bismuth shield using an abrasive wheel cutter on the stainless steel portion.
Project Response:
This has been changed in the updated procedure to be a plasma arc cutter.

7. Is the project having appropriate training for the workers to perform tasks efficiently and safely?
Project Response:
The project have mock-ups and dry runs to ensure task are performed efficiently and safely.
In fact, this was being conducting for one of the tasks as we were having the meeting.

8. Discussion of the activity needing to fill out an ALARA Check List, provided in LIR 402-700-01.
Project Response:
The project had filled out the ALARA Checklist and provided it for review.

The only change I would recommend is a yes not no for the item "Develop new engineering controls" because the project has used numerous mitigating features and continually evaluates the situation to incorporate other features when needed to reduce the radiation field to their worker, i.e., shielding in the reactor deck, shield curtains, ventilation, and containment plus others.

9. A RWP has been developed for this work with the oversight of Marty Pelfer, HSR-1 Team Leader for this Project.

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ALARA Review Conclusion

The project has done an excellent job in planning the work to be performed and estimating the potential radiation doses. The project has implement ALARA radiation dose control measures and plan on having an ongoing evaluation of the radiological situation with the constant tracking of the work area radiation fields and doses to the workers. The project has established hold points to re-evaluate the radiological situation, if needed. A RWP and ALARA Review Checklist were developed for these activities. The project conducts training and mock-up/dry-runs. MOTA have very competent, professional and experienced individuals performing this work with appropriate supervision of activities. The work performed by MOTA has the oversight of Marty Pelfer, HSR-1 Team Leader, and Keith Randell, LANL Project Leader with Stan Bodenstein as the Omega West SME.

The project must keep Marty Pelfer, HSR-1, and Keith Rendell, LANL Project Leader, informed of any significant changes effecting radiation condition or any changes not discussed effecting the radiation dose to the workers or their safety. What is considered significant will be determined by Marty Pelfer, HSR-1, and Keith Rendell, LANL Project Leader.

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A formal memorandum will be sent for this ALARA Review incorporating items outlined in this email.

Please contact me, if there are any significant changes to activities discussed for this ALARA review. Again, what is considered significant will be determined by Marty Pelfer, HSR-1, and Keith Rendell, LANL Project Leader.

Jim Bland
HSR-12 Radiological Engineering Team

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ALARA EVALUATION OF THE THERMAL COLUMN REMOVAL

The initial Thermal Column Head removal plan was to use a wire saw to cut off both the Aluminum Head and the Bismuth head (which has a stainless steel flange). Using the wire saw would have required remote equipment operation approximately 25 feet into the reactor vessel. A mock-up setup of the proposed wire saw operation demonstrated that it would be successful, but with some operational risks. Based on the very high dose rates expected in the area of the Bismuth shield, the operational risk was acceptable but the possibility of additional schedule delays due to wire breakage remained evident.

After the Thermal Neutron ports were emptied, dose rates were taken inside the ports near the Bismuth shield and the stainless steel flange. The dose rate survey indicated 50 R/Hr dose rates in these areas. This dose rate presented an acceptable working condition while using remote tooling inside the Thermal Column for its removal. Drawings of the Thermal Column components were reviewed to determine the methods required to remove the Thermal Column head from inside the Thermal Column. The drawing review demonstrated that the Thermal Column head could be successfully removed from within the Thermal Column.

A Man Rem estimate was made, based on the Thermal head removal time estimate, and the observed dose rates measured inside the Thermal Column. The estimated Man Rem was 4.6 Man Rem, with 4 feet of the graphite removed. (The 4 feet of graphite removal projection was 0.3 Man Rem). The initial Thermal Head Column remote wire saw removal Man Rem estimate was 3.3 Man Rem, which included the removal of the graphite. The wire saw method would take 10 days, with an additional 2 days to remove the graphite from the Thermal Column. Direct removal of the Thermal Column, and interior Thermal Column graphite, was estimated at four days, saving 8 schedule days. The 8 day schedule time difference justified the increase of 1.6 Man Rem to remove the Thermal Column from inside the Thermal column.

Upon entering the Thermal Column, it became apparent that the removal of the Thermal Column graphite was more difficult than expected. Dose rates at 30 inches from the Bismuth Shield were found to be higher than expected. Because of the alignment of the graphite, we realized that Thermal Column head bolt removal from inside the Thermal Column, at 30 inches from the Bismuth shield, may not be possible. Work was stopped to consider more efficient methods for the required tasks, and to determine methods to provide better shielding for work conducted inside the Thermal Column. Numerous shielding methods were considered, but all hindered the removal of the graphite from the Thermal Column. It was estimated that a minimum of 3.5 inches of lead equivalent shielding would be required to adequately shield the work area. The installation alone for field assembled shielding of this magnitude would require more Man Rem to install than the method saved. The installation of any shielding in the Thermal Column would have required an extensive engineering evaluation and inherent procurement and fabrication delays; installation which conformed to the geometry of the Thermal Column would have been very Man Rem intensive as well.

ALTERNATIVE METHODS CONSIDERED BEFORE REMOVING THE GRAPHITE:

- Steel Plate shielding
- Lead Blanket shielding
- Breaking the graphite into small pieces
- Pulling the graphite out in one piece
- Providing water shielding
- Only removing the outer graphite blocks
- Using the wire saw
- High Pressure water

Due to shielding efficiency problems, it was determined that the only way to remove the graphite from the Thermal Column was to use a direct approach without shielding. In order to successfully use a direct approach, specific hold points were established, and intensive work briefings were held with all workers involved, including a graphite removal demonstration. A TV camera was installed to observe the work in the area, and to provide information to workers preparing to enter the area.

It was estimated that 5 Man Rem would be required to remove the graphite. Stop points of 2.5 Man Rem without progress was established along with other stop points. It took 2 hours and 4.1 Man Rem to remove the graphite. At this point it was determined that the Thermal Column head bolts were exposed and could be removed. An estimate of 30 minutes, and 2.5 Man Rem to remove the head bolts without shielding, was made. An evaluation of possible head bolt removal shielding configurations was made, but none were efficient enough to save Man Rem during the removal of the head bolts. It was determined that the most Man Rem efficient, and cost effective method, was the direct approach of removing the head bolts. The same hold points established for the graphite removal were used for the head bolt removal.

The removal of all but 3 head bolts took 30 minutes and 2.5 Man Rem. Three of the head bolts were found to be blocked with graphite. Two of the bolts were cleared of graphite and removed. A third bolt required extensive graphite removal to provide access of remote tooling necessary to remove the bolt. The removal of the last 3 head bolts required 1.7 Man Rem. A total of 4.2 Man Rem was required to remove the Thermal column head bolts.

The Thermal Column head bolt and graphite removal Man Rem total was 8.9 Man Rem; 0.7 Man Rem was required to remove the first 4 feet of graphite. The removal of a small amount of remaining graphite is estimated to require 1 Man Rem. The removal and segmenting of the Aluminum head and the Bismuth shield is estimated to require an additional 1 Man Rem. The removal of the stainless steel flange is estimated to take 1.1 Man Rem. The current total Man Rem estimate for the Thermal column removal is 11 Man Rem. At the estimated 12 Man Rem to complete the Thermal Column removal from inside the Thermal Column, the Man Rem increase is estimated at 7.621 Man Rem from

the original estimate. The original estimated savings resulting from removing the Thermal column from inside the Thermal Column was 8 days schedule reduction. The added cost of 7.621 Man Rem to remove the Thermal Column from inside the Thermal Column is an acceptable ALARA decision.

The Man Rem expended was distributed amongst 12 individuals. For the most part, the individuals involved in the removal of components from the Thermal Column were from the project management staff. The use of this exposure was prudent and would not adversely affect future work activities. The range of the exposure for the task was from 155 mrem to 1081 mrem with an average exposure of 677 mrem. Of the exposed group, only two individuals will be involved in future activities involving high exposure. We do not expect to approach the contractual exposure limit of 2 Rem for any person assigned to the project.

The original Omega West project Man Rem estimate, established in July of 2002, was 40.438, which included 11.59 Man Rem for Thermal Column removal. An October 2002 review of the project Man Rem estimate reduced the Man Rem goal to 28.113. Later in October 2002, a 20 Man Rem project goal was established. Based on the removal of the Thermal Column from inside the Thermal Column, the original Man Rem estimate of 40.438 appears to be more realistic, as it included an 11.59 Man Rem estimate for the removal of the Thermal Column components. An adjusted project goal of 30 Man Rem is now more realistic than the revised 20 Man Rem goal, yet still less than the originally expected total Man Rem of 40.438.

Estimated Man hours by task				hrs/task	70% eff	10% hi dose rate	hi doserate mr/hr	low dose hrs	low dose rate mr/hr	Man Rem
WBS Name	No. Of Techs	Hrs Per Tech	Total Tech Hours							
Install/Test HEPA	4	40	160	32	22.4	2	10			0.02
								11	1	0.011
Bldg 101 Equip Removal	4	80	320							0.05
Remove Tank Lid	4	64	256	120	84	8	300			2.4
Vertical Equip				120	84	8	300			2.4
Install Platform				16	11.2	1	300			0.3
								10	50	0.5
								10	50	0.5
								5	10	0.05
Remove TC Lead	4	36	144	72	50.4	5	150			0.75
								40	1	0.04
Remov BE Ass.				72	50.4	5	300			1.5
								25	10	0.25
								25	10	0.25
Remove BP Liners	4	48	192	192	134.4	13	300			3.9
								67	10	0.67
Remove TC Head	4	80	320	320	224	22	150			3.3
								60	10	0.6
Remove Fuel Racks	4	48	192	32	22.4	2	300			0.6
Grid Plate				160	112	11	300			3.3
								11	10	0.11
								56	10	0.56
Remove TC	4	144	576		403.2	8	300			2.4
						10	150			1.5
						100	20			2
								80	10	0.8
								200	1	0.2
Remove Spectrom.	4	120	480		336			336	0.1	0.033
Fume Hood										0
Remove Argonne Syst.	4	80	320		224	22		22	1	0.022
Emergency Spray								22	1	0.022
Misc. Systems								160	1	0.16
TA 2-69,90	4	32	128		89.6	69		89	0.1	0.009
Upper/Lower Bio Shield	4	520	2080		1456	70	100			7
								1000	1	1
								240	10	2.4
Install/Remove tent	8	200	1600		1120	112	2			0.224
								1008	0.1	0.1
Sub Floor	4	80	320		224			224	0.5	0.112
Final Survey 101	8	24	144		100		2			0.2
Demo 101	4	32	128		90		1			0.09
Abate 101 Roof	3	8	24		17		5			0.085
TOTAL										40.438

[redacted]ed Man Rem for internals work completed 9.944 OWR Man Rem [redacted]sed on Schedule 10/1/02 Actual Man Rem for internals [redacted]

Item	days	people	hours	total hours	70%	HI dose hours	HI dose rate R/Hr	Mid dose hours	mid dose rate R/hr	low dose hrs	low dose rate	Total dose for task Mrem	RP support	misc support	total Man Rem	Task Status
Remove Rx Tk lid	3	4	10	120	84	8.4	0.15	33.6	0.01	42	0.001	1.638	0.4914	0.01638	2.146	done
install platform	3	4	10	120	84	8.4	0.15	33.6	0.04	42	0.005	2.814	0.8442	0.02814	3.686	done
Remove internal vert equip	5	4	10	200	140	0.7	0.05	56	0.005	83.3	0.001	0.3983	0.11949	0.03983	0.556	done
Remove Be reflector	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Beam port liners	6	3	10	180	126	12.6	0.1	50.4	0.005	63	0.001	1.575	0.4725	0.1575	2.205	done
Remove Lead shield	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Fuel racks	2	4	10	80	56	2.8	0.05	22.4	0.005	30.8	0.001	0.2828	0.08484	0.02828	0.396	done
Remove Grid Plate & Base	5	4	10	200	140	7	0.03	56	0.005	77	0.001	0.567	0.1701	0.0567	0.794	working
Remove Thermal Column head	10	6	10	600	420	21	0.025	168	0.005	231	0.001	1.596	0.4788	0.1596	2.234	not started
Remove Debris	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Remove platform	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	not started
Plasma Arc Vessel Tank	1	4	10	40	28	1.4	0.01	11.2	0.0025	15.4	0.001	0.0574	0.01722	0.00574	0.080	not started
Remove material from storage ports	2	4	10	80	56	2.8	0.01	22.4	0.0025	30.8	0.001	0.1148	0.03444	0.01148	0.161	done
Remove Thermal column graphite	2	6	10	120	84	8.4	0.05	33.6	0.01	42	0.0005	0.777	0.2331	0.0777	1.088	working
Total dose Rx Internals				2060								10.6155	3.18465	0.66087	14.461	

Estimated Man Rem for remaining internals work 4.518

Total estimated Man Rem for internals work 14.461

ALARA REVIEW FOR THERMAL COLUMN REMOVAL

1. Describe Thermal Column

   A. Aluminum Head
   B. Bismuth Shield
   C. Stainless Steel Flange
   D. Flange Bolts
   E. Flange Lead

2. Thermal Column dose rates

3. Thermal Column contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium

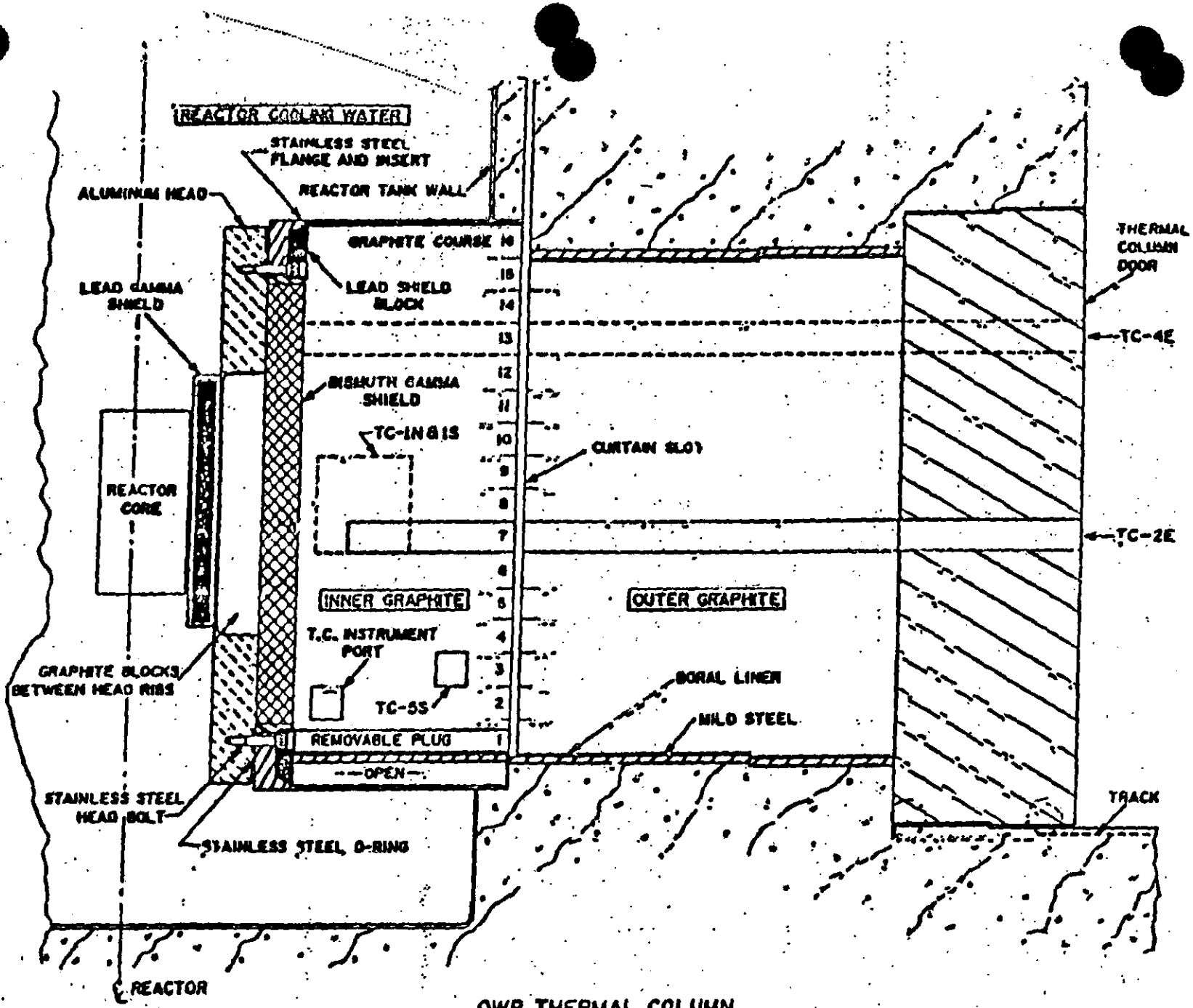
3. Airborne contamination levels

   A. Beta/Gamma levels
   B. Alpha levels
   C. Particulate Tritium levels

4. Ventilation and contamination Controls

5. Estimated Man Rem 4.379

A.	MOTA	3.650
B.	Management	0.182
C.	RCTs	0.365
D.	Waste Packaging	0.182



OWR THERMAL COLUMN

Los Alamos

Ω-West

Man Rem Estimate for Thermal Column

Task	Duration hours	people assigned	Man Hours	Effective hrs 70%	Low dose rate	Mid dose rate	High dose rate	LDR Man Rem	MDR Man Rem	HDR Man Rem	Man Rem/Task
Install sheilding	3	4	12	8.4	0.005	0.05	0.6	0.021	0.168	0.504	0.693
Remove remaining Graphite	4	2	8	5.6	0.005	0.05	0.6	0.014	0.112	0.336	0.462
Remove remaining Head bolts	4	2	8	5.6	0.05	0.05	0.6	0.14	0.112	0.336	0.588
Remove four segments of lead	1	2	2	1.4	0.05	0.05	0.6	0.035	0.028	0.084	0.147
Rig and remove Al head	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Segment Al head	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Rig and remove Bi sheild	1	3	3	2.1	0.01	0.05	0.9	0.0105	0.042	0.189	0.242
Segment Bi sheild	2	4	8	5.6	0.01	0.05	0.2	0.028	0.112	0.112	0.252
Remove SS flange	2	4	8	5.6	0.01	0.05	0.6	0.028	0.112	0.336	0.476
Segment SS flange	2	3	6	4.2	0.01	0.05	0.2	0.021	0.084	0.084	0.189
Instrall ventilation control items	2	2	4	2.8	0.005	0.02	0.04	0.007	0.0224	0.0112	0.041
Remove sheilding	2	2	4	2.8	0.02	0.04	0.08	0.028	0.0448	0.0224	0.095
Secure Thermal Col umn after removal	2	2	4	2.8	0.005	0.01	0.02	0.007	0.0112	0.0056	0.024
Mgr support											0.182
RCT support											0.385
Waste Packaging											0.182
Total											4.379

Initial Man Rem estimate 2.778

NAME Ext	Firm	Z/I	TLD Data	20-Jan
Toutaint, Robert H. 4.5/5.7	MOTA	191947	JAN 13 TLD	853
Ortiz, Daniel	SW	192477	NOV TLD	875.7
Granus, Mark	WD3	190158	NOV TLD	888
Fennema, James	MOTA	191503	NOV TLD	899.4
Kerr, Scott	MOTA	190389	NOV TLD	974.3
Ball, David	MOTA	193024	NOV TLD	1007.7
Laurent, S	MOTA	192795	NOV TLD	1044.2
Przybyski, Marty	WD3	190412	NOV TLD	1048.9
Mountain, Mark	MOTA	193023	NOV TLD	1054.2
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	1065.9
Reust, Jack L.	Duratek	191044	NOV TLD	1068.3
Schnell, Gerald	SEC	191326	NOV TLD	1090.8
Coleman, John	WD3	190383	NOV TLD	1101.2

01/21/03 10:38pm P. 010
505 667 3503
MOTA CORP

TA -2 RADIOLOGICAL SURVEY FORM

Survey #	Location
03-OWR-062	OWR
Date / Time	**RCT / Z #**
1/16/02 1430	SUMMERS 191329
RWP #	**RCT Signature**
HSR-1-02-029-TA2	

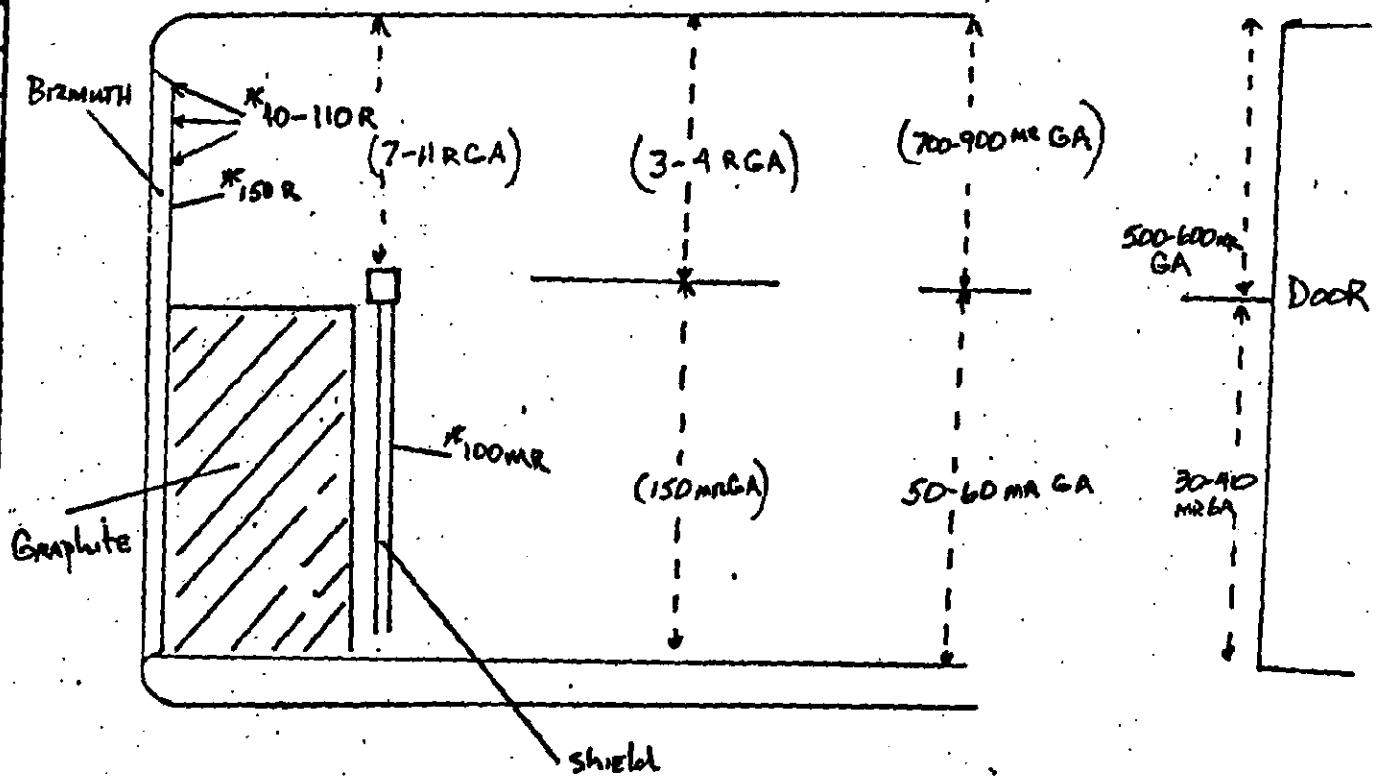
Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Size CP	BKG
βγ Dose RD20	531	2/7/03	N/A	N/A	.2 mR/hr
βγ			N/A		
α					

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
	N/A		

THERMO COLUMN



Comments NONE

Reviewed / /

01/21/03 10:53am P. 011

NAME Ext	Firm	Z#	TLD Data	
Coleman, John	WD3	190383	NOV TLD	1080.8
Granus, Mark	WD3	190158	NOV TLD	813.9
Przybyski, Marty	WD3	190412	NOV TLD	1005.5
Williams, Dana	WD3	178110	NOV TLD	759.3
Reust, Jack L.	Duratek	191044	NOV TLD	841
Romero, Adrian	Duratek	120634	NOV TLD	490.8
Ball, David	MOTA	193024	NOV TLD	155
Fennema, James	MOTA	191503	NOV TLD	874.1
Mountain, Mark	MOTA	193023	NOV TLD	454.7
Blackwell, Steve 1.7/2.3	SEC	193252	NOV TLD	188.1
Schnell, Gerald	SEC	191326	NOV TLD	610.3
Ortiz, Daniel	SW	192477	NOV TLD	831

TA -2 RADIOLOGICAL SURVEY

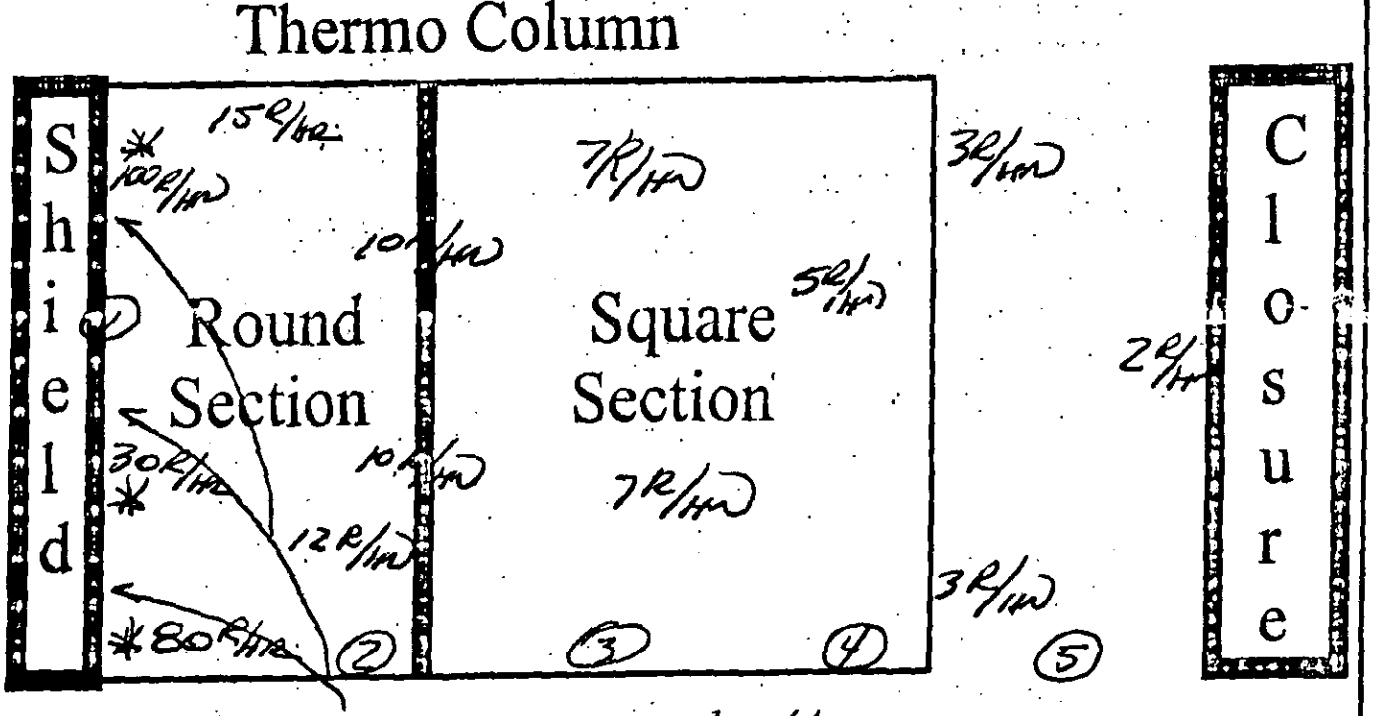
Survey #	Location
03-OWR-086	Inside Thermo Column
Date / Time	**RCT / Z #**
1-18-03 / 1430	191326
RWP #	**RCT Signature**
HSR-1-02-0024	

Instrumentation

Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose 6112B	1613	10/30/03	N/A	N/A	N/A
βγ ESP-1	7428	6/3/03	50	17.5 cm²	400 dpm
α 139	3768	3/21/03	50	17.5 cm²	0 cpm
N/A	N/A	N/A	N/A	N/A	N/A

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
1	Surface Shield	300K	L20
2		30K	
3	SAP	10K	
4	NAP	3K	L
5		2K	L20



* CONTACT surface of shield

Comments

Reviewed by

DLS 1/21/03

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☐ Job-specific air monitoring
- ☐ Pre-job survey data
- ☐ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☐ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☐ ~~Yes~~ *(Add attachment if necessary)* ☐ No

NO high tech equipment used
Planing could have been better

ALARA actions taken and results:

use of Shilded Platform and Cameras
worked well

Problems encountered:

Poor Planing equipment proposed
did not work well.
Poor information available

Recommendations for future similar jobs:

Pre Plan Better

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R Swei NAM	Signature R Swei Nam	Z Number 90160	Date 9/23/03

Los Alamos
National Laboratory

ESH-1 USE ONLY

Permit Number HSR-1-03-005
Effective 2-12-03 Expires 6-1-03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
James Fennema J.A. Fennema	WD3	780-0336	M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	2/10/03	5/1/03

Work to be performed:

Reactor Vessel Removal (Reactor Vessel Cut Up, Bioshield Demolition, Vessel removal, Bioshield debris removal and other associated tasks necessary to complete the job task of removal of reactor vessel from tent slab)

Are nonradiological hazards involved? Yes ☒ No ☐ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	<20 / <20	<20 / <20	<20 / <20
Beta/gamma	>500K / >100K	>500K / >100K	>500K / >500K
Tritium		N/A / N/A	

External Dose Rate (mrem/hr in work area)

Beta + gamma	50000 / 50
Neutron	N/A / N/A
Total (β + γ + n)	50000 / 50

Identify anticipated radionuclides:

Co60

Airborne Radioactivity

<.1 DAC Co60 Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT (printed name)	Signature	Number	Date
Gerald Schnell		191326	2/7/03

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: see special instructions *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
Estimated person-hours for job 1920
Estimated /measured working dose rates .5 to 100 mRem/hr
Estimated collective dose 10 person-rem
☒ Routine work ☐ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Ventilation is required whenever air sampling indicates values >.01 DAC. Personnel shall notify Rad Protection of changing work scope that may cause increased airborne to ensure proper ventilation is used.
2) A secondary undress area to be established at exit from tent for contamination control (see attached map)
3) Specific work instructions must be in place for each job evolution worked under this RWP
4) Full face respirator will be used until air data can be trended to indicate air values < .1 DAC
5) RCT to verify dose rates on reactor components as they are exposed during disassembly
6) Daily brief is required prior to commencing work on this RWP. Additional briefings are required during workday as work scope changes. These briefs shall include but not limited to anticipated dose rates, contamination levels, anticipated exposures, and ALARA suggestions. If any of these values are exceeded by 20% work is to be stopped, WD3 and LANL management to be notified.
7) Daily post job survey by an RCT to be conducted to verify postings and housekeeping in area.
8) Outside tent doors can be opened if radiological conditions will ensure airborne levels are maintained <.01 DAC.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	

APPROVALS

1. Manager R SWOTNAM	Signature	Z Number 190160	Date 3-10-03
2. RCT supervisor MARTY PEIFER	Signature	Z Number 108821	Date 3-10-03
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

ALARA Review Checklist

Job/Operation Title	RX Vessel, Bio-Shield and Liner removal and Packaging
Purpose of Job/Operation	Remove RX Vessel and Bio Shield.
RWP/HCP No. HSR-1-03-005	Job/Operation Contact / SJ Ticket/WO No

Yes	No	
		Procedures
✓		Prepare special radiological procedures?
✓		Include radiological control hold points?
✓		Review abnormal and emergency procedures?
✓		Identify *where* signatures or verifications are needed?
✓		Establish success or completion criteria?
✓		Develop pre-job collective dose estimate?
✓		Apply special waste minimization, control, or disposal?
✓		Establish detailed schedule for task sequencing/personnel entries?
		Engineering
✓		Make special use of existing engineering controls?
	✓	Develop new engineering controls?
	✓	Install temporary/permanent shielding? (Include load/stress concerns.)
		Worker Preparation
	✓	Provide special radiological training?
✓		Use mockups, walkdowns, or dry runs?
✓		Optimize worker efficiency (comfort vs. exposure)?
✓		Use photos/drawings/video for pre-job briefing/training?
✓		Select most highly skilled/qualified workers?
		Job Setup
✓		Prestage materials or tools?
✓		Prefabricate parts/materials?
✓		Install special services (power, water, air, ventilation)?
		Post ALARA waiting/rest areas and hot spots?
		Contamination Control
✓	✓	Use contamination curbing, floor covering, fencing?
✓	✓	Use tents/glove boxes/containments?
✓	✓	Use catch trays/drainlines?
✓		Use HEPA vacuums?
✓		Install local ventilation?
	✓	Use special protective clothing/devices?
	✓	Implement special hot particle controls?
✓		Wet or fix loose contamination?
		Exposure Control
	✓	Flush contaminated lines?
✓		Decontaminate area? (Optimize decontamination dose vs. job dose.)
	✓	Allow for decay before entry?
✓		Use special, remote, or robotic tools?
✓		Can a high-dose source be removed?
✓		Require special *monitoring* (for example, CAMS, ARMS, *continuous* coverage)?
	✓	Move some work to low or no exposure areas?
	✓	Can work crew be reduced w/o increasing total dose?
	✓	Is there unnecessary work that can be eliminated?
✓		Use remote, integrating, or real-time dose tracking?
✓		Use remote audio/visual communications?
	✓	**Use worker time limits?**
	✓	Is there a useful ALARA technique for this job not mentioned above? Document on back of form.

List detailed recommendations on back. Attach any special analyses/worksheets (date and sign).

If ALARA recommendation implementation cost is about $50K or more, provide cost-benefit analysis.

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: see special instructions *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
Estimated person-hours for job 1920
Estimated /measured working dose rates .5 to 100 mRem/hr
Estimated collective dose 10 person-rem
☒ Routine work ☐ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Ventilation to be in use at all times the brock is in operation.
2) A secondary undress area to be established at exit from tent for contamination control (see attached map)
3) Specific work instructions must be in place for each job evolution worked under this RWP
4) Full face respirator will be used until air data can be trended to indicate air values < .1 DAC
5) RCT to verify dose rates on reactor components as they are exposed during disassembly
6) Daily brief is required prior to commencing work on this RWP. Additional briefings are required during workday as work scope changes. These briefs shall include but not limited to anticipated dose rates, contamination levels, anticipated exposures, and ALARA suggestions. If any of these values are exceeded by 20% work is to be stopped. WD3 and LANL management to be notified.
7) Daily post job survey by an RCT to be conducted to verify postings and housekeeping in area.
8) The southwest airlock will be used for material or equipment insertion or removal and as a secondary personnel entrance only. All movement through this airlock must be approved by RCT supervision and monitored by an RCT.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	2/20/03

APPROVALS

1. Manager	Signature	Z Number	Date
2. RCT supervisor R. Swe Tham	Signature	Z Number 190160	Date 2/20/03
3. Other *(job title/printed name)* LANL HP Team Leader / Mary Beth	Signature	Z Number 108821	Date 2/20/03
4. Other *(job title/printed name)*	Signature	Z Number	Date

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: see special instructions *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
Estimated person-hours for job 1920
Estimated /measured working dose rates .5 to 100 mRem/hr
Estimated collective dose 10 person-rem
☒ Routine work ☐ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) Ventilation to be in use at all times the brock is in operation.
2) A secondary undress area to be established at exit from tent for contamination control (see attached map)
3) Specific work instructions must be in place for each job evolution worked under this RWP
4) Full face respirator will be used until air data can be trended to indicate air values < .1 DAC
5) RCT to verify dose rates on reactor components as they are exposed during disassembly
6) Daily brief is required prior to commencing work on this RWP. Additional briefings are required during workday as work scope changes. These briefs shall include but not limited to anticipated dose rates, contamination levels, anticipated exposures, and ALARA suggestions. If any of these values are exceeded by 20% work is to be stopped. WD3 and LANL management to be notified.
7) Daily post job survey by an RCT to be conducted to verify postings and housekeeping in area.

Completed by RCT *(printed name)* Gerald Schnell	Signature	Z Number 191326	Date 2/7/03
APPROVALS			
1. Manager SIVO TNAM	Signature	Z Number 190160	Date 2/7/03
2. RCT supervisor MARTY PEIFER	Signature	Z Number 108821	Date 2/7/03
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

Man Rem Estim[redacted]o Complete Project

Task	Duration hours	people assigned	Man Hours	Effective hrs 70%	Low dose rate	Mid dose rate	High dose rate	LDR Man Rem	MDR Man Rem	HDR Man Rem	Man Rem/Task
Segment Al head	16	3	48	33.6	0.001	0.05	0.1	0.018	0.672	0.168	0.858
Remove/segment SS flange	16	3	48	33.6	0.01	0.025	0.075	0.252	0.084	0.378	0.714
Load Liners	28	5	140	84	0.001	0.05	10	0.067	0.836	0.84	1.743
Segment Rx Wall	16	4	64	44.8	0.001	0.01	0.05	0.029	0.134	0.112	0.276
Remove Rx Debris	8	4	32	22.4	0.001	0.01	0.05	0.015	0.067	0.056	0.138
Coat inner Rx Shell	6	4	24	16.8	0.001	0.01	0.05	0.011	0.050	0.042	0.103
Demo BioShield	300	6	1800	1260	0.0005	0.01	0.1	0.410	4.158	2.52	7.088
Remove Steel	40	3	120	84	0.0005	0.01	0.1	0.034	0.160	0.084	0.277
RCT support	450	4	1800	1080	0.0005	0.005	0.5	0.459	0.807	0.27	1.536
Mgr Support	20	4	80	56	0.0005	0.005	0.05	0.024	0.042	0.0014	0.067
Waste Mgr	450	3	1350	675	0.0005	0.005	0.1	0.287	0.505	0.03375	0.825
Total											13.625

Subj: **Re: ALARA Review Material**
Date: 2/11/03 4:34:46 PM Mountain Standard Time
From: bodenstein@lanl.gov
To: RSwetnam@aol.com
CC: pelferm@lanl.gov, rendell_keith@lanl.gov, jrbland@lanl.gov, bodenstein@lanl.gov, jimstaehr@hotmail.com, darnl@lanl.gov
Sent from the Internet (Details)

Ron,

What time on Thursday?

Stan

Comments:

1) How do you handle the water from the spray used for dust mitigation? Is ice an issue? Is moisture a contamination migration issue?

2) The Clementine foundation is deeper than 2 feet below grade (4.14, 4.15).

3) Emphasize Note 3 to not lose containment due to loaded HEPAs from the dust in this new mode of operation.

4) Consider respirators until a history is developed in this new mode of operation without the vessel ventilation system operating.

5) Will the exhaust fumes from the equipment still be acceptable inside the tent?

6) When do you stop the reactor vessel ventilation? After the segmenting and prior to concrete work?

7) Is the control rod well (the abyss) to be specifically addressed? Coating, removal, etc.

Stan

At 04:43 PM 2/11/2003 -0500, RSwetnam@aol.com wrote:

> All
>
> Attached are 3 documents for the ALARA Review on Thursday, 2/13/03.
>
> Ron Swetnam
> 505 7800357

Stan Bodenstein
Los Alamos National Laboratory
Actinide & Fuels Cycle Technologies
NMT-11, MS G730
Los Alamos, NM 87545
Voice: 505-665-8462, **Fax:** 505-665-4013, **Pager:** 104-2471

Response to ALARA Comments of 2/12/03

The ALARA review is at 0900 2/13/03

1. Water from dust suppression operations will be absorbed with the dust. It will be a fine mist very low volume.

2. The Clementine foundation and underground piping is at 11 to 14 feet. We will remove all piping and concrete down to this level. A general contractual depth is at 2 feet.

3. HEPA filter DPs along with prefilter DP and dose rates are checked daily or more often as required.

4. Respirators will be used until airborne levels can be determined and found to be acceptable. We may continue some form of respiratory protection because of dust conditions in the tent.

5. The equipment exhaust will go through a scrubber plus the air flow through the tent will be 15,000 to 17,000 CFM. The exhaust flow from the equipment will not exceed 1200 CFM.

6. The reactor ventilation will be operating until the outlet recirc piping is removed. All three large HEPA units will operate during the Bioshield demo.

7. When we remove debris from the Rx vessel we will also inspect the Rx sump. Additional material removal will be done from the sump when we reach the floor of the reactor vessel. The sump will be coated when the vessel is coated.

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-03-005	00	Duke wide

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
192477	DANIEL ORTIZ	S.W.I	Daniel Ortiz	2-19-03	0630
192296	Debra Gonzales	SAT	Debra Gonzales	2-18-03	16:30
194795	Mary Garcia	SEC	M Garcia	2-18-03	0635
193023	MARK MOUNTAIN	MOTA	Mark Mountain	02-18-03	0635
194571	PAUL WARRIOR	MOTA		2/18/03	635
193024	DAVID BALL	MOTA	David W. Ball	2/18/03	6:35
182455	John Conley	SAI	John Conley	2/18/03	6:35
194730	Billy Spooner	SEC		2/18/03	0640
194179	John Jackson	SEC		2/18/03	0640
113569	David Stallard	CHL		2/18/03	0640
192744	Robert Livingston	MOTA		2/18/03	0641
190586	D DANSARD	MOTA		2-18-03	0643
191947	R H Toutaint	MOTA		2/18/2003	0645
190588	H Rutlan	MOTA		2-18-03	0645
190389	Scott KREIL	MOTA		2-18-03	0646
A3253	Dan McDonald	Duratek		2/18/03	6:47
178110	Dana Williams	WSII		2/18/03	6:45
191503	Jim Fennema	MOTA		2/18/03	6:45
390191		WD3		2/18/03	6:50
190383	J. Coleman	WD3		2/18/03	6:50
193025	Eric Barron	WD3	Douglas E. Barron	2/18/03	6:51
Conducted by:			Date:		

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSE-1-03-005	00	Double wide

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
190412	MARTY L BRZYBYSKI	LGLE		3/18/03	0700
169743	Ralph Young	JAKES Const		2/18/03	0702
141566	T. A. [illegible]	CW		2-20-03	0700
194795	M Garcia	SEC	M garcia	2-21-03	0715
141589	JD - STALTER	CW		02-21-03	08:15
176307	ADAM SCOTT	CW		2-21-03	8:15
170066	Donovan Torivio	CW		02-21-03	0816
191324	SUMMERS	SEC		2/21/03	0815
190611	Keith Knifer	CW		03-03-03	7:10
194549	R. D.	MOTA	R. D.	3/03/03	7:20
191044	Jack Ernst	Dynatech		3/3/03	8:10
193025	Eric Barron	WD3		3/17/03	0730
195450	WILLIAM P. KING	SEC		3/20/03	0710
110010	Darrik Stafford	LANL		3/3/03	8:21
182660	[illegible]	SAI		3/19/03	7:00
190383	J. Coleman	WP3		4/16/03	0950
Conducted by:			Date:		

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☐ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☒ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☒ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☐ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☐ Routine work ☐ Special radiological work

Estimated person-hours for job: 16
Estimated /measured working dose rates: 100 mRem / hr - 500mRem / hr
Estimated collective dose: 0.5 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

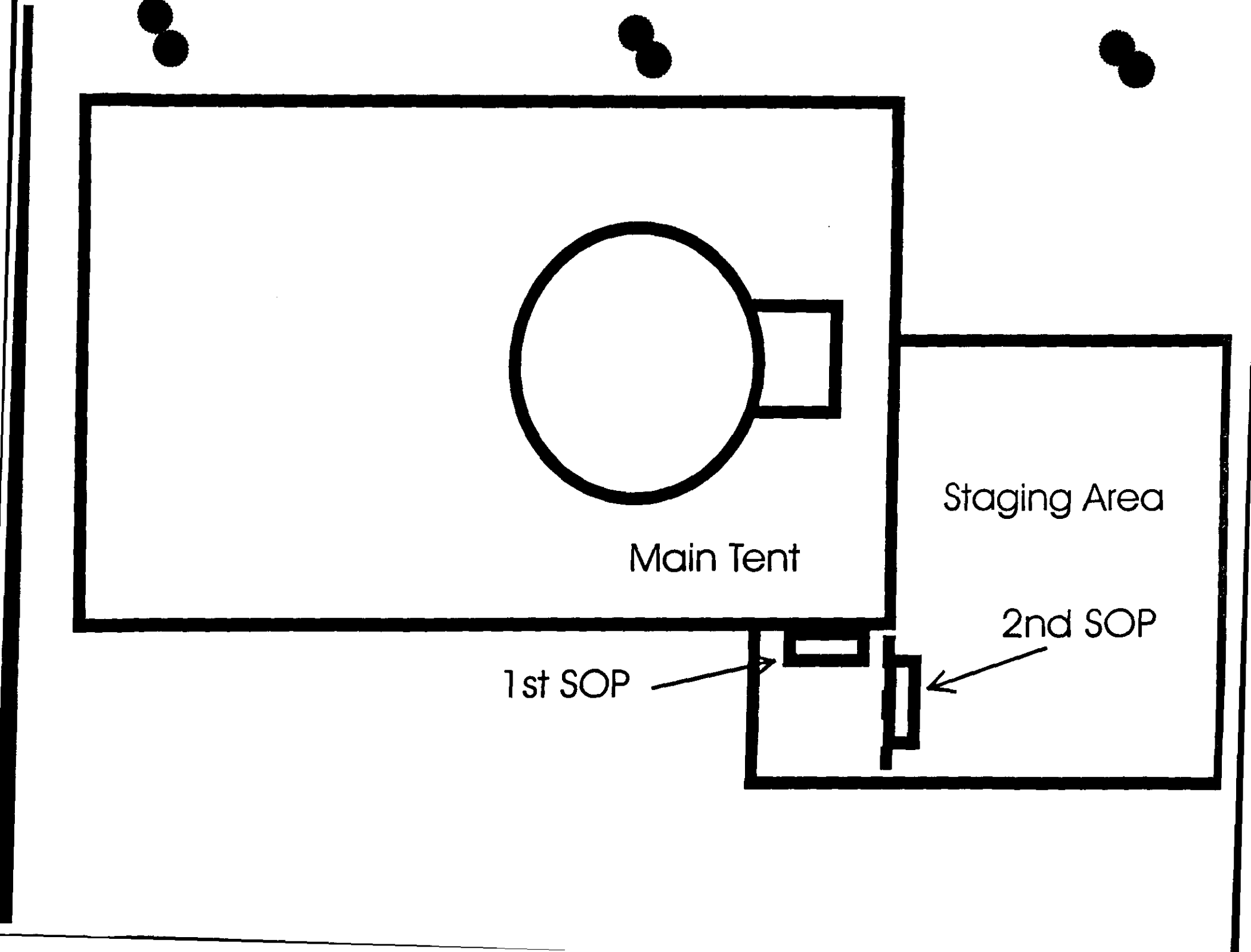
Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1. Full mock-up of Be & Pb shield movement required prior to commencing actual evolution.
2. Only personnel participating in the mock-up shall be used during the actual evolution.
3. A detailed work instruction shall be used to provide direction to workers performing the actual evolution. The work instruction shall not be finalized until completion of mock-up training so that the actual transfer and closure will replicate the mock-up.
4. All non-essential personnel shall be moved to low dose areas during the actual transfer of the Be reflector.
5. Site access gates to be monitored to prevent entry on job site during actual shield transfer.
6. 60 foot radiation readings to be collected on exposed Be shield during movement to estimate liner dose rates for off load at TA-54.
7. A detailed briefing shall be held prior to the actual evolution. The briefing shall include but not limited to anticipated dose rates, contamination levels and anticipated exposures. If any of these values are exceeded by 20% work is to be put in a safe condition and stopped. WD3 and LANL management notified prior to recommencing activities.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	3/19/03

APPROVALS

1. Manager RON SWETNAM	Signature	Z Number 190160	Date 3/19/03
2. RCT supervisor MARTY PEIFER	Signature	Z Number 105821	Date 3/19/03
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date


Staging Area
Main Tent
2nd SOP
1st SOP

MOVEMENT OF THE Be & Pb SHIELDS

1. The Be and Pb shields are currently stored in a liner with a bolted lid. The liner is stored in an underground storage area.

2. The removal of the Be & Pb shields from the storage liner will be conducted from the underground storage area.

3. Unbolting of the storage liner lid will be done with a long extension rod attached to an electric dive unit. One of the underground storage lids can be used as shielding during the unbolting of the liner lid.

4. Long poles will be used to grapple the slings attached to the Be & Pb shields when attaching the slings to the crane hook.

5. Electronic dosimeters will be set at 25 R/Hr and 100 mr exposure for personnel working near the liner lid.

6. Electronic dosimeters will be used as extremities monitors and will be set at 50 R/hr and 5 Rem.

7. The crane operator's electronic dosimeter will be set at 5 R/hr and 100 mr exposure.

8. The permanent disposal liner for the Be & Pb shields will be installed in the shipping cask with the liner lid removed.

9. Shoring will be installed in the liner followed by the Be shield and the Pb shield.

10. Additional Pb shielding will be placed in the disposal liner prior to installing the liner lid.

11. Impact guns will be used to secure the liner lid to liner.

12. A remotely operated TV camera will be used to overview the transfer operation of the Be and Pb shields.

13. During the transfer of the shields the site will be evacuated.

14. LANL representatives will be notified prior to the transfer so that increases in background radiation levels can be expected.

15. The outer gate to the site will be secured during the transfer.

16. Mockup testing will be done using the permanent storage liner to determine the specific loading sequence and equipment required.

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☐ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☐ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

NO High Tech equipment used Vent System could have been better

ALARA actions taken and results:

dose below projected

Problems encountered:

Co Monitor not in Place

Recommendations for future similar jobs:

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWETNAM	Signature R Swetnam	Z Number 190160	Date 4/23/03

Los Alamos
National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-03-6
Effective 3/24/03 Expires 4/24/03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
James Staher	WD3		M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	3/24/03	4/10/03

Work to be performed:

Removal and transfer of Beryllium Reflector and Lead Shield from current liner to final storage liner (this RWP includes all prep work, transfer of additional material to storage liner following Be and Pb shield transfer, closure of storage liner and preparation, closure of transfer cask for shipping to TA-54)

Are nonradiological hazards involved? Yes ☒ No ☐ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☐ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☒ Measured radiological conditions *(Record all readings as highest/general area.)* ☒ See attached map

Surface Contamination (dpm/100 cm^2)

	Direct	Smear	LAS (large area swipe)
Alpha	N/A / N/A	N/A / N/A	N/A / N/A
Beta/gamma	>500K / >500K	>500K / >500K	>500K / >500K
Tritium		TBD / TBD	

External Dose Rate (mrem/hr in work area)

Beta + gamma	>1000 / >1000
Neutron	N/A / N/A
Total (β + γ + n)	>1000 / >1000

Identify anticipated radionuclides:

Co60, H3

Airborne Radioactivity

<.1 DAC Co60 Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

N/A

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Gerald Schnell		191326	3/19/03

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National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-03-6	00	Double wide

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
190921	John Carlson	WD3		3/26/03	7:15
190160	R. Swoyer	WD3		3/26/03	1000
169743	Ralph Young	SAKES		3/26/03	10:00
195457	JOE MORGAN	MOTA		3/26/03	10:00
113567	[illegible]	CANI		3/26/03	10:00
82455	John Conley	SAI		"	"
192744	Bob Livaccari	MOTA		3/26/03	10:01
190588	HAL RUTLAND	MOTA		3/26/03	10:01
178110	Dan Williams	WG1		3/26/03	1000
19-381	JIM STAELIN	WD3		3/26/03	1005
190412	Marty L Jazybyski	WGI		3/26/03	1006
187554	Michael Dennis	LANL HSR-5		3/26/03	1007
194195	M Garcia	SEC		3-26-03	1010
193252	BLACKwell	SEC		3-26-03	1010
193253	Dan McDonald	Daiden		3/26/03	10:10
191328	SUMMERS	SEC		3/26/03	1010
194174	John Jackson	SEC		3/26/03	1010
195450	WILLIAM KING	SEC		3-26-03	1010
110010	Darrik Stafford	LANL		3-26-03	1000
191326	GERALD Schnell	SEC		3/26/03	1015

Conducted by: GERALD Schnell Date: 3-26-03

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
Conducted by:			Date:		

MOVEMENT OF THE Be & Pb SHIELDS

1. The Be and Pb shields are currently stored in a liner with a bolted lid. The liner is stored in an underground storage area.

2. The removal of the Be & Pb shields from the storage liner will be conducted from the underground storage area.

3. Unbolting of the storage liner lid will be done with a long extension rod attached to an electric dive unit. One of the underground storage lids can be used as shielding during the unbolting of the liner lid.

4. Long poles will be used to grapple the slings attached to the Be & Pb shields when attaching the slings to the crane hook.

5. Electronic dosimeters will be set at 25 R/Hr and 100 mr exposure for personnel working near the liner lid.

6. Electronic dosimeters will be used as extremities monitors and will be set at 50 R/hr and 5 Rem.

7. The crane operator's electronic dosimeter will be set at 5 R/hr and 100 mr exposure.

8. The permanent disposal liner for the Be & Pb shields will be installed in the shipping cask with the liner lid removed.

9. Shoring will be installed in the liner followed by the Be shield and the Pb shield.

10. Additional Pb shielding will be placed in the disposal liner prior to installing the liner lid.

11. Impact guns will be used to secure the liner lid to liner.

12. A remotely operated TV camera will be used to overview the transfer operation of the Be and Pb shields.

13. During the transfer of the shields the site will be evacuated.

14. LANL representatives will be notified prior to the transfer so that increases in background radiation levels can be expected.

15. The outer gate to the site will be secured during the transfer.

16. Mockup testing will be done using the permanent storage liner to determine the specific loading sequence and equipment required.

TA -2 RADIOLOGICAL SURVEY FORM

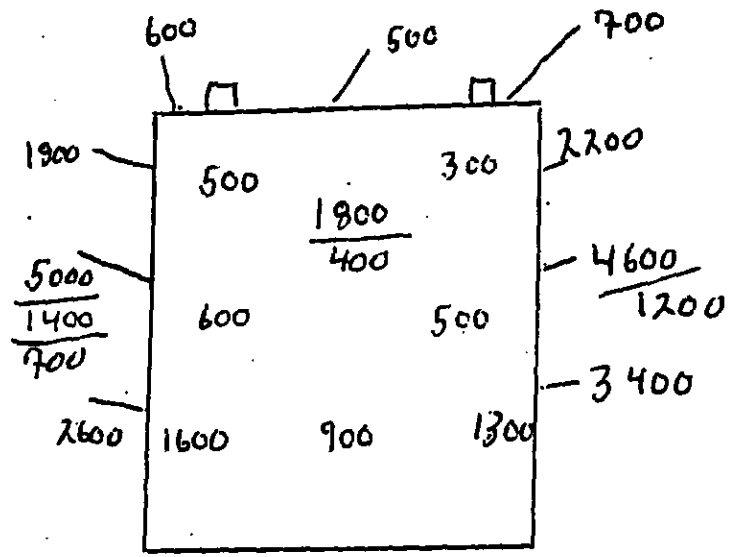
Survey #	Location
03-OWR-047	RX - Floor
Date / Time	**RCT / Z #**
1-6-03 / 1400	BLACKWELL / 193252
RWP #	**RCT Signature**
HSR-1-02-01-TA-2	

Instrumentation					
Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose Ba-7	726630	8-09-03	N/A	N/A	N/A
βγ					
α N/A	N/A		N/A	N/A	N/A

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
	N/A		

Be Shield



Contact
1 foot
1 meter

All Dose RATes in Rem/HR

Comments

Reviewed

TA -2 RADIOLOGICAL SURVEY FORM

Survey #	Location
03-OWR-048	Rx floor
Date / Time	**RCT / Z #**
1-4-03 / 1400	Blackwell / 193252
RWP #	**RCT Signature**
HSR-1-02-024-TA-2	SC Blackwell

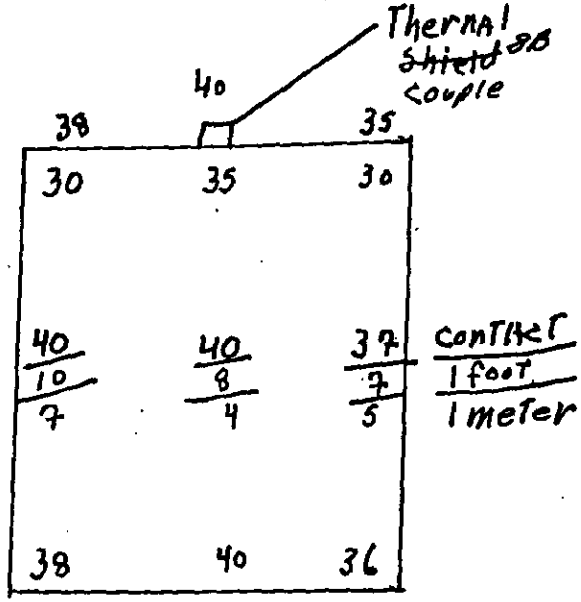
Instrumentation

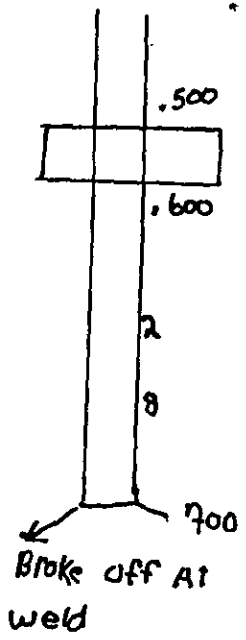
Type	HSE No.	Cal Due	% Eff	Detector Size CF	BKG
βγ Dose RO-7	726630	8-09-03	N/A	N/A	N/A
βγ				N/A	
α N/A	N/A				N/A

Smear Data (dpm / 100 cm²)

#	Location	βγ	α
	N/A		

Lead shield





All Dose RATes in Rem/HR

Comments

Reviewed

ALARA Review Checklist

Job/Operation Title	Transfer of Be and Pb Shields		
Purpose of Job/Operation	Place Be and Pb Shields in disposal liners		
RWP/HCP No.		Job/Operation Contact	SJ Ticket/WO No

Yes	No		
			Procedures
✓			Prepare special radiological procedures?
✓			Include radiological control hold points?
✓			Review abnormal and emergency procedures?
		NA	Identify where signatures or verifications are needed?
		NA	Establish success or completion criteria?
✓			Develop pre-job collective dose estimate?
		NA	Apply special waste minimization, control, or disposal?
✓			Establish detailed schedule for task sequencing/personnel entries?
			Engineering
✓			Make special use of existing engineering controls?
		NA	Develop new engineering controls?
✓			Install temporary/permanent shielding? (Include load/stress concerns.)
			Worker Preparation
	✓		Provide special radiological training?
✓			Use mockups, walkdowns, or dry runs?
✓			Optimize worker efficiency (comfort vs. exposure)?
✓			Use photos/drawings/video for pre-job briefing/training?
✓			Select most highly skilled/qualified workers?
			Job Setup
✓			Prestage materials or tools?
✓			Prefabricate parts/materials?
		NA	Install special services (power, water, air, ventilation)?
✓			Post ALARA waiting/rest areas and hot spots?
			Contamination Control
		NA	Use contamination curbing, floor covering, fencing?
		NA	Use tents/glove boxes/containments?
		NA	Use catch trays/drainlines?
		NA	Use HEPA vacuums?
		NA	Install local ventilation?
		NA	Use special protective clothing/devices?
	✓		Implement special hot particle controls?
	✓		Wet or fix loose contamination?
			Exposure Control
		NA	Flush contaminated lines?
		NA	Decontaminate area? (Optimize decontamination dose vs. job dose.)
		NA	Allow for decay before entry?
✓			Use special, remote, or robotic tools?
	✓		Can a high-dose source be removed?
✓			Require special monitoring (for example, CAMS, ARMS, continuous coverage)?
	✓		Move *some* work to low or no exposure areas?
	✓		Can work crew be reduced w/o increasing total dose?
	✓		Is there unnecessary work that can be eliminated?
✓			Use remote, integrating, or real-time dose tracking?
✓			Use remote audio/visual communications?
✓			Use worker time limits?
	✓		Is there a useful ALARA technique for this job not mentioned above? Document on back of form.

List detailed recommendations on back. Attach any special analyses/worksheets (date and sign).

If ALARA recommendation implementation cost is about $50K or more, provide cost-benefit analysis. NA

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☐ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☐ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

use of remote Cameras and Mockup

ALARA actions taken and results:

Good Pre Plan

Problems encountered:

None

Recommendations for future similar jobs:

Pre Plan

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* SWETNAM	Signature	Z Number 19060	Date 4/23/03

Los Alamos
National Laboratory

ESH-1 USE ONLY

Permit Number TSR-1-03-001-TN
Effective 1/02/03 Expires 4/02/03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus	WD3		M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	1/2/03	4/02/03

Work to be performed:

Removal and transfer of Beryllium Reflector from Reactor Vessel, including transfer to temporary storage and permanant liner.

Note: Estimated Contact Dose Rate On Reflector 500 R/hr, Working Dose Rate 5-10 mr/hr on shielded platform, .500-1 R/hr on unshielded platform

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)

	Direct	Smear	LAS (large area swipe)
Alpha	N/A / N/A	N/A / N/A	N/A / N/A
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / N/A	

External Dose Rate (mrem/hr in work area)

Beta + gamma	500 / 40
Neutron	N/A / N/A
Total (β + γ + n)	500 / 40

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

TBD DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Elaine Brown	Elaine Brown	190385	12-31-02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☒ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☒ Other: PPE TBD by Health Physics Technician

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: PPE TBD by Health Physics Technician *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☒ Other: Extremetry Dosimetry TBD by H.P.

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☒ Other: TBD by H.P.

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
Estimated person-hours for job 80
Estimated /measured working dose rates TBD
Estimated collective dose .396 person-rem
☐ Routine work ☒ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) RX Vessel HEPA Ventilation Operating Prior To Job Start
2) Only Essential Personnel Will Be Allowed On Site
3) Mock-Up Of Removal And Transfer Required
4) Dose Rates Will be Determined When Be Reflector Is Approximately Half Way Out Of Vessel To Determine Accurate Radiation Levels
5) Long Handled Tools Will Be Used To Keep Personnel REM A.L.A.R.A.
6) Dose Rate Monitoring O/S Tent During Job Activities
7) Surveillance Of Gates To Site To Ensure No Entry During Job Activities
8) Video Taping And Viewing Equipment Set-Up Prior To Job Start
9) This R.W.P. written in conjunction with R.W.P. # 024, See A.L.A.R.A. Review Attached To R.W.P. # 024

Completed by RCT *(printed name)*	Signature	Z Number	Date
Elaine Brown		190385	12-31-02

APPROVALS

	Signature	Z Number	Date
1. Manager Ron Swetnam		190160	1/2/03
2. RCT supervisor Martin Peifer		108821	1/2/03
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

1/6/03

* [illegible] 1/6/03

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-03-001-TA-2	N/A	TA-2 OWR

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
191329	K. SUMMERS	SEC		1/4/03	0930
198795	S. LAURENT	MOTA		1/4/03	0938
189743	R. YOUNG	JAKES		1-4-03	0938
192794	ROBERT LIVINGSTON	MOTA		1-4-03	0938
191947	R H TOUTAINT	MOTA		1/4/03	0938
193252	S BLACKWELL	SEC		1/4/03	0940
192296	Debra Gonzales	SW		1-4-03	0940
190369	SCOTT KERR	MOTA		01-04-03	0945
193253	Daniel McDonald	Dynatel		1-4-03	9:45
190834	Adrian Powell	Dynatel		1/4/03	9:50
190412	MARK L PRZYBYLSKI	WGK		1-4-03	955
191503	JAF ENNEMA	MOTA		1-4-03	955
190586	D L DANSARD	MOTA		1-4-03	1135
191044	Trek Reust	Dynatk		1-4-03	1155
190160	R SWETNAM	WDJ		1-4-03	1220
086114	KEITH RANDALL	LANL		1-4-03	12:21
190385	Elaine Brown	SEC		1-4-03	1225
190588	HAL RUTLAND	MOTA		1-4-03	1225
113569	Darril Stoffard	CANL		1/4/03	1225
193023	MARK MOUNTAIN	MOTA	Mark Mountain	01-04-03	1230
188381	JIM STABILE	WD3		01/4/03	1238
Conducted by: Elaine Brown			Date: 1-4-03		

Los Alamos
National Laboratory

Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-03-001-TA-2	N/A	TA-2 OWR

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (*print*)	Organization	Name (*signature*)	Date	Time
192477	DANIEL ORTIZ	S.A.I.		1-4-03	12:35
190363	Jonathan Coleman	WD3		1-4-03	12:36
191326		SEC		1-4-03	12:37
73024	DAVID BALC	META		1-6-03	6:40
110010	Darrik Stafford	LANL		1-6-03	1:00

Conducted by: _____ Date: 1-4-03

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)

	Direct	Smear	LAS (large area swipe)	
Alpha	<MDCR / <MDA	<MDA / <MDA	<MDA / <MDA	
Beta/gamma	N/A / >500K	>500K / >500K	>500K / >500k	
Tritium		<MDA / <MDA		

External Dose Rate (mrem/hr in work area)

Beta + gamma	5000000 / 1000
Neutron	N/A / N/A
Total (β + γ + n)	5000000 / 1000

Airborne Radioactivity <.01 DAC Co60 Isotope ☐ Estimated or ☒ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☒ Job-specific air monitoring
- ☒ Pre-job survey data
- ☒ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☒ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☒ Pre-job briefing log
- ☒ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☒ Yes *(Add attachment if necessary)* ☐ No

Because metal components rust with age the disassembly of reactor components in a shutdown reactor can be difficult to accomplish. The bolts holding the beryllium shield were rusted in place as well as the frame of the shield rusted to it's support components. The greatest expenditure of dose occurred during repeated attempts to break the shield loose.

ALARA actions taken and results:

Cameras were installed to allow close inspection of high dose components

Electronic dosimeter was provided to track daily exposure and to audibly warn workers of high dose fields.

Long handled tools were used to increase worker distance from shield

Mock ups were used to dry run all movement evolutions of shield

Problems encountered:

As mentioned in lessons learned the rusting of components made breaking the shield away from the reactor core a daunting task. Also due to the high dose rates exhibited from the shield adequately shielding the component following removal resulted in significant exposures when placing in temporary storage.

Recommendations for future similar jobs:

Due to high dose rates encountered with the shield the storage (both temporary and permanent) should be carefully planned. The dose rates on the outside of the storage cask exceeded 25 R/hr and a better planned storage area with adequate ready shielding would have greatly reduced the exposure of closing the cask within it's storage location.

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		191326	
Reviewed by RCT supervisor *(printed name)*	Signature	Z Number	Date

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

☐ CAM results	☐ Nasal swipe data	☐ Dose tracking report
☐ Job-specific air monitoring	☐ Urinalysis report	☐ Radiological occurrence/incident report
☐ Pre-job survey data	☐ Whole-body count	☐ Changes in radiological protection requirements
☐ Post-job survey data	☐ Wound count	☐ Pre-job briefing log
☐ Extremity dose data	☐ Skin contamination	☐ ALARA Review Checklist
☐ Special dosimetry results	☐ Personal clothing survey	☐ Other: _____

Lessons learned? ☐ Yes *(Add attachment if necessary)* ☐ No

use of Cameras good did mockup to resolve problem.

ALARA actions taken and results:

good Planning
low Dose < 0.2 Rem from 5000 R source

Problems encountered:

None

Recommendations for future similar jobs:

Pre Plan

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* R SWETNAM	Signature R Swetnam	Z Number 198160	Date 9/23/02

Los Alamos
National Laboratory

ESH-1 USE ONLY
Permit Number HSR-1-03-004-TA2
Effective 2/11/03 Expires 8/1/03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (printed name, signature)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Jack Reust	Duratec		M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
N/A	N/A	N/A	N/A	2/10/03	8/1/03

Work to be performed:

Loading, packaging, movement and storage of high level liners and casks (>1 R/hr @ 1 ft)Evaluation

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)

	Direct	Smear	LAS (large area swipe)
Alpha	<20 / <20	<20 / <20	<20 / <20
Beta/gamma	>1000 / >1000	>1000 / >1000	>1000 / >1000
Tritium		N/A / N/A	

External Dose Rate (mrem/hr in work area)

Beta + gamma	>500000 / 50 - 250
Neutron	N/A / N/A
Total (β + γ + n)	>500000 / 50 - 250

Identify anticipated radionuclides:

Co60

Airborne Radioactivity

<.1 DAC Co60 Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

TBD

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date
Gerald Schnell		101228	

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☒ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☐ Full-face respirator ☐ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☐ Other: _____ *Requires ESH-5/JSFT (JCNMM) approval

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☒ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☐ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☐ Intermittent coverage ☐ Personnel before leaving job ☐ Equipment and tools before removal
☐ Self-frisking ☒ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements Estimated person-hours for job 140
ALARA Review Checklist attached: ☐ Yes ☒ No Estimated /measured working dose rates .5 to 500 mRem/hr
Estimated collective dose 2 person-rem
☒ Routine work ☐ Special radiological work

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) A briefing is required on each cask or liner move. This briefing should include anticipated dose rates, detailed job assignments and a talk through of each movement phase. During performance any deviation from the discussed plan will require stop work until the deviations are approved by management.

2) Level 1 dressout is required for liner closure and decontamination. Cask / liner to be verified uncontaminated prior to movement from tent.

3) Extremity dosimetry to be worn by individuals bolting liner / cask lids and attaching lift cables to cask / liner.

4) Evaluation for evacuating site personnel will be reviewed for all cask / liner movements of >100 R/hr . At no time will individuals not directly involved in the cask movement be within the radiation area created by cask / liner.

5) A detailed shipping survey will be documented when the liner is moved from the tent to temporary storage outside the tent.

Completed by RCT (printed name)	Signature	Z Number	Date
Gerald Schnell		191326	

APPROVALS

1. Manager SUETNAM	Signature	Z Number 140160	Date 2/11/03
2. RCT supervisor MARTY PEIFER	Signature	Z Number 108824	Date 2/11/03
3. Other (job title/printed name)	Signature	Z Number	Date
4. Other (job title/printed name)	Signature	Z Number	Date

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Pre-Job Briefing Log

RWP Number	Change Number	Location
HSE-1-03-004	00	RP TRAILER

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
194798	Billy D Hatcher	Quadrex	Billy D Hatcher	2-21-03	0916
194746	R H Touchaint	MOTA		2/21/03	0916
190585	Hal Rutland	MOTA		2-21-03	0915
169743	Ralph Young	JAROS CRANE		2-21-03	0917
194174	John Jackson	RCT		2/21/03	0918
193024	DAVID BALL	MOTA	David W Ball	2-21-03	0918
193023	MARK MOUNTAIN	MOTA	Mark Mountain	02-21-03	0920
190468	John Cook	SAIC		2/21/03	920
193253	Dan McDonald	Duratek		2/21/03	925
194754	Mary Jane Wint	Duratek		2/21/03	925
194730	Barry Faulkner	SEC		2/21/03	0930
190586	D. DANSARD	MOTA		2-25-03	1410
178110	Dan Williams	WG11	Dan Williams	2/25/03	1410
~~194754~~	~~Mary Jane Wint~~	~~Duratek~~		~~2/25/03~~	~~1410~~ 3/3/03
190160	R. SWETNAM	WD3		2/25/03	1410
190389	Scott Kerr	MOTA		02-25-03	1415
190389	Rob Gamble	MOTA		3/1/03	1030
13569	Daniel Stafford	LANL		3/1/03	1035
193025	Eric Barron	WD3	Douglas E Barron	3/6/03	0645
194795	Mary Garcia	RCT		3-8-03	0700
195457	JOE MORGAN	MOTA		3/17/03	0745
Conducted by:			Date:		

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☐ Job-specific air monitoring
- ☐ Pre-job survey data
- ☐ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☐ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☐ Yes *(Add attachment if necessary)* ☑ No

ALARA actions taken and results:

Good Pre-Planning

Problems encountered:

Rigging Sometimes not available

Recommendations for future similar jobs:

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
Reviewed by RCT supervisor *(printed name)* SWATMAN	Signature	Z Number 190160	Date 4/23/03

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ESH-1 USE ONLY
Permit Number HSR-1-02-27T #2
Effective 12/18/02 Expires 4/1/03

Radiological Work Permit

GENERAL INFORMATION (to be completed by requester)

Requested by: (*printed name, signature*)	Group	Phone No.	Mail Stop	Work Location (TA, Bldg, Room No.)
Mark Granus DLS For M Granus	WD3	NA	M769	TA-2 OWR

HCP No.	Small Job Ticket No.	Work Order No.	SWP No.	Requested Start Date	Expected End Date
NA	NA	NA	NA	12/18/02	3/30/03

Work to be performed:

Size reduction of radiological material at OWR containment.

Are nonradiological hazards involved? Yes ☐ No ☒ If yes, the nonradiological hazards must be covered by an appropriate permit, HCP, or other work control document.

PRE-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

☒ Anticipated radiological conditions (enter anticipated conditions if survey cannot be performed before work begins)

or

☐ Measured radiological conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm^2)

	Direct	Smear	LAS (large area swipe)
Alpha	TBD / TBD	TBD / TBD	TBD / TBD
Beta/gamma	TBD / TBD	TBD / TBD	TBD / TBD
Tritium		TBD / TBD	

External Dose Rate (mrem/hr in work area)

Beta + gamma	10 / 5
Neutron	na / na
Total (β + γ + n)	10 / 5

Identify anticipated radionuclides:

MFP

Airborne Radioactivity

TBD DAC MFP Isotope

☒ Expected or ☐ Measured

Identify any contamination under paint or on inaccessible surfaces:

Loose surface contamination expected.

Completed by RCT/HPT (*printed name*)	Signature	Z Number	Date
Kirk Summers		191324	12/18/02

ALARA/RADIOLOGICAL PROTECTION REQUIREMENTS (to be completed by RCT)

Protective Clothing Requirements ☐ None ☒ Level I (Coveralls, 2 pair anti-c gloves, and booties)
☐ Lab coat ☐ Skull cap ☐ Hood ☐ Taped openings ☐ Level II (2 coveralls, 2 pair anti-c gloves, 2 pair booties)
☐ Anti-C Gloves ☐ Booties ☐ Other: _____

Respiratory Requirements ☐ None ☐ ESH-5 respirator card ☐ Supplied air mask* ☐ SCBA*
☒ Full-face respirator ☒ Ventilation ☐ Combination cartridge* ☐ Supplied air suit*
☐ Particulate cartridge ☒ Job-specific air monitoring ☐ Chemical cartridge*
☒ Other: HEPA ventilation required **Requires ESH-5/JSFT (JCNMM) approval*

Dosimetry Requirements ☐ None ☒ WB dosimeter ☐ Supplemental dosimeter ☒ Alarming dosimeter
☐ Extremity dosimeter ☐ Special neutron dosimetry ☐ PNAD packet ☐ Pu access list ☐ Nasal swipes
☐ Special urinalysis ☐ Whole-body count ☐ Other: _____

Monitoring Requirements ☐ None ☒ Notify RCT before job starts @ _____ ☐ Notify RCT at job end
☒ Intermittent coverage ☒ Personnel before leaving job ☒ Equipment and tools before removal
☐ Self-frisking ☐ Continuous coverage ☐ RCT monitor doffing of anti-Cs
☐ Other: _____

Training Requirements ☐ RW I ☒ RW II ☐ Other: _____

ALARA Requirements
ALARA Review Checklist attached: ☒ Yes ☐ No
☐ Routine work ☐ Special radiological work
Estimated person-hours for job 250
Estimated /measured working dose rates TBD
Estimated collective dose .500 person-rem

HOLD POINTS/SPECIAL INSTRUCTIONS (to be completed by RCT)

Hold Points or Special Instructions (for example, individual dose limits, collective dose limits, contamination limits, etc.):

1) RCT may require additional monitoring if neccessary.

Completed by RCT *(printed name)*	Signature	Z Number	Date
Kirk Summers		191324	12/18/02

APPROVALS

1. Manager R SWETNAM	Signature	Z Number 190160	Date 12/18/02
2. RCT supervisor MARTY PEIFER	Signature	Z Number 108821	Date 12-18-02
3. Other *(job title/printed name)*	Signature	Z Number	Date
4. Other *(job title/printed name)*	Signature	Z Number	Date

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Pre-Job Briefing Log

RWP Number	Change Number	Location
HSR-1-02-027-TA2	0	OWR

By signing this log, I acknowledge that I have read the radiological conditions and protection requirements and attended a pre-job briefing on the RWP. I understand these conditions and protection requirements and will abide by them.

Z Number	Name (print)	Organization	Name (signature)	Date	Time
193023	M. MOUNTAIN	MOTA	Mark Mountain	12.18.02	1055
193024	DAVID BALL	MOTA	David Ball	12.18.02	1055
19132A	SUMMERS	SEC		12/18/02	1055
190588	HAL RUTLAND	MOTA	Hal Rutland	12.18.02	1055
190385	Elaine Brown	SEC	Elaine Brown	1-23-03	0830
194571	PAUL WHEELER	MOTA		2/6/03	200
192794	Robert Livingston	MOTA		2/6/03	1410

Conducted by: [signature] Date: 12/18/02

Form 2056, 12/22/00

POST-JOB RADIOLOGICAL CONDITIONS (to be completed by RCT/HPT)

Measured Radiological Conditions *(Record all readings as highest/general area.)* ☐ See attached map

Surface Contamination (dpm/100 cm²)	Direct	Smear	LAS (large area swipe)
Alpha	____/____	____/____	____/____
Beta/gamma	____/____	____/____	____/____
Tritium		____/____	

External Dose Rate (mrem/hr in work area)	
Beta + gamma	____/____
Neutron	____/____
Total (β + γ + n)	____/____

Airborne Radioactivity _____ DAC _____ Isotope ☐ Estimated or ☐ Measured

Completed by RCT/HPT *(printed name)*	Signature	Z Number	Date

REVIEW

Associated reports for this job *(indicate the ones that apply)*:

- ☐ CAM results
- ☐ Job-specific air monitoring
- ☑ Pre-job survey data
- ☑ Post-job survey data
- ☐ Extremity dose data
- ☐ Special dosimetry results
- ☐ Nasal swipe data
- ☐ Urinalysis report
- ☐ Whole-body count
- ☐ Wound count
- ☐ Skin contamination
- ☐ Personal clothing survey
- ☑ Dose tracking report
- ☐ Radiological occurrence/incident report
- ☐ Changes in radiological protection requirements
- ☐ Pre-job briefing log
- ☐ ALARA Review Checklist
- ☐ Other: _____

Lessons learned? ☑ Yes *(Add attachment if necessary)* ☐ No

The need for a good Containment and Vent Systems. Pre-Plan to determine methods of Cutting

ALARA actions taken and results:

High dose rate items resulted in dose being received that was not ALARA

Problems encountered:

Didn't have proper equipment

Recommendations for future similar jobs:

Pre-Plan!

Reviewed by RCT *(printed name)*	Signature	Z Number	Date
~~Reviewed by RCT supervisor (printed name)~~ R Fuelner	Signature R Fuelner	Z Number 40160	Date 9/23/03