



NEW MEXICO
ENVIRONMENT DEPARTMENT



Hazardous Waste Bureau

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us

RON CURRY
Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 17, 2010

Donald L. Winchell, Jr., Manager
Los Alamos Site Office
Department of Energy
528 35th Street, Mail Stop A316
Los Alamos, NM 87544

James C. Cantwell, Associate Director
Environment, Safety, Health, & Quality
Los Alamos National Security, LLC
Los Alamos Research Park
4200 Jemez Road, Suite 400
Los Alamos, NM 87545

**RE: PROPOSED REVISED LANGUAGE FOR DRAFT RENEWAL PERMIT
LOS ALAMOS NATIONAL LABORATORY, EPA ID# NM0890010515
LANL-01-006**

Dear Messrs. Winchell and Cantwell:

The New Mexico Environment Department (NMED) is in receipt of the U.S. Department of Energy March 3, 2010 request to modify the Los Alamos National Laboratory (LANL) Hazardous Waste Permit. The request also included proposed changes to the draft renewal permit to also reflect similar changes. The permit modification request was addressed under separate cover dated March 17, 2010.

NMED finds that the DOE's proposed language changes to the draft renewal permit are generally appropriate. NMED has made minor changes for clarity and consistency, and to reflect changes to the February 2, 2010 Proposed Permit rather, than to the July 6, 2009 version as submitted by the Applicant. NMED's proposed language is attached to this letter.

NMED will propose to incorporate these changes to the Proposed Permit in its prefiled direct testimony for the April 5, 2010 public hearing.



Messrs. Winchell and Cantwell
March 17, 2010
Page 2

Please contact Steve Pullen at (505) 476-6044 or John Kieling (505) 476-6035 if you have any questions.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED-HWB
D. Cobrain, NMED-HWB
S. Pullen, NMED-HWB
R. Cram, NMED-HWB
T. Grieggs, ENV-RCRA, LANS, MS K490
D. Hjeresen, ADESHQ, LANS, MS J978
J. Ellvinger, ENV-RCRA, LANS, MS K490
G. Turner, DOE-LANS, MS A316
File: Reading and LANL Permit 2009
LANL-09-055

Attachment A

A.4.1 AREA L

The Area L permitted unit is the area within the fence and is comprised of several storage structures: dome 215; ~~canopy 216~~; concrete pad with canopy 32; concrete pads 35 and 36; storage sheds 68, 69, 70, 31; modular units 39 and 58 (*see* Figure 26 in Attachment N (*Figures*)).

The permitted unit stores containers of hazardous and mixed low level waste in solid and liquid form. Liquid wastes are stored primarily in structures that are designed for secondary containment; however, secondary containment pallets are also used. Secondary containment pallets are typically constructed of polyethylene or metal painted with a chemical-resistant coating. Polyethylene secondary containment pallets used at TA-54 are generally 50 inches long by 50 inches wide by 17 inches deep, with a designed capacity of 83 gallons. Currently, two sizes of metal secondary containment pallets are used at TA-54. One is 52 inches long by 52 inches wide by 6.5 inches deep, with a designed capacity of 57 gallons; the other is 60 inches wide by 60 inches long by 6.5 inches deep, with a designed capacity of 77 gallons. The metal secondary containment pallets are coated with chemically-resistant urethane. The stressed- or tensioned-membrane fabric used on Storage Dome 215 and ~~Canopy 216~~ at the aboveground permitted unit within the fence at Area L ~~are similar. This fabric~~ is coated with ultraviolet (UV)-stabilized plasticized polyvinyl chloride (PVC). It is fungus-resistant and certified flame-retardant (*i.e.*, self-extinguishing).

A.4.1.2 Reserved Canopy 216

~~Storage dome 216 is approximately 33 feet wide and 120 feet long (*see* Figure 26 in Attachment N (*Figures*)). This storage structure consists of a rigid aluminum frame that supports a tensioned membrane. A series of aluminum I-beam trusses spanning the width of the structure comprises the framework. The membrane is integrally connected to the frame to provide a fully tensioned fit for the roof and one side of the structure. The membrane on the remaining three sides of the structure can be rolled down to provide further containment or protection from the weather. The canopy frame is anchored to a sloped asphaltic-concrete pad~~

A.4.2.1 Pad 9

The 4 to 6 in thick asphalt pad is approximately 570 feet long and 275 feet wide (*see* Figure 28 in Attachment N (*Figures*)). Transuranic Waste Inspectable Storage Project (TWISP) domes 229, 230, 231, and 232 are located on Pad 9 at the east end of Area G. Each dome is approximately 246 ft long, and 88 ft by 7 inches wide and consist of a rigid aluminum frame that supports a tensioned membrane. A series of aluminum I-beam trusses spanning the width of the structures comprise the dome framework. The membrane material is a polyester fabric coated with UV-stabilized plasticized PVC. The material is fungus-resistant and fire-retardant (*i.e.*, self-extinguishing). The membrane is integrally connected to the frame to provide a fully tensioned

fit. Each dome is equipped with personnel doors and a roll-up door for vehicle access and is anchored to a concrete ring-wall with anchor bolts. Under Pad 9 is a fire water collection system that collects water from Domes 232 ~~and, 231, and Dome 226 on Pad 1~~ and transports it to a sump system in Dome 229 at the south end of Pad 9. The system is not intended for, nor was it designed to provide, secondary containment of liquid waste releases. It was designed to provide an augmented fire water collection capability to prevent fire water running off the pad if any fire suppression activities exceeded the capacity contained in the upstream domes. ~~Dome 226 has two drain inlets at the south end of the dome and~~ Domes 231 and 232 have three drain inlets apiece in the southeast portion of the domes. ~~All~~The drains in each dome are connected and drain to a collection pipe line that runs down the east side of Pad 9. The line terminates in the collection sump in the east end of Dome 229. The floor of Dome 230 is designed for secondary containment of liquids. The asphalt pad floor is sloped (1%) towards a concrete sump at the east end of the dome. The asphalt floor and curbs in Dome 230 are lined with a double layer of 40 mil high-density polyethylene (HDPE), and the sump is lined with a single layer of 40 mil HDPE, creating an impervious layer to contain any liquids that might accumulate. The secondary containment capacity for Dome 230, which includes the sump and curbed area, is approximately 48,255 gallons which exceeds the amount necessary to hold 10% of the total storage capacity of the dome (330,000 gallons). The TWISP domes on Pad 9 are unheated; the storage of waste within the transportainer is for the purpose of temperature equilibration of the waste for characterization procedures (*i.e.*, real-time radiography and headspace gas sampling associated with the transuranic waste characterization program).

A.4.2.2 Pad 1

The 4 to 6 inch thick asphalt pad is approximately 358 feet long and 213 feet wide. TA-54-412 ~~and storage dome 226 and the Mobile Visual Examination and Repackaging (MOVER) with support trailer~~ are located on the pad in the northeastern portion of Area G (*see* Figure 29 in Attachment N (*Figures*)).

TA-54-412 (*see* Figure 29 in Attachment N (*Figures*)) is a one story building that is approximately 220 feet long by 60 feet wide (13,200 ft²). It consists of two structures, an internal primary confinement structure that houses the DVRS processing operations and an external secondary confinement structure which surrounds the primary confinement structure. The external secondary confinement structure (hereinafter referred to as “building”) provides protection from the elements and a temperature-controlled space for the internal structures and associated process equipment. A 16 ft by 16 ft roll-up vehicle-access door is located on the north end of the building. The roll-up vehicle access door opens to the secondary confinement structure area and serves as a pass-through for moving DVRS feed-stock waste into the primary confinement structure. There is also vehicle access on the south end of the building for removal of compacted waste from DVRS operations. The concrete slab provides a structural foundation for the building and the shearer and baler system and provides a direct working surface for movement of fiberglass reinforced plywood boxes and processing equipment. The concrete slab is above grade to direct potential run-on away from the building. The floor in the building is sloped to a sump that has a grating cover to provide traction and a level working surface. The sump is treated with chemical-resistant epoxy filler-sealer and protective coating.

The primary confinement structure is housed entirely within the building and consists of five interconnected enclosures or cells. The system is approximately 150 feet long by 50 feet wide by 16 feet high and sits directly on the sealed concrete floor. The primary confinement structure is constructed of 6-inch-thick, two-hour fire-rated sandwich panels made of 16-gauge steel and gypsum wallboard measuring 40 feet wide by 4 or 8 feet long. The structure interlocks in a self-supporting steel framework that can be assembled into multiple configurations. The primary confinement structure has five cells each of which is used for a specific function of the DVRS process. The cells are equipped with both personnel and large roll-up doors so that personnel, equipment, and material can access the structure and move from one cell to the next. A cell is used to sort and segregate transuranic and mixed transuranic waste and contains various tools used to dismantle the fiberglass reinforced plywood boxes. Other cells are used for decontamination and packaging and a final cell contains the shearer and baler used to compact waste items. The shearing and baling process takes place within a tightly sealed compartment. Waste containers that need to be dismantled are processed using circular saws, reciprocating saws, hammers, pry bars, and other tools, as needed. Waste containers are moved with trucks, forklifts, air pallets, and hand dollies. The primary and secondary confinement structures are built to meet criteria specified in DOE-STD-1020-92, "*Natural Phenomena Hazards Design and Evaluation Criteria for DOE Facilities*" (DOE, 1992) for Performance Criteria 2 structures. Performance Criteria 2 structures include active fire suppression, emergency communications, and confinement systems that provide important safety functions related to emergency handling or hazard recovery and are designed to protect the health and safety of workers and visitors during active operations. The building contains fire protection piping and heating, ventilation, and air conditioning ducting and is a two-hour code-compliant fire-rated building. Panels in the primary confinement structure are the same material as the two-hour fire-rated wall construction with additional supports. A dry-pipe fire-protection system provides coverage for the primary confinement structure. A water collection area in the south end of the building provides for containment of any potential leaks, spills, or accumulated water resulting from the activation of the fire protection system.

Located on the northeast portion of Pad 1 (form location of Dome 226) is the MOVER and support trailer. The MOVER is a 10 by 40-ft transportainer unit that contains a glovebox utilized to visually examine and repackage the contents of high activity TRU waste drums. The MOVER unit is a certified DOT 7A Type Container (CPC 1998). The MOVER structure is classified as a Type II (000) structure per NFPA 220, *Standard on Types of Building Construction*. Interior walls are double-walled for containment purposes with sealed and polished stainless steel interior for ease of decontamination. The outside walls of the MOVER are constructed of carbon steel. The walls are insulated with cellulose, which is manufactured under Consumer Product Safety Commission performance criteria mandating fire standards. The interior and exterior of the MOVER are non-flammable metal with steel stud construction. All electrical systems are designed to the National Electrical Code.

The MOVER is comprised of three rooms consisting of a control room, glovebox operations room, and the drum entry room. The control room provides space for personnel entry, a portal radiation monitor, and system controls. There are doors between each section to isolate each room. Doors are kept closed during the glovebox operations to maintain negative pressure in the unit. Airflow direction is maintained so that air flows from areas of low contamination to areas of potentially higher contamination before being exhausted through the HEPA ventilation

system. The unit has continuous air and fixed head monitors, intercom system, fire protection system, HVAC, and lighting.

The glove box operation room contains the glovebox, drum lifter, HEPA filters and differential pressure-monitor panel. The drum entry room is located at one end of the trailer. This room provides space for four standard 55-gallon drums on transport dollies. TRU waste drums are bagged into the glovebox and opened. The contents are examined and then bagged out into another drum(s). Nonconformance items are identified and bagged out into a third drum. The empty parent drum and newly filled drum(s) are then removed from the MOVER unit.

The glovebox is 12-ft long, 2.75-ft high and the end is 2.3-ft wide at the top. The glovebox is fabricated from Type 304L stainless steel and includes a HEPA ventilations system.

The MOVER support trailer is 9 by 20 ft metal trailer that houses ventilation blowers with a monitored discharge system, the fire suppression system and electrical distribution system for the MOVER.

~~Dome 226 is approximately 286 feet long and 88 feet 7 inches wide (see Figure 29 in Attachment N (Figures)). The design and materials of construction for Dome 226 are the same as for other domes at TA-54. The dome is equipped with personnel doors and a roll-up door for vehicle access. It is anchored to the concrete ring wall with anchor bolts. The interior floor perimeter of Dome 226 is surrounded with a minimum 6-inch-high, 6-inch-wide asphalt curb. The asphalt pad is sloped 1 to 1.5% towards one end to allow any accumulated liquids to be contained within the curbed area at the southern end of the dome. At the southern end of the dome is a drain connecting to the recessed sump in Pad 9's Dome 229. This fire protection drain system consists of a 10" line running southeast from Dome 226 with secondary connecting drains from Domes 232 and 231. The purpose of this drain system is to provide additional fire water collection capacity in the event of an emergency.~~



A.4.2.4 Pad 10 (former Pads 2 and 4)

Pad 10 is constructed at the location of former Pads 2 and 4. The asphalt pad measures approximately 350 feet long by 250 feet wide and is constructed of asphalt (*see* Figure 31 in Attachment N (*Figures*)). The transuranic waste characterization facilities and container storage area are located on this pad. The transuranic waste characterization facilities consist of mobile and modular units equipped with instruments and equipment for waste characterization and repackaging. The transuranic waste characterization facilities include the following: drum-loading or receiving unit(s); equilibration units(s); gas mobile characterization unit(s); mobile repack units; and nondestructive radioassay unit(s). External containment is provided by the trailers and transportainers because waste characterization activities take place inside the structures. The characterization provided by the non-destructive assay radioactivity monitoring techniques described does not involve opening the waste containers. Activities at Pad 10 include the following:

The Canberra Facility High Efficiency Neutron Counter (HENC) is designed to provide a passive neutron and gamma measurement of transuranic waste drums in 55-gal containers. The trailer housing the HENC is Structure #498. The HENC supported the Facility's TWCP and Project 2010 and subsequently CCP operations beginning in 2004 to the present.

TA 54-0365, Office Building, Formerly MTGS

TA 54-0365 formerly housed the Mobile Tomographic Gamma System (MTGS). The MTGS was a gamma assay system prototype developed by the Permittees. The instrument was salvaged in 2007 and the trailer in which it was housed (Structure #365) was converted to office space.

TA 54-0457, Super High Efficiency Neutron Coincidence (SuperHENC) counter

Trailer TA-0457 houses a high efficiency neutron counter designed to handle large waste containers. It is designed to provide a passive neutron and gamma measurement of large transuranic waste containers like standard waste boxes. The SuperHENC will support the Facility's TWCP and the CCP operations beginning in 2010.

TA 54-0439, FRAM

~~The Fixed-Energy Response Function Analysis with Multiple Efficiency (FRAM) is a single high purity germanium detector with FRAM software to evaluate the isotopic composition of waste drums from gamma measurements. Two systems were housed in trailer TA54-0439. The system was manually integrated with the Facility's HENC and the MTGS to quantify neutron and gamma signals into plutonium mass. The FRAM detectors were moved to TA54-0438 in 2008 to prepare the TA54-0439 trailer for removal from Pad 10.~~

A.4.2.9 Pad 11

This asphalt pad is approximately 4 inches thick, measures approximately 478 ft long by 137 ft wide, and is sloped approximately 1 to 2% to the southeast. Storage dome 375 is located on the western portion of pad 11 and is used for storage of hazardous, mixed low level, and mixed transuranic waste. It measures approximately 300 ft long by 100 ft wide (*see* Figure 36 in Attachment N (*Figures*)). The building is an aluminum A-frame truss design that is anchored to a concrete ring wall. The dome is of modular construction utilizing a membrane or fabric covering. It is equipped with 14 personnel doors and two roll-up doors, one each at the east and west ends of the building. Ramped entrances allow for safe movement of container handling equipment and vehicle access. The High Energy Real-Time Radiography (HERTR) Unit is located on the eastern portion of Pad 11. The Unit is placed on a concrete pad with an approximate footprint of 50 by 50 ft. It consists of two structures, a portable control room and a re-locatable X-ray vault constructed of modular concrete walls and blocks for shielding. Waste containers are placed inside the vault on a turntable mounted to a mechanical cart. Once the waste is loaded on to the cart, the RTR operator, from within the control room, will electronically move the cart into the X-ray vault, close the vault door, and perform the RTR. This unit will provide X-ray examination of the contents of waste drums or SWBs. The high energy of the unit will allow more efficient characterization of TRU waste container and

minimize the opening and repackaging of waste containers that contain objects that the standard RTR unit could not penetrate.

Contingency Plan

Table D-2
TA-54 AREA G
Emergency Equipment

FIRE CONTROL EQUIPMENT

ABC and/or BC rated fire extinguishers are available at TA-54-8, TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, ~~TA-54-226~~, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412, and on Pads 1, 9 and 10.

Description of General Capabilities:

These portable, manually operated fire extinguishers may be used by any qualified employee in the event of a small fire. For larger fires, security personnel and the Los Alamos Fire Department (LAFD) are alerted.

Flame or smoke detection equipment and fire alarm pull stations will be located within structures at ~~TA-54-226~~, TA-54-229, TA-54-230, TA-54-231, and TA-54-232.

Dry-chemical fire suppression systems are available at TA-54-1027, TA-54-1028, TA-54-1030, and TA-54-1041.

A dry-pipe fire suppression system is available at TA-54-412.

Fire alarm pull stations are available at TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, ~~TA-54-226~~, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LAFD and security personnel. Security personnel and LAFD are also notified upon activation of the flame or smoke detectors.

Several fire hydrants are located in Area G. These fire hydrants will supply water at an adequate volume and pressure to satisfy the requirements of 40 CFR 264.32(d)

SPILL CONTROL EQUIPMENT

Spill control stations and/or portable spill kits are located at TA-54-8, TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, ~~TA-54-226~~, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412.

Each spill kit generally includes bags of absorbent and an inventory of tools and supplies.

COMMUNICATION EQUIPMENT

Alpha-numeric emergency pagers are given to employees working in the area.

Emergency paging system- loud speakers located throughout the site.

Evacuation alarm buttons are located at or near TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, ~~TA-54-226~~, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, TA-54-412, Pads 1, 9 and 10 and at various muster stations.

Additional equipment includes portable two-way radios and cellular telephones.

Description of General Capabilities:

Loud speakers, telephones and alarms are located throughout Area G. Paging telephones are equipped with public address capabilities. Evacuation alarms have horns mounted on telephone poles throughout Area G. The evacuation alarm is a is an audible alarm that can be heard throughout Area G. Employees can be notified of an emergency situation and appropriate response action through the use of a text message sent on the emergency alpha-numeric pagers. The emergency paging system can be utilized to alert workers of an emergency situation as well as appropriate response actions.

Closure Plans

1. Proposed language Change for Attachment G.6

Attachment G.6, Section 2.0

A description of the permitted unit can be found in Permit Attachment A (*Technical Area Unit Descriptions*). This section of the closure plan provides a description of the permitted unit which is located in the north-eastern portion of Area G and is comprised of an asphalt pad with ~~one~~ three structures (Building 412 (the Decontamination and Volume Reduction System (DVRS), the Mobile Visual Examination and Repackaging (MOVER), and support trailer for the MOVER) situated on it.

The irregularly-shaped asphalt pad is approximately 358 feet (ft) long and 213 ft wide or approximately 76,000 square feet. The pad, which is sloped 1% to 1.5% to the south and south-east for drainage consists of a four to six inch (in) layer of asphalt over the underlying base course overlying fill (minimum six inches of tuff). ~~The pad is sloped from 1% to 1.5% to the south and south-east for drainage (see Permit Attachment A for information concerning drain and piping system connected to Pad 9).~~ The pad has ~~two~~ three structures associated with it: ~~Dome 226 and Building 412 (DVRS); Dome 226 was decommissioned, dismantled, and removed in October, 2009~~ the MOVER; and the MOVER's support trailer. It was in these two structures that the sStorage of mixed waste occurs ~~red only on the Pad in Building 412.~~

Dome 226, which was decommissioned in October 2009, was located on the eastern portion of the permitted unit. The dome was approximately 286 ft long and 89 ft wide, was built of an aluminum framework of trusses covered with tension-fitted ultraviolet resistant, fire-retardant coated, polyester fabric anchored with bolts to the pad's concrete ring wall and had a surface area of about 22,300 square ft. The interior floor perimeter of the dome was surrounded with a 6-inch-high, 6-inch-wide asphalt curb and was equipped with personnel doors and a roll-up door on the south end for vehicle access. A ramp was located at the vehicle entrance to the dome, which allowed vehicles and container handling equipment to pass safely over the interior curb which prevented run-on into the dome. At the southern end of the dome was a drain connecting to the recessed sump in Pad 9's Dome 229. This fire protection drain system consists of a 10 in. line running southeast from where Dome 226 was located with secondary connecting drains from Domes 232 and 231. The purpose of this drain system was to provide additional fire water collection capacity in the event of an emergency. The sump and drain have ~~temporarily~~ been plugged to prevent storm water from entering the system at the drainage point. ~~Samples were collected and analyses of those samples are pending.~~

Building 412 is a one story building that is approximately 220 ft long by 60 ft wide or 13,200 square ft. This building is currently used for storage and volume reduction of bulky mixed waste. It consists of two structures: an internal primary confinement structure that houses mixed waste processing operations; and an external confinement building, which contains the primary confinement structure. The building itself provides protection from the elements and a temperature-controlled space for the internal structures and associated process equipment. There are roll-up vehicle-access loading doors on the north and south ends of the building and personnel access doors on the north, east, and south for support of operations. The floor and foundation of the building are concrete and the floor is painted with an epoxy sealant. The concrete slab is above grade to direct potential run-on away from the building. The floor in the building is sloped to a sump that has a grating cover to provide traction and a level working surface.

The primary confinement structure is housed entirely within the building and consists of interconnected enclosures. The primary confinement is approximately 150 ft long by 50 ft wide by 16 ft high and sits directly on the sealed concrete floor. The primary confinement interlocks in a self supporting steel framework that can be assembled into multiple configurations. It is equipped with both large roll-up doors so that personnel, equipment, and material can access the primary confinement and move from one enclosure to the next. Equipment in the enclosures includes gloveboxes, dismantling tools (e.g., power saws, hammers, pry bars), shearing and bailing equipment. Building 412 contains fire protection piping as well as heating and ventilation ducting.

The MOVER is a 10 x 40-ft transportainer that contains a glovebox utilized to visually examine and repackage the contents of high activity transuranic waste drums. The MOVER unit is a certified DOT 7A Type A Container (CPC 1998). The MOVER is classified as a Type II (000) structure per NFPA 220, Standard on Types of Building Construction. Interior walls are constructed as double-walled for containment purposes with sealed and polished stainless steel interior for ease of decontamination. The outside walls of the MOVER are constructed of carbon steel. The walls are insulated with cellulose, which is manufactured under Consumer Product Safety Commission performance criteria mandating fire standards. The interior and exterior of the MOVER are non-flammable metal with steel stud construction. All electrical systems are designed to the National Electrical Code.

The MOVER is comprised of 3 rooms consisting of a control room, a glovebox operations room, and the drum entry room. The control room provides space for personnel entry, a portal radiation monitor, and system controls. There are doors between each section to isolate each room. Doors are kept closed during the glovebox operations to maintain negative pressure in the unit. Airflow direction is maintained so that air flows from areas of low contamination to areas of potentially higher contamination before being exhausted through the HEPA ventilation system. The unit has continuous air and fixed head monitors, intercom system, fire protection system, HVAC, and lighting.

The glovebox operation room contains the glovebox, drum lifter, HEPA filters and differential pressure-monitor panel. The drum entry room is located at one end of the trailer. This room provides space for four standard 55-gallon drums on transport dollies. Transuranic waste drums are bagged into the glovebox and opened. The contents are examined and then bagged out into another drum(s). Nonconformance items are identified and bagged out into a third drum. The empty parent drum and newly filled drum(s) are then removed from the MOVER unit. The glovebox is 12feet long, 2.75 feet high and the end is 2.3 feet wide at the top. The glovebox component is fabricated from Type 304L stainless steel and includes a HEPA ventilation system.

The MOVER support trailer is a 8 x 20 ft metal trailer that houses ventilation blowers and monitored discharge system, the fire suppression system, and electrical distribution system for the MOVER.

The permitted unit has been used for the storage of both liquid and non-liquid mixed waste and has stored the following waste types: solidified inorganic solids; leached process residues; salts and cement paste; ash; dewatered aqueous sludge; chemical treatment sludge; soils; combustible debris (e.g., plastics, rubber, laboratory trash, building debris); and heterogeneous debris.

Attachment G.6, Section 5.3.1

Building 412 (and its ancillary equipment), the MOVER, and its support trailer will be removed before the assessment.

Attachment G.6, Section 5.3.2

All surfaces, structures, and related equipment that will be reused by the Facility will be decontaminated in accordance with Permit Section 9.4.3.1. This includes: the gloveboxes, enclosure components, ~~and the~~

cabinets in Building 412; bailing equipment; portable air monitors; all electronic devices and tools; and spill cleanup equipment containers in Building 412, the MOVER, and the support trailer. This list of equipment requiring decontamination may be revised during the review and assessment which would result in an amendment to this closure plan.

The quantity of the wash solution will be minimized by dispensing from buckets, spray bottles, or other types of containers. The ~~collection drain in Dome 226 as well as the~~ sump in the DVRS building will be plugged ~~during before~~ decontamination activities begin to ensure that none of the wash water solution enters the drain on the floor. Cloths, or other absorbent cleaning devices, will not be reused to wipe down the equipment after being wetted in the wash solution or after spraying solution onto the equipment. Portable berms or other such devices (e.g., absorbent socks, plastic sheeting, wading pools, existing secondary containment) will collect excess wash water and provide containment during the decontamination process.

Attachment G.6, Section 6.0

One wipe sample will be collected from each piece of decontaminated equipment at the permitted unit.

In compliance with Permit Section 9.4.7.1.i, this closure plan will ensure the collection of wipe samples from the walls, the floor, and the ceiling of the MOVER for a minimum of five wipe samples.

In compliance with Permit Section 9.4.7.1.ii-a, this closure plan will ensure the collection of soil samples at the following locations:

- a. one sample every 250 square feet in the loading/unloading zone outside the MOVER (see Permit Section 9.4.7.1.ii(1));
- a.b. one sample every 900 square feet of the permitted unit for a total of 64 soil samples (see Permit Section 9.4.7.1.ii-a(2));
- b.c. one sample just off the southeast edge of the permitted unit where stormwater runs off the pad (see Permit Section 9.4.7.1.ii-a(3));
 - 1. if the soil sample collected at the southeast edge of the permitted unit detects hazardous constituents, ten samples shall be collected along the swale between the permitted unit and Pad 10 (see Permit Section 9.4.7.1.ii-a(8)) (see Figure G.6-2).
- e.d. one sample at the rock check dam at the far southeast end of Area G where stormwater discharges (see Permit Section 9.4.7.1.ii-a(3));
 - 1. if the soil sample collected at the rock check dam detects hazardous constituents, ten samples shall be collected along the swale between the permitted unit and Pad 10 (see Permit Section 9.4.7.1.ii-a(8)) (see Figure G.6-2).
- d.e. one sample at the floor drain at the south end of the permitted unit underlying the removed Dome 226 and one sample at the sump in Building 412 (see Permit Section 9.4.7.1.ii-a(5)); and
- e.f. one sample at all the joints and intersections of the ten inch fire protection drain line running southeast and then east toward Pad 9 TWISP domes (see Permit Section 9.4.7.1.ii-a(7)).

Figures G.6-1 and G.6-2 illustrate these respective sampling locations at the permitted unit.

If there is liquid found in either the drain lines or the sumps at the time of sample collection the assessment, liquid samples will be collected in accordance with Section 6.2.1 of this closure plan.

Figure G.6-1

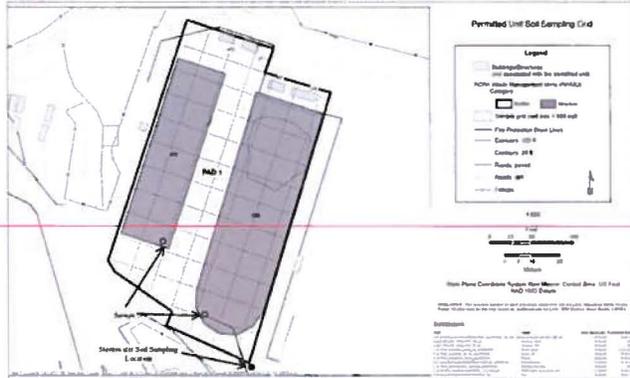


Figure G.6-1: Technical Area 54, Area G, Pad 1 Outdoor Container Storage Unit Soil Sampling Grid and Additional Sampling Locations

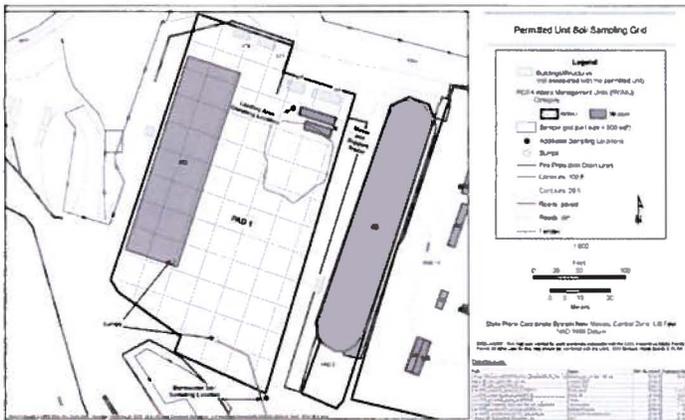


Figure G.6-2

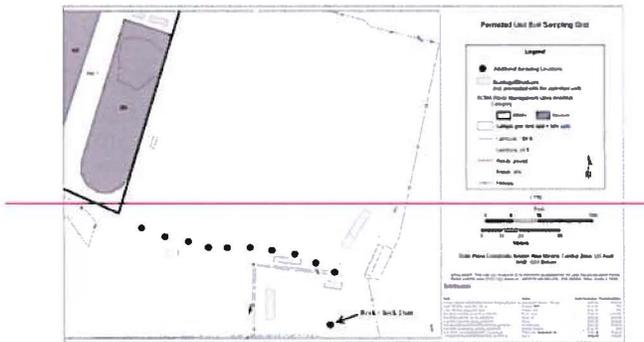
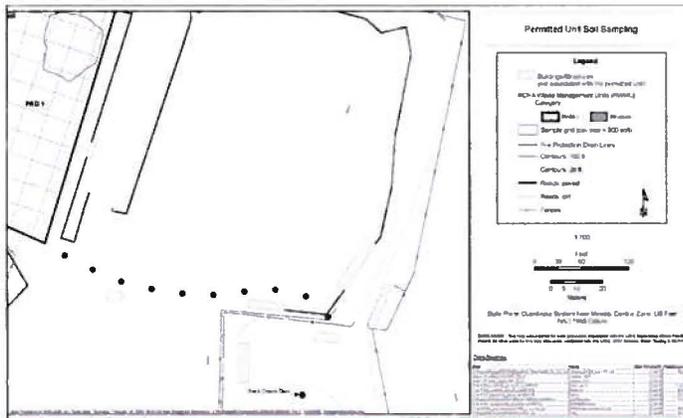


Figure G-6-3 Tracked Area 54, Area G, Pad 10 Outdoor Customer Storage Unit Drainage Sampling



2. Proposed language Changes for Attachment G.11

Attachment G.11, Section 2.0

TA54-0439, FRAM—The Fixed Energy Response Function Analysis with Multiple Efficiency (FRAM) is a single high purity germanium detector with FRAM software to evaluate the isotopic composition of waste drums from gamma measurements. Two systems were housed in trailer TA54-0439. The system was coordinated with the High Efficiency Neutron Counter (HENC) and the Mobile Tomographic Gamma System (MTGS) to quantify neutron and gamma detections into plutonium mass data. The FRAM detectors were moved to TA54-0438 in 2008 to prepare the TA54-0439 trailer for removal from Pad 10.

TA-54-XXX1, Shed—this shed has not been used for waste storage or characterization.

TA 54-0547, Super High Efficiency Neutron Coincidence (SuperHENC) counter - Trailer TA-54-0457 houses a high efficiency neutron counter designed to handle large waste containers. It is designed to provide a passive neutron and gamma measurement of large transuranic waste containers like standard waste boxes. The SuperHENC will support the Facility's Transuranic Waste Characterization Project and Central Characterization Project operations beginning in 2010.

Attachment G.11, Section 5.2.2

An assessment of the permitted unit's physical condition will be conducted in accordance with Permit Section 9.4.6.2. The assessment will include inspection of the floors, walls, and ceilings of ~~the FRAM,~~ the RTR2, the LANL HENC, the MCS HENC, the SuperHENC, the storage trailers (545 & 546), and the asphalt pad for any existing cracks or conditions that indicate a potential for, or an actual, release of constituents.

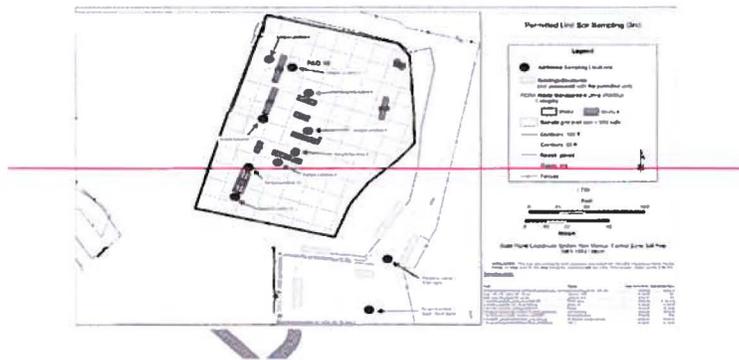
Attachment G.11, Section 5.3.2

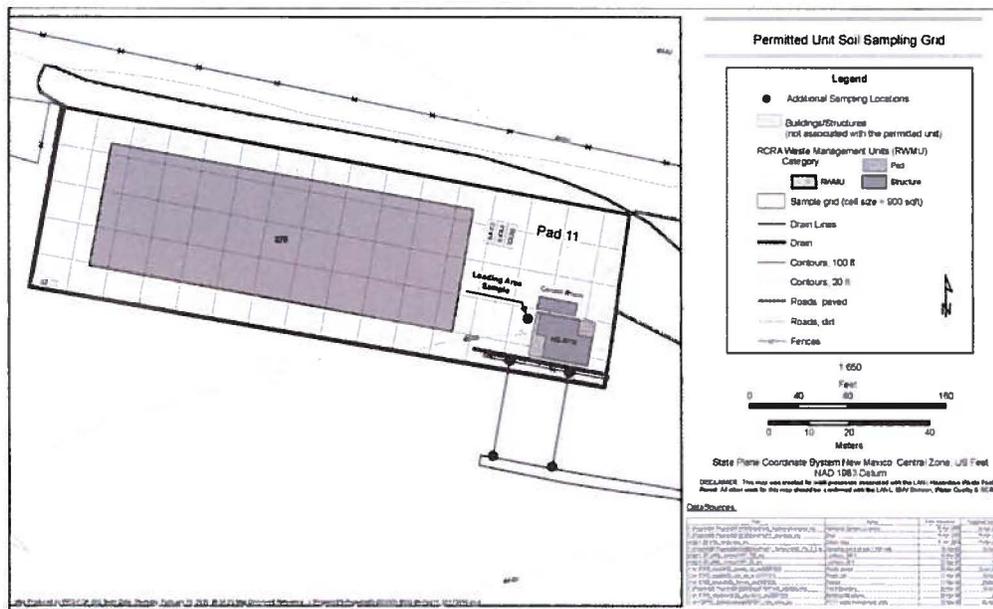
All structures and related equipment that will be reused by the Facility will be decontaminated (see Table G.11-6) in accordance with Permit Section 9.4.3.1. This includes ~~the FRAM,~~ the RTR2, the LANL HENC, the MCS HENC, the SuperHENC, and the two storage trailers (545 & 546).

Attachment G.11, Section 6.1

One wipe sample will be collected from each piece of decontaminated equipment at the permitted unit. In compliance with Permit Section 9.4.7.1.i, this closure plan will ensure the collection of at least one wipe sample from each wall, floor, and ceiling of ~~the FRAM,~~ the RTR2, the LANL HENC, the MCS HENC, the SuperHENC, and the two storage trailers (545 and 546) for a total of 36 samples.

Figure G.11-1





4. Proposed language Changes for Attachment G.15

Attachment G.15, Section 2.0

Canopy 216, ~~decommissioned in March 2010, i~~was 33 ft wide by 120 ft long with an area of approximately 3,960 ft². The canopy consisted of a rigid aluminum frame anchored to a sloped asphalt pad which supported a tensioned membrane; ~~the membrane, on the sides of the structure, can be rolled down to provide protection from the weather.~~ All waste containers that were stored in Canopy 216, including gas cylinders, ~~are~~were stored on pallets or ~~are~~were otherwise elevated (e.g., metal supports, wooden timbers, baskets) to prevent contact with accumulated liquids. All liquid wastes ~~are~~were stored on secondary containment pallets.

Attachment G.15, Section 6.1

An assessment of the permitted unit's physical condition will be conducted in accordance with Permit Section 9.4.6.2. The assessment will include inspecting the floors, walls, and ceilings of storage buildings 68, 69, and 70, Storage Shed 31, and Building 39, the floors in Dome 215, ~~where Canopy 216 was loctaed,~~ and covered storage pads 32, 35, 36, and 58, and the floor of the permitted unit for any existing cracks or conditions that indicate a potential for release of constituents.

Attachment G.15, Section 5.3.1

The following structures and equipment will be removed before the structural assessment: Dome 215 ~~and Canopy 216;~~ equipment related to the dome and canopy (e.g., tensioned-fabric membranes, aluminum beams, trusses, ancillary equipment); and Building 39.

Figure G.15-1

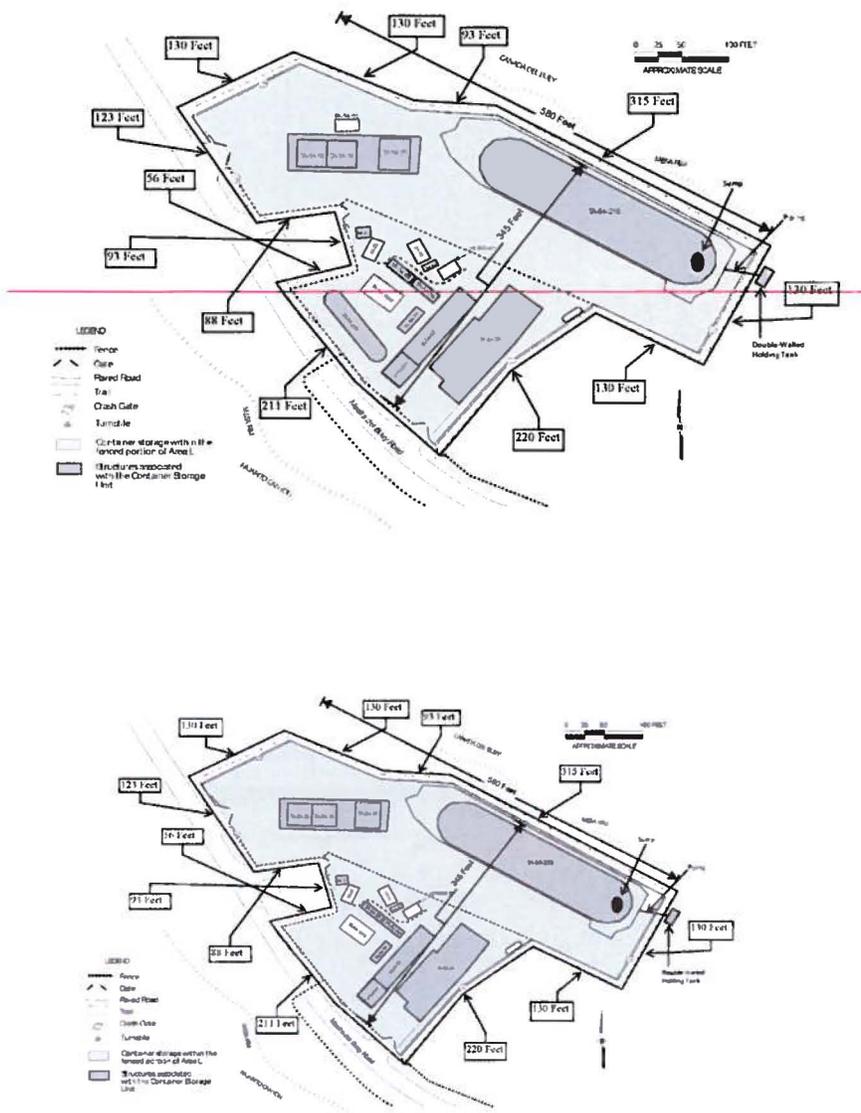


Figure G.15-1: Technical Area 54, Area L, Outdoor Container Storage Unit Sampling Grid and Dimensions

Figure G.15-2

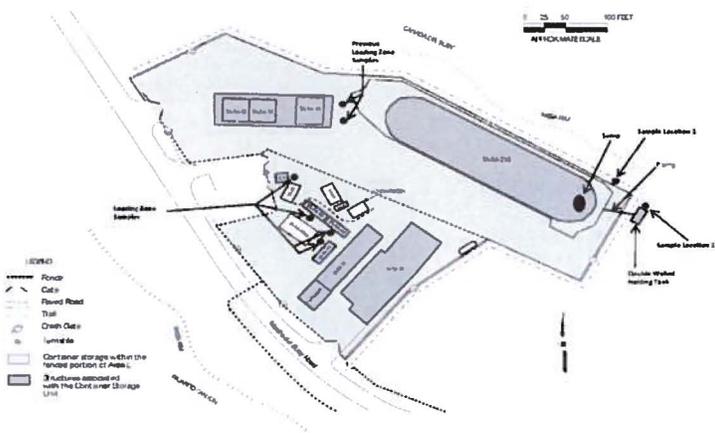
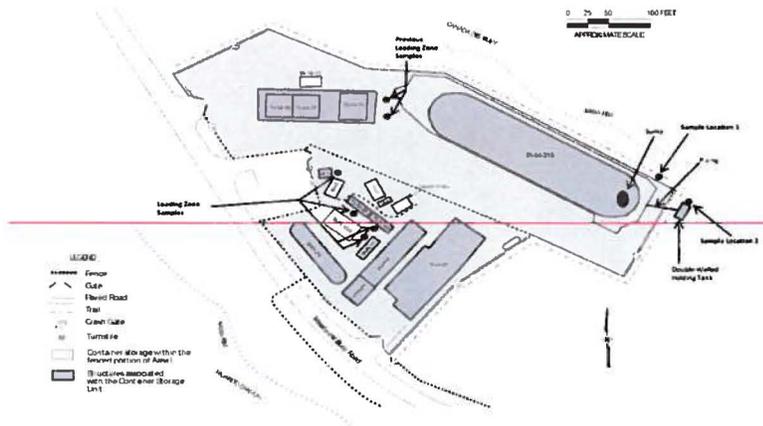


Figure G.15-2: Technical Area 54, Area L, Outdoor Container Storage Unit Additional Soil Sampling Locations

Attachment J, Table J-1

TA-16-399	X01*		Burn Tray Total square footage - 64 Interim Status Unit not authorized to treat hazardous waste and undergoing closure	Outdoor (associated with an open burn unit)
TA-36-8	X01**	2000 lbs/detonation	Near Structure TA-36-8 Interim Status Unit	NA
TA-39-6	X01**	1000 lbs/detonation	Near Structure TA-39-6 Interim Status Unit	NA
TA-39-57	X01**	1000 lbs/detonation	Near Structure TA-39-57 Interim Status Unit	NA
TA-50-69 Indoor	S01	1,500 gal	Includes Rooms 102 and 103. Total square footage – 2,680	Indoor
TA-50-69 Outdoor Pad	S01	30,000 gal	Total square footage – 3,240	Outdoor (not associated with a regulated unit)
TA-54 “G”	D80	NA	Material Disposal Area Unit not permitted to receive hazardous waste	Regulated unit
TA-54 Area G Container Storage Unit (below ground)	S99	4,950 gal	Includes shafts 145 and 146 Wastes removed and unit undergoing closure, closure certification incomplete	NA
TA-54 Area G Pad 1	S01	502,920 gal	Includes building TA-54-412 (DVRS) and <u>MOVER and support trailer Storage Dome 226</u> Total square footage – 89,500	Outdoor (associated with a regulated unit)

TA-54 Area G Pad 3	S01	213,840 gal	Includes Storage Dome 48 Total square footage – 19,300	Outdoor (associated with a regulated unit)
TA-54 Area G Pad 5	S01	623,480 gal	Includes Storage Domes 49 and 224; Storage Sheds 144, 145, 146, 177, 1027, 1028, 1030, and 1041 Pad 5 is a consolidation of former Pads 5, 7, and 8. Total square footage – 59,900	Outdoor (associated with a regulated unit)
TA-54 Area G Pad 6	S01	597,300 gal	Includes Storage Domes 153 and 283; Transportainer 491; and Storage Sheds 486, 522, 523, and 492. Total square footage – 68,300	Outdoor (associated with an regulated unit)
TA-54 Area G Pad 9	S01	1,446,720 gal	Includes Storage Domes 229, 230, 231, and 232; Transportainer 362; and Storage Sheds 57 and 484. Total square footage – 158,000	Outdoor (associated with a regulated unit)
TA-54 Area G Pad 10	S01	159,770 gal	Includes Transuranic (TRU) Waste Characterization Facilities: TA-54-0439 (FRAM) , TA-54-0547 (SuperHENC) , TA-54-0497 (RTR2), TA-54-0498 (LANL HENC), TA-54-0506 (MCS HENC), TA-54-0545 and 546 (Storage trailers), TA-54-0365 (Office Building Formerly MTGS), TA-54-0483 (Source Storage Trailer), and TA-54-1059 (Storage Trailer) Pad 10 is a consolidation of former Pads 2 and 4. Total square footage – 120,000	Outdoor (associated with a regulated unit)

TA-54 Area G Pad 11	S01	682,440 gal	Includes Storage Dome 375 and HERTR Total square footage – 30,000	Outdoor (associated with a regulated unit)
TA-54 Area G Storage Shed 8	S01	11,880 gal	Also referred to as TA-54-8 Total square footage - 698	Indoor
TA-54 Area G TA-54-33	S01	108,240 gal	Also referred to as Drum Prep Facility Total square footage – 5,000	Indoor
TA-54 “H”	D80	NA	Material Disposal Area H Unit not permitted to receive hazardous waste	Regulated unit
TA-54 “L”	D80	NA	Material Disposal Area L Unit not permitted to receive hazardous waste	Regulated unit
TA-54 Area L Container Storage Unit (below ground)	S99	600 gal	Includes shafts 36 and 37 Wastes removed and unit undergoing closure, closure certification incomplete	NA
TA-54 Area L Outdoor Pad	S01	407,880 gal	Includes all area within fence-line except limited administrative areas. Includes Storage Sheds 31, 68, 69, and 70; Storage Pads 32, 35, 36, and 58; Building 39; Storage Dome 215 (former Area 1); and Canopy 216 (former Area 7). Total square footage – 28,900	Outdoor (associated with a regulated unit)
TA-54-38 West Indoor	S01	3,740 gal	Includes High Bay and Low Bay Total square footage – 4,060	Indoor
TA-54-38 West Outdoor Pad	S01	7,920 gal	Includes loading dock and Pad surrounding Total square footage – 37,900	Outdoor (not associated with a regulated unit)

Attachment M

Permit Attachment	Permitted Unit	Type of Unit	Structures Associated with the Permitted Unit	Pre-Closure Subtotal	Decontamination Subtotal	Sampling and Analysis Subtotal	Cost Estimate Total
G.1	TA-3-29	Indoor Storage (Building)	Room 9010 Room 9020 Room 9030	\$248,742.75	\$107,463.31	\$69,217.86	\$425,423.92
G.4	TA-50-69	Indoor Storage (Building)	Rooms 102 & 103	\$165,495.04	\$104,907.65	\$58,748.38	\$329,151.07
G.5	TA-50-69	Outdoor Storage (Pad)	Transportainers X & X	\$172,019.09	\$106,947.37	\$57,747.31	\$336,713.77
G.6	TA-54 Area G Pad 1	Outdoor Storage (Pad)	Dome 226 & Building 412 and <u>MOVER/support trailer</u>	\$1,120,393.23	\$1,030,100.10	\$165,777.76	\$2,316,271.09
G.7	TA-54 Area G Pad 3	Outdoor Storage (Pad)	Dome 48	\$1,022,042.72	\$180,427.88	\$64,550.88	\$1,267,021.48
G.8	TA-54 Area G Pad 5	Outdoor Storage (Pad)	Domes 49 & 224	\$1,086,550.63	\$1,100,981.24	\$237,949.51	\$2,425,481.38
G.9	TA-54 Area G Pad 6	Outdoor Storage (Pad)	Domes 153 & 283	\$1,034,430.36	\$1,088,924.52	\$156,468.87	\$2,279,823.75
G.10	TA-54 Area G Pad 9	Outdoor Storage (Pad)	Domes 229, 230, 231, 232, Transportainer 362, Permacon [®] , and Storage Sheds 57 & 484	\$1,043,873.66	\$2,217,640.20	\$273,485.85	\$3,534,999.71
G.11	TA-54 Area G Pad 10	Outdoor Storage (Pad)	<u>FRAM, SuperHENC, RTR2, LANL-HENC, MCS-HENC, and Storage Trailers 545 & 546</u>	\$1,079,783.27	\$352,750.36	\$225,925.22	\$1,658,458.85

G.12	TA-54 Area G Pad 11	Outdoor Storage (Pad)	Dome 375 and HERTR	\$1,026,075.12	\$841,283.71	\$148,069.73	\$2,015,383.56
G.13	TA-54 Area G Storage Shed 8	Indoor (Storage Shed)	n/a	\$1,019,076.30	\$73,356.79	\$56,395.01	\$1,148,828.10
G.14	TA-54 Area G Building 33	Indoor (Building)	n/a	\$1,021,176.03	\$338,644.43	\$96,852.30	\$1,456,692.76
G.15	TA-54 Area L within the Fence line	Outdoor (Pad)	Dome 215, Canopy 216 , Storage Sheds 31, 68, 69, & 70, Building 39 & containment pad, & covered Storage Pads 32, 35, 36, & 58	\$1,575,139.00	\$690,199.13	\$289,158.84	\$2,554,496.97
G.16	TA-54 West Building 38	Indoor (Building)	High Bay & Low Bay	\$129,710.50	\$69,727.80	\$71,345.23	\$270,783.53