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Department of Energy  
Los Alamos Area Office  
Albuquerque Operations Office  
Los Alamos, New Mexico 87544



APR 08 1994

Mr. Joel Dougherty  
Hazardous Waste Management Division  
RCRA Enforcement Branch (ALONM)  
Environmental Protection Agency, Region 6  
1445 Ross Ave., Suite 1200  
Dallas, TX 75202-2733

Dear Mr. Dougherty:

This letter transmits the final versions of the Los Alamos National Laboratory (LANL) deliverables and reports prepared in response to the following milestones:

- AR 100 Annual Report
- ATS 100 Program Management Plan for Generic Development, Design, Permitting, Construction, and Operation of Low-Level Mixed Waste (LLMW) Treatment Skids
- GAS 100 Gas Cylinder Work-Off Plan
- IFLL 100 Preconceptual Study to Identify Required LLMW Storage Upgrades
- HLL 100 Characterization Plan for Historical LLMW
- OSS 100 Feasibility of Diversified Scientific Services, Inc., Treatment
- WM 100 Waste Minimization Plan
- WM 200 Waste Minimization Annual Work Plan

The Department of Energy's (DOE) submittal of these documents to the Environmental Protection Agency (EPA) is required to ensure compliance with the Federal Facilities Compliance Agreement (FFCA). This FFCA has just been signed addressing hazardous and radioactive mixed wastes pursuant to the Resource Conservation and Recovery Act. The FFCA specified a due date for compliance with the referenced milestones within 30 days of the signature date (April 14, 1994).

We have prepared these documents to be consistent as possible in appearance and format. It is our expectation that this format would be used for all future deliverables, notices and reports prepared pursuant to the FFCA. Please advise us as to whether this format is acceptable or whether changes are desired.

An initial Annual Report was prepared and submitted herewith (AR 100). While it complies with the FFCA Appendix B requirements by providing information on the current status of implementation of waste minimization efforts (WM 100), treatment skid development, design, and construction (ATS 100), and the availability/applicability of off-site treatment capacity for low-level mixed wastes (OSS 100), it also provides discussion on

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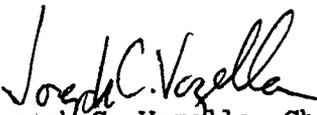
the status of all other FFCA milestones, as well as an explanation of the interrelationships among milestones. It is our expectation that this format would be used for all future annual reports.

Additionally, as you have discussed with my staff, changes and updates to the waste inventory information in the FFCA Appendix B enclosures which have occurred since their development will be included in the AR 100 report. Thereafter, the inventory information will be updated and reported to you annually in the AR 100 report, and modifications to the FFCA will be made, if necessary.

Notifications of the completion of milestones HW 100, HW 300, LD 100, and CAI 100 are being sent to you concurrently under separate cover.

Supporting documentation will be retained in DOE and LANL files to support the FFCA, and will be made available to EPA and the State of New Mexico upon request. If you have any questions regarding this activity, please contact Jon Mack of my staff at (505) 665-5026.

Sincerely,

  
Joseph C. Vozella, Chief  
Environment, Safety, and Health  
Branch

LESH:7JM-114

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FFCO

**OSS 100**  
**FEASIBILITY OF TREATMENT OF**  
**LOS ALAMOS NATIONAL LABORATORY**  
**LOW-LEVEL MIXED WASTE AT**  
**DIVERSIFIED SCIENTIFIC SERVICES, INC.**

Final

Submitted in partial fulfillment of the  
requirements of the Federal Facility  
Compliance Agreement addressing hazardous  
and mixed waste under the Resource  
Conservation and Recovery Act

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## PREFACE

This report on *Feasibility of Treatment of Los Alamos National Laboratory (LANL) Low-Level Mix Waste at Diversified Scientific Services, Inc. (DSSI) (OSS 100)* is being submitted to the United States Environmental Protection Agency (EPA) by the Department of Energy (DOE) and Los Alamos National Laboratory (LANL) in fulfillment of DOE's commitment to EPA under the Federal Facility Compliance Agreement (FFCA) developed pursuant to the Land Disposal Restrictions (LDR) requirements of the Resource Conservation and Recovery Act (RCRA), as promulgated in 40 CFR Part 268. This is provided as a report in compliance with Milestone OSS 100 in Appendix B of the FFCA.

Off-site treatment is the treatment of waste at another location, outside the confines of LANL. This includes commercial facilities, as well as other DOE sites. At the present time, treatment of LANL waste at other DOE sites is unavailable due to the limited number of treatment facilities in operation, the incompatibility of LANL waste with the treatment processes, and other regulatory barriers. DOE has surveyed 138 commercial treatment facilities. An opportunity for treating some of LANL's low-level mixed waste (LLMW) at a commercial facility has been identified. This facility is available to treat liquid mixed waste. The facility does not accept solid or gaseous mixed waste for treatment. LANL has identified a possible facility to treat liquid mixed waste including ignitable liquids, spent solvents and contaminated chemical products.

Off-site treatment facilities have waste acceptance criteria that limit both the chemical and radionuclide content of the waste to ensure their permit conditions are not exceeded. The waste acceptance criteria and the competition with other facilities for capacity limits the wastes that can be shipped. The FFCA outlines the actions necessary for LANL to begin pursuing treatment of LLMW at off-site facilities. A review of the requirements and costs for packaging, transportation, and treatment at the identified facility has been performed as required by Appendix B, Section D.1, of the FFCA.

The purpose of this report is to examine the feasibility of sending selected LLMW to DSSI and to clarify what LANL must accomplish to maintain compliance with regulations and DSSI requirements. The report concludes that treatment of selected LLMW is feasible at DSSI provided specific activities outlined in the report are completed. These activities include a determination of the fate of the treatment residues, an inspection trip to DSSI and the recommended commercial disposal facility, a determination of whether to bulk the wastes, selection of specific wastes to send to DSSI for treatment, and negotiating an agreement with DSSI.

The following table discusses the LDR FFCA milestone that related to OSS 100 and the nature of that inter-relationship:

<b>PRIMARY MILESTONE</b>	<b>RELATED MILESTONE</b>	<b>NATURE OF INTERRELATIONSHIP</b>
OSS 100	HLL 100	Decisions on waste shipments to the off-site treatment/disposal facilities identified in this report will utilize applicable information collected pursuant to the waste characterization plan.
	HLL 200	Information developed in the feasibility report will be reviewed for applicability to prioritizing LLMW treatment.

PRIMARY MILESTONE	RELATED MILESTONE	NATURE OF INTERRELATIONSHIP
	HW 300	Information developed in the report on the feasibility of treatment of waste at off-site treatment/disposal facilities will be reviewed to determine whether any modifications to the RCRA MW permit application are required.
	OSS 200	The report on the feasibility of treatment of waste at off-site treatment/disposal facilities will provide the basis for developing the annual action plan for off-site shipment of wastes.

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## LIST OF ACRONYMS

ACIS	Automated Chemical Inventory Systems
AET	Applied Environmental Technologies
ALARA	As Low As Reasonably Achievable
ATLAS	Advanced Testing for Actinide Separations
BAT	Best Available Technology
BDAT	Best Demonstrated Available Technology
BEJ	Best Engineering Judgment
BIF	Boiler and Industrial Furnace
CAI	Controlled-Air Incinerator
CAMs	Continuous Air Monitors
CFC	Chlorinated Solvents
CFR	Code of Federal Regulations
CLS	Analytical Chemistry Group
CWM	Chemical Waste Management, Inc.
CWDR	Chemical Waste Disposal Request
DOE	U.S. Department of Energy
DOE/AL	DOE Albuquerque Operations Office
DOT	Department of Transportation
DSSI	Diversified Scientific Services, Inc.
EPA	U.S. Environmental Protection Agency
ERC	Earth Resources Corporation
ES&H	Environment, Safety, and Health
FERC	Federal Energy Regulatory Commission
FFCA	Federal Facility Compliance Agreement
FY	Fiscal Year
GCP	Gas Cylinder Project
GSA	General Services Administration
HEPA	High Efficiency Particulate Air Filter
HSWA	Hazardous and Solid Waste Amendments
HWFP	Hazardous Waste Facility Permit
HWTF	Hazardous Waste Treatment Facility
ICP	Inductively Coupled Plasma
IPC	Industrial Partnership Center
JCI	Johnson Control Incorporated
KOP	Knowledge of Process
LAMPF	Los Alamos Meson Physics Facility
LANL	Los Alamos National Laboratory
LAO	LANL Assessment Office
LDR	Land Disposal Restriction
LLMW	Low-Level Mixed Waste
LLW	Low-Level Radioactive Waste
LP	LANL Procedures
MSDS	Material Safety Data Sheet
MWRSF	Mixed Waste Receiving and Storage Facility
NEPA	National Environmental Policy Act
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NMED	New Mexico Environmental Department
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission

## LIST OF ACRONYMS

(Continued)

PPAC	Pollution Prevention Awareness Campaign
PRD	Program Required Document
PTS	Project Tracking System
PWA	Process Waste Assessments
QA	Quality Assurance
QAP	Quality Assurance Plan
RCRA	Resource Conservation and Recovery Act
R&D	Research and Development
R&M	Redistribution and Marketing Center
RES	Rollins Environmental Services
RMMA	Radioactive Material Management Area
RSWD	Radioactive Solid Waste Disposal Record
SOP	Standard Operating Procedure
SSP	Site Specific Plans
SWDA	Solid Waste Disposal Act
TA	Technical Area
TCPLP	Toxicity Characteristic Leaching Procedure
TRU	Transuranic
TSCA	Toxic Substance Control Act
TSDF	Treatment, Storage, or Disposal Facility
UBC	Uniform Building Code
UL	Underwriters Laboratories
ULISSES	Uranium Line for Special Separation Sciences
WAC	Waste Acceptance Criteria
WBS	Work Breakdown Structure
WIPP	Waste Isolation Pilot Plant
WMC	Waste Management Coordinator
WMPO	Waste Minimization Program Office
WPF	Waste Profile Form

**OSS 100**  
**FEASIBILITY OF DSSI TREATMENT**

**1.0 INTRODUCTION**

One off-site commercial company with mixed-waste treatment capability is Diversified Scientific Services, Inc. (DSSI), a subsidiary of Chemical Waste Management, Inc. (CWM), located near Oak Ridge, Tennessee. DSSI has been identified to have the potential capability to treat certain LANL low-level mixed wastes (LLMW). LANL has an existing contract with CWM and could access DSSI through a modification to the existing LANL/CWM contract. Activities being conducted under the Milestone HLL 100 characterize LLMW that could potentially be treated at DSSI. The LLMW will be characterized through knowledge of process (KOP) first, then remaining wastes that cannot be characterized through KOP will be sampled and analyzed. Radionuclide(s) content will also be identified during the LLMW characterization project. For details on the LLMW characterization plan, refer to FFCA Milestone report HLL 100, which is delivered concurrently with this report.

DSSI is operating under interim status. DSSI is working toward, and should soon have all federal and state permits and approvals required for commercial treatment and disposal of a wide variety of liquid LLMWs. DSSI operates a commercial process based on an industrial boiler for treatment of wastes (by combustion) with simultaneous generation of saleable electricity.

DOE recognizes that commercial offsite treatment/disposal options are potentially viable for some LLMWs. In order to facilitate the offsite option, DOE is issuing general guidance for preparation of petitions for exemptions from the 5820.2A "Radioactive Waste Management"(i.e. release of radioactive waste) DOE-facility disposal requirement.

The purpose of this report is to determine the feasibility of sending selected LLMW to DSSI, a commercial off-site treatment and disposal facility, and to clarify what LANL must do to maintain compliance with regulations and DSSI requirements. Section 2.0 contains a discussion of the DSSI organization, facility, process capabilities, and authority to receive, treat, and dispose of low-level and mixed waste forms. Section 3.0 contains the plan for use of DSSI for treatment and disposal of LANL wastes. Included in the plan are sections that discuss DOE requirements for shipment, treatment, and disposal of treatment residues. Sections 3.3 and 3.4 contain a determination of LANL waste forms that can be sent to DSSI. Section 3.5 contains a brief discussion of costs. Section 3.6 contains an estimated schedule for activities prior to and including shipment of wastes to DSSI for treatment and disposal.

**2.0 DSSI CAPABILITIES**

DSSI capabilities are outlined in the following sections on operating authority and engineering design of the treatment process. As stated previously DSSI is currently operating under interim status and expects to receive the appropriate permits in the near future.

**2.1 Operating Authority**

DSSI operates a commercial process based on an industrial boiler for treatment of wastes. The process and associated support equipment and facilities are approved and permitted for operation by several state and federal regulatory agencies (copies of most of the approvals are contained in the appendixes). These

approvals and permits enable DSSI to accept, store, treat, and dispose of many types of liquid mixed wastes. Approvals and permits for the DSSI operation include the following:

- U. S. Environmental Protection Agency(EPA), National Emission Standards for Hazardous Air Pollutants (NESHAP) approval for construction and operation (Appendix B). This permit specifies emission limits for radionuclides, offgas sampling provisions, and emissions reporting requirements.
- EPA, boiler and industrial furnace (BIF) operating permit (pending). DSSI is operating under Interim Status. There is no final date on when it will receive its operating permit. The operating permit is expected to limit the process throughput of certain hazardous wastes (hazardous waste codes D004 through D017 - see Table 3.3-2). These wastes would still be handled by DSSI but not at the rate of other permitted wastes.
- Federal Energy Regulatory Commission (FERC), small power production facility permit.
- State of Tennessee, Department of Health and Environment, Part B permit for storing and recycling of hazardous wastes (Appendix C). This permits lists hazardous waste types, by EPA hazardous waste number, and total amount of all hazardous wastes that can be received, stored, and recycled as boiler fuel at DSSI.
- State of Tennessee, Department of Health and Environment, radioactive material license (Appendix D). This license authorizes DSSI to receive, possess, and transfer the listed radionuclides for the use listed for each radionuclide. The permitted uses are as a constituent of boiler fuel and as analytical/calibration sources.
- State of Tennessee, Department of Health and Environment, permit to construct or modify an air-contaminant source (Appendix E). This permit allows startup operation, and other related activities necessary to prepare and test the process prior to receiving the final operating permit. The permit specifies maximum heat release for the boiler, allowable boiler fuels, minimum boiler operating temperature, emission limits for particulate, HCl, Cl<sub>2</sub>, and HF, and emissions reporting requirements.
- State of Tennessee, Department of Conservation, National Pollutant Discharge Elimination System (NPDES), storm water runoff permit. This permit addresses only rain water that might come into contact with stored waste containers. The DSSI industrial boiler does not generate a liquid blowdown and thus does not require consideration in the NPDES permit.

## **2.2 Engineering Description of Treatment Process**

The DSSI industrial boiler process is described in the following two sections.

### **2.2.1 Waste Feed Preparation Line**

Unit operations and unit processes for the current arrangement of DSSI's feed preparation line are illustrated in Figure 2.2-1. The feed-preparation line is optimized for accepting and remotely handling drummed plastic scintillation vials packed in vermiculite. The waste feed preparation line is scheduled for major modifications to increase flexibility, reliability, and maintainability. However, the basic concept of the feed preparation line will likely remain similar to the current arrangement, which works as follows.

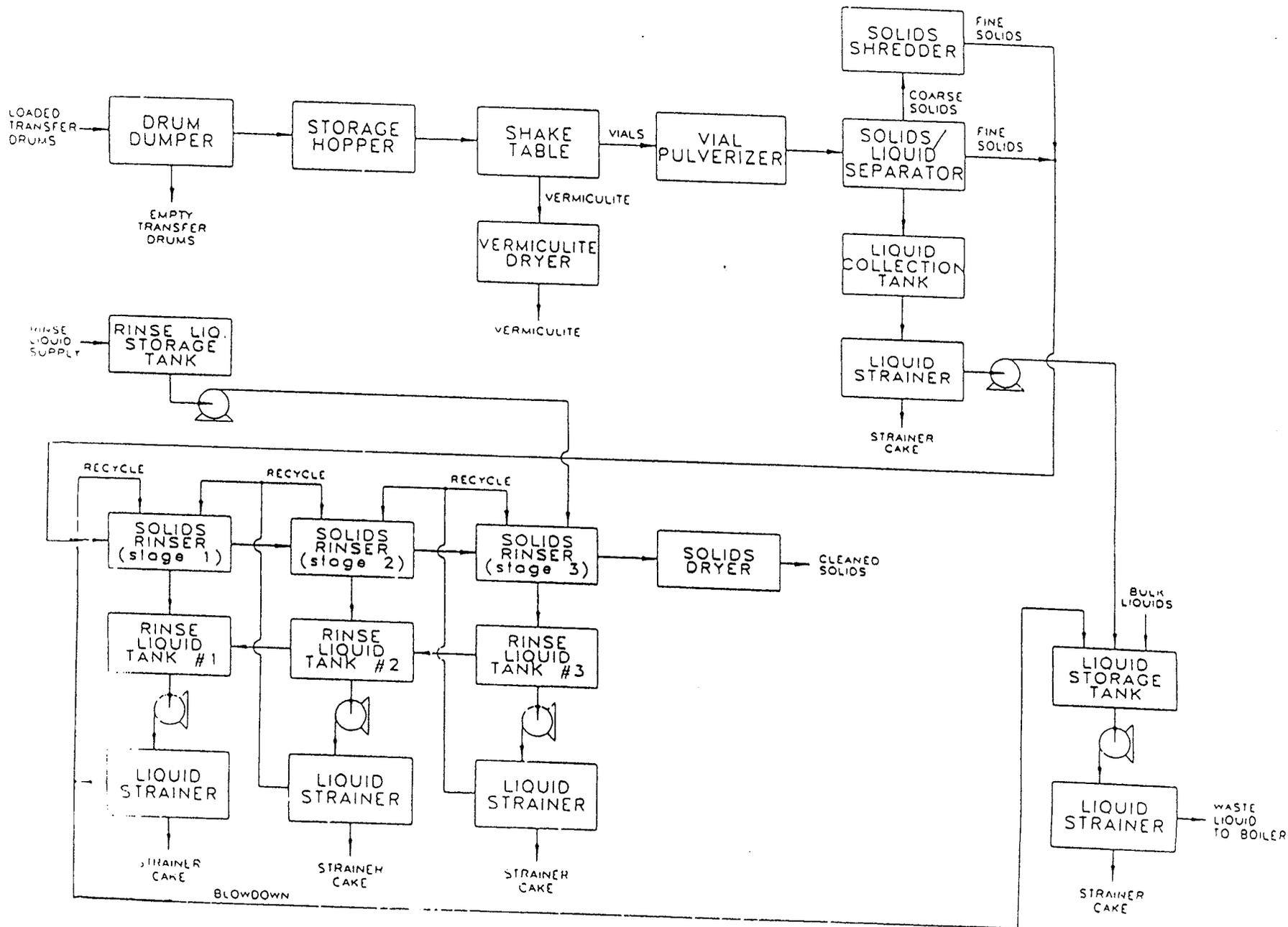


FIG. 2.2-1 DSSI Waste Feed Preparation Line

The top of an incoming loaded transfer drum is removed and the drum is suspended by a drum dumper that elevates and inverts the drum to pour out the contents (scintillation vials and vermiculite) into a storage hopper. The vial/vermiculite mixture is metered from storage onto a screen shake table; the vermiculite falls through the screen and is transported to a dryer. The dryer is indirectly heated by steam. Any moisture or absorbed scintillation liquid is evaporated during the heating of the vermiculite. The evaporated moisture and scintillation vapors are vented to the main building ventilation-air exhaust system and pass through an activated-carbon adsorb. The dried vermiculite is drummed for storage.

The remaining whole vials move from the shake table into a pulverizer where the vials are broken into small pieces, releasing the vial liquids. The vial/liquid mixture next enters an agitated-screen separator with coarse and fine screens. The liquids drain through both screens into a collection tank. When the collection tank is full, the liquid is strained to remove residual fine solids and is transferred to a boiler-feed storage tank.

Larger vial pieces are captured by the coarse screen and are diverted to a shredder for further size-reduction. The shredded pieces then join the pieces captured by the fine screen. The combined solids then pass through three sequential rinsers. Each rinser is an agitated-screen device that shakes the solids as they are rinsed with a spray of ethyl alcohol. The solids are rinsed in the first rinser with excess alcohol draining from the second rinser; the second rinser uses alcohol from the first rinser. With this arrangement, the cleanest alcohol is used for the last rinse of the solids. The net result is a triple rinse of the solids.

The alcohol stream that is recycled around each rinser is strained to remove residual fine solids. Spent alcohol is transferred and mixed with scintillation liquids in the boiler-feed storage tank. The cleaned vial pieces are collected in 55-gallon drums and are sold as scrap for reprocessing.

### 2.2.2 Industrial Boiler and Offgas Cleaning Line

Figure 2.2-2 illustrates the DSSI industrial boiler and offgas cleaning line. The combustor is an industrial boiler that is optimized for burning waste liquids. The offgas cleaning line is optimized for collection of acid gases, volatile metals, and particulates entrained in the boiler offgas. The combustor is a standard fire-tube boiler. In this type of boiler, fuel is mixed with combustion air and is burned in a combustion chamber attached to the front of the boiler and which extends through the middle of the boiler. Although most of the combustion occurs in the combustion chamber, the fuel and air are mixed and the flame is initiated, stabilized, and monitored by a burner attached to the forward end of the combustion chamber.

At the end of the combustion chamber, the hot products of combustion (the offgas) are routed through many parallel, thin-wall steel tubes that transfer heat from the offgas to a water bath that surrounds the tubes. The tubes are arranged in four separate bundles that are separated by baffles so that the offgas is routed back and forth through the tubes in the water bath four separate times.

The flow of the water through the boiler is also controlled by a series of baffles so that the highest temperature offgas liberates heat to the highest temperature water. In this way, the amount of heat that is transferred to the water is maximized. When enough heat is transferred to the water, the water vaporizes to steam. The water absorbs enough heat from the offgas to lower the temperature of the offgas from 1600-2000° Fahrenheit as it enters the boiler tubes to 450-500° Fahrenheit as it leaves the last bundle of tubes. Simultaneously, the water that surrounds the tubes is heated from about 200° Fahrenheit liquid water to 380° Fahrenheit steam. Steam at this temperature has a pressure of about 200 pounds per square inch. (The temperature of the boiler tubes is carefully controlled - if the inner surface of the tubes is either too cool or too hot, the tubes would be corroded by strong acids produced by burning some types of waste.)

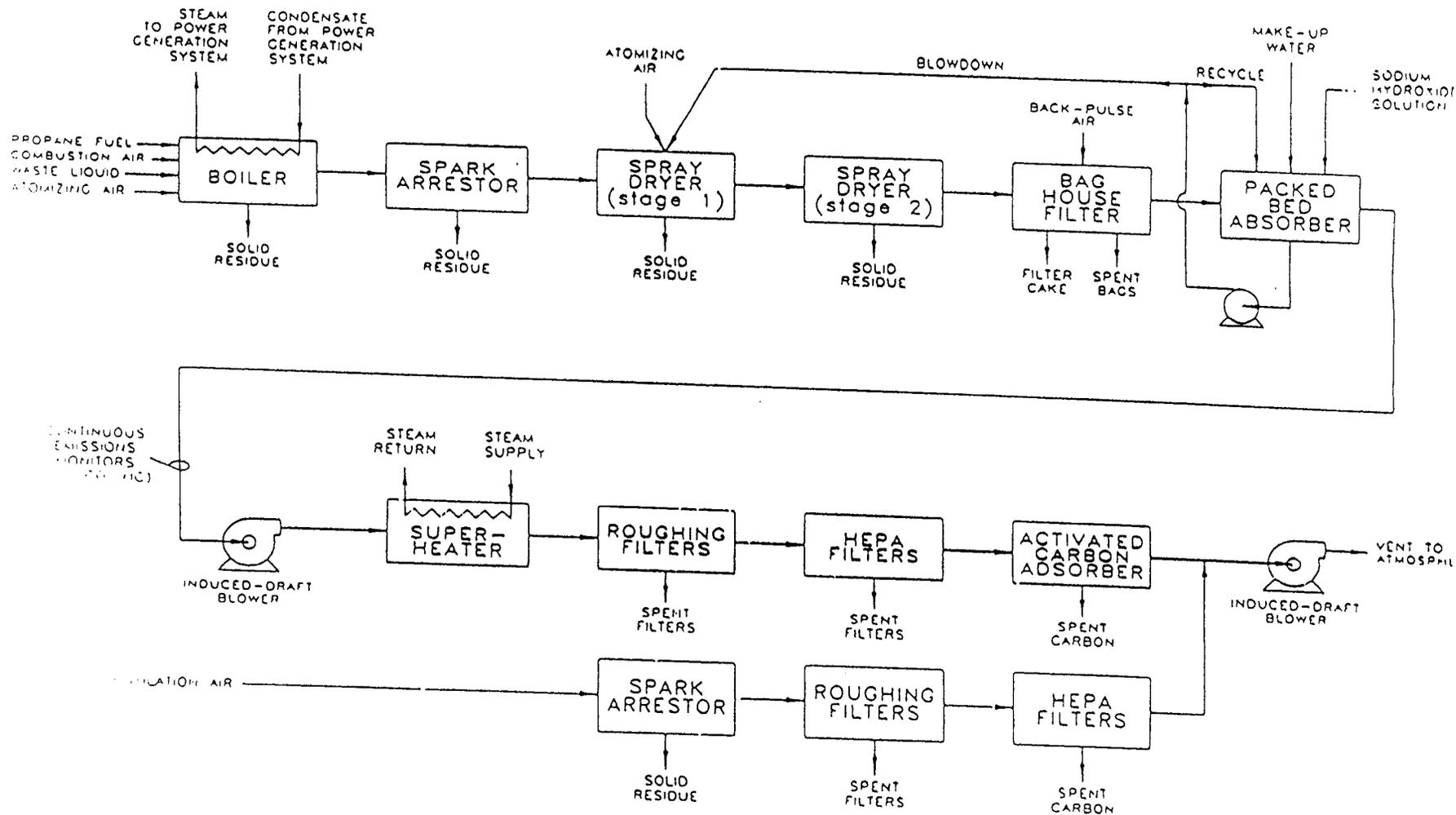


FIG. 2.2-2 DSSI Combustion and Offgas Cleaning Line

The steam produced by the boiler is passed through a turbine that converts the energy of the steam to electrical energy by driving an electrical generator attached to the output shaft of the turbine. The newly generated electricity is sold to the local municipal power company. The low-pressure steam from the turbine outlet is cooled and condensed in a heat exchanger. The condensate is then returned to the boiler as feed water (a pump pressurizes the feed water enough to overcome the internal pressure of the boiler).

The burner on the DSSI boiler is designed to mix combustion air with either gaseous propane or combustible liquids. In operation, the boiler is started with propane fuel. Once the boiler is at operating temperature, combustible waste liquids replace the propane as the fuel (DSSI mixes alcohol with any lower-BTU waste to increase its heating value). The waste liquid must first vaporize before it can react with the oxygen in the combustion air and burn. To speed the vaporization, the liquid is atomized with compressed air into a spray of fine droplets.

The offgas cleaning line is a series of equipment that is designed to capture acid gases, particles, and volatile metals. All of the cleaning components are fractional removal devices; they remove most, but not all, pollutants. However, their design and operation collectively removes enough pollutants to meet the offgas emission standards of DSSI's operating permits.

The first component in the offgas cleaning line is a spark arrestor. This device uses wire mesh or screens to capture and cool burning particles that may be entrained in the offgas from the boiler. If not captured, these sparks might ignite the baghouse filters, which are constructed of combustible fabric or felt.

The second component is a spray dryer. Figure 2.2-2 shows that the length of the DSSI spray dryer has been effectively cut in half and set side-by-side, because the facility ceiling is not high enough to accommodate a single-height unit. The spray dryer is a long, vertical, cylindrical vessel in which the offgas is mixed with a spray of scrubber liquid droplets. The scrubber liquid is water that contains a small amount of sodium hydroxide. The scrubber liquid is atomized with compressed air in the same way that waste liquid is atomized in the boiler burner. The volume of the spray dryer provides sufficient time for the spray droplets to completely evaporate.

As the spray evaporates into the offgas, it cools the offgas (from about 450° Fahrenheit to about 175° Fahrenheit) and simultaneously contacts the offgas with the sodium hydroxide reagent. (The amount of spray, and thus the outlet temperature of the spray dryer, is carefully controlled - if too much water evaporates, it will condense in the offgas and blind the baghouse bags.) Gaseous halogen and sulfur acids in the offgas react with the sodium hydroxide to form water vapor and solid salt particles; some of the reagent goes unreacted, and is dried to a solid along with the salt. The velocity of the offgas in the spray dryer is high enough to sweep most of the newly formed particles out of the spray dryer and into the baghouse filter. A small amount of dried material collects in the bottom of the dryer.

The baghouse filter contains a large number of fabric or felt bags (100-150) that are fitted over wire cages and hang from a horizontal plate near the top of the baghouse. The bags are closed on the bottom and are open at the top. Each is 4-6 inches in diameter and 10-15 feet long. The open top of each bag is fitted to matching holes in the suspending plate. The plate extends to the inside vertical walls of the baghouse and divides the baghouse into two separate chambers. The offgas enters the lower chamber, passes through the bag walls to the interior of the bags, and exits the bags through openings in the top ends of the bags. The wire cages inside the bags prevent the flow of offgas from collapsing the bags inward. In the upper chamber, the offgas is collected from all the separate bags and exits the baghouse through a single duct.

Most particles entrained in the offgas collect as a cake on the outer surface of the bags as the offgas passes through the bag material. The cake consists of entrained residue (flyash) from the boiler, salt from the neutralization of acid gases from the spray dryer, and unreacted-reacted reagent from the spray dryer. The presence of the cake improves the filtering ability of the bags and the unreacted-reacted reagent in the cake continues to come into contact and react with residual acid gases from the spray dryer.

The thickness of the cake builds until it becomes a hindrance to the flow of the offgas. Then, a sharp puff of compressed air is sent back down the inside of each bag. The pressure wave from the puff causes each bag to momentarily swell and dislodge the cake, which falls clear of the bags and is collected from the bottom of the baghouse.

The next component in the offgas cleaning line is a packed-bed absorber. The DSSI unit is a tall, vertical, cylindrical vessel that is filled with small plastic structures, collectively called packing. The packing is dumped into the top of the absorber and rests on an open-structure support tray. The free spaces within the packing are connected and are large enough to allow the offgas to pass without difficulty up through the support tray and packing. Scrubber liquid is poured over the top of the packing and percolates downward. The packing is shaped to spread the scrubber liquid into a thin film over its complete surface. As the offgas passes through the packing, some of the water from the scrubber liquid evaporates until the offgas is saturated with water vapor. Then most of the residual acid gases and volatile metals are absorbed into the film of the remaining scrubber liquid.

Scrubber liquid, containing the absorbed pollutants, drains to the bottom of the tower and is then recycled to the top of the packing. Water and sodium hydroxide solution are added as required to maintain scrubber liquid volume and unreacted-reacted reagent concentration. Some scrubber liquid is diverted from the recycle stream to the spray dryer (in accordance with the needs of the spray dryer). In this way, pollutants in the scrubber liquid are eventually dried to solids in the spray dryer and are collected in the baghouse; there is no liquid discharge from the offgas cleaning line.

The offgas from the packed-bed absorber then passes through an induced-draft blower. The inlet suction of the blower maintains upstream equipment (all the way back to the boiler) at a negative pressure relative to the surrounding workspace. By using a blower at the end to suck the offgas through the equipment, rather than a blower at the beginning to force the offgas through the equipment, any leakage through the containing walls of the equipment will be into the equipment rather than out of the equipment.

A portion of the offgas at the inlet to the induced-draft blower is continuously sampled and analyzed for oxygen, carbon monoxide, and total hydrocarbon concentrations. A surplus of oxygen is required in the offgas to ensure that enough is present for complete combustion. The concentration of carbon monoxide is determined as a measure of combustion efficiency. The concentration of total hydrocarbons is determined as a measure of the formation of products of incomplete combustion (other than hydrogen and carbon monoxide). DSSI operating permits will require one or more of these parameters to be operating limits; waste feed is automatically cut off if either the concentration of oxygen is too low or the carbon monoxide or total hydrocarbons is too high.

Any free liquid in the offgas will tend to blind the offgas HEPA filters. The heat of compression of the induced-draft blower will partially dry the saturated offgas. To dry the gas further, the offgas cleaning line uses a steam-heated superheater. The steam coils in the heater extend into the offgas and heat the offgas to about 300° Fahrenheit, enough of a temperature increase to completely dry the offgas before it passes through the HEPA filters. The offgas then passes through roughing filters, two sequential banks of HEPA filters, and an array of activated-carbon adsorbers. The roughing filters remove larger residual particles. The HEPA filters provide polishing filtration of the process stream. The activated-carbon adsorbers serve to capture residual volatile pollutants from the process stream.

The flowrate of the offgas at that point is about 3000 standard cubic feet per minute. It is mixed with a very large volume (about 30,000 standard cubic feet per minute) of facility ventilation air. If the boiler offgas was filtered and released directly to the atmosphere, a steam plume would form as the offgas cooled and some of the water in the offgas condensed; then the plume would disappear as the offgas became diluted by atmospheric air and the steam re-evaporated. By mixing the boiler offgas with the large volume of facility ventilation air, the boiler offgas is sufficiently diluted before being vented to prevent a steam plume. This forestalls DSSI's having to constantly answer questions about a visible plume from the

boiler stack. A second, much larger induced-draft blower provides the suction for the facility ventilation air and the boiler offgas. The combined stream is vented through a stack to the atmosphere.

### 3.0 PLAN FOR APPROVAL OF OFFSITE SHIPMENT

The following sections discuss considerations for shipment of LANL wastes to DSSI, waste forms that are amenable to the DSSI treatment system, and a proposed schedule for shipment of wastes to DSSI. Information on wastes sent by LANL to DSSI will be described on the shipping manifest and Waste Profile Sheets for each waste container. Copies of the Waste Profile Sheets will be sent to DSSI prior to shipment of the waste and the shipping manifest and Waste Profile Sheets will accompany the waste during shipment. Waste will be shipped in accordance with DOT requirements. DOE has a national radiological assistance program, under which DOE personnel will respond from one of eight regional coordination centers to supply resources, advice, and assistance to cope with radiological hazards.

#### 3.1 Handling of Treatment Residues

DOE Orders allow the offsite commercial treatment of LLMWs. DOE Orders do not provide for disposal of wastes or treatment residues at commercial disposal facilities. LANL may elect to retain possession of all residues generated during treatment. In this case, the DSSI treatment process would be cleaned before and after treatment of LANL wastes. All process vessels, tanks, strainers, and transfer lines would be cleaned; all filters and activated carbon would be replaced with unused media. After operation on LANL wastes, secondary wastes generated during the run would be collected and processed by DSSI for shipment back to LANL. An examination of attached Figure 2.2-1 and Figure 2.2-2 illustrates the number and types of secondary waste streams produced by the DSSI process.

The secondary wastes in Figure 2.2-1 that would normally be sent by DSSI to a commercial disposal facility or sold to commercial recyclers include the empty shipping drums, vermiculite packing, and vial shards. It is assumed that DSSI would return the cake from the various liquid strainers to the preparation line for rinsing and eventual combination with the other vial shards.

The secondary wastes in Figure 2.2-2 that would normally be immobilized and sent by DSSI to a commercial disposal facility include combustion residues that collect on the floor and tubes of the boiler; flyash that settles in the spark arrestor housing; flyash, salt, and unreacted-reacted reagent that settles in the base of each section of the spray dryer; filter cake and spent bags from the baghouse; spent roughing filters; spent HEPA filters; and spent activated carbon.

It is possible that the dried vermiculite and vial shards could be sent back to LANL in the original shipping drums. It is also likely that none of these materials would have to be immobilized to meet LDR standards before shipment back to LANL.

The residue that accumulates in the boiler and spark arrestor will be similar in composition and would likely be combined after collection. Even for an extended run, the volume should be a small, <1 cubic feet. The collected residue would have to be immobilized by DSSI to meet LDR standards before shipment back to LANL.

The residue from the two spray-dryer vessels and the filter cake collected from the baghouse will be similar in composition and would likely be combined after collection. The volume of this material could be substantial, depending on the efficiency of reagent use, (approximately, 1-pound residue for every drum of vials shipped). The collected residue would have to be immobilized by DSSI to meet LDR standards before shipment back to LANL.

One set of baghouse bags should last the duration of any length of LANL run. They would then be removed, chopped or shredded, and immobilized by DSSI to meet LDR standards before shipment back to LANL. The DSSI baghouse uses about 150 bags, each 4 inches in diameter and 10 feet long. The shredded volume before immobilization would then be about 15 cubic feet (equivalent to four 55-gallon drums, after immobilization).

One set of roughing filters should last the duration of any length of LANL run. They would then be removed, chopped or shredded, and immobilized by DSSI to meet LDR standards before shipment back to LANL. An offgas flowrate of 33,000 cubic feet per minute would require about twenty 2-foot by 2-foot by 12-inches HEPA filters in parallel to handle the flow without excessive pressure drop. An equal number of 2-foot by 2-foot by 1-inch roughing filters is used, one in front of each HEPA filter. The volume of roughing filters after immobilization would then be equivalent to about one 55-gallon drum. DSSI uses two banks of HEPA filters. The total number per change-out is estimated to be 36. After the LANL run, these would be removed, chopped or shredded, and immobilized by DSSI to meet LDR standards before shipment back to LANL. The volume after immobilization would be equivalent to about twenty 55-gallon drums.

The service life of the first bank (of two) of HEPA filters is hard to estimate. The life depends on the efficiency of the baghouse and is estimated to be about 100 hours during combustion of waste. If the yield of scintillation liquid from each shipping drum is assumed to be about 10 gallons and about 2 gallons of alcohol per drum is used for rinsing the vial shards, then the combustion time required to dispose of each drum will be about 8 minutes. So over 700 drums of LANL waste could be burned before the HEPA filters should need to be changed. If change-outs are required during the run, about ten 55-gallon drums of secondary waste per change-out would be generated, to be returned to LANL.

One set of activated-carbon trays should last the duration of any length of LANL run. The carbon would then be removed and immobilized by DSSI to meet LDR standards before shipment back to LANL. An offgas volume of 33,000 cubic feet per minute would require about twenty-two 2-foot by 2-foot by 2-foot carbon adsorption modules mounted in parallel to handle the flow without excessive pressure drop. Each module would contain six 2-foot by 2-foot by 1-inch carbon trays. The volume of activated carbon after immobilization would then be equivalent to about twelve 55-gallon drums.

In summary, the volume of secondary waste that LANL would expect to receive back from DSSI will be equal to the number of drums of scintillation vials and lab-packs shipped to DSSI plus about 38 additional drums. Before treated wastes from DSSI are returned to LANL they must be certified to meet LDR standards.

### **3.2 Limitations Imposed by DSSI Waste Acceptance Criteria**

The DSSI waste acceptance criteria are not contained in a separate, dedicated document. The general waste acceptance limitations are contained in the DSSI sample contract (see Appendix I, DSSI Example Contract Terms and Conditions). The sample contract, and references therein, prescribe the following criteria for acceptance of wastes by DSSI.

- **Package Form.** DSSI can currently receive wastes in bulk form (tank cars, drums) or in scintillation vials, packed in drums. Their operation is being expanded to include acceptance of wastes in lab-packs.
- **Physical State.** Wastes received by DSSI for treatment must be liquid at room temperature. The maximum particle size of entrained solids is 1/32 inch (to deter settling of solids in tanks and lines and to prevent plugging of the burner atomizer nozzle).

- **Total Permitted Volume.** DSSI's Part B Permit lists the maximum total facility inventory, for any or all wastes, as 240,000 gallons (about 4500 full drums). This volume should be many times that needed to accommodate LANL's candidate wastes.
- **Chemicals Acceptable for Treatment.** Only the chemicals named in the Tennessee Part B Permit (see Appendix C) can be received by DSSI for storage and subsequent treatment. A listing of allowable chemicals, by chemical name, is contained in Table 3.3-1. Table 3.3-2 contains a listing of these same chemicals by hazardous waste code. This list has been derived from DSSI's Part B Permit and several errors have been corrected in the chemical list supplied by DSSI.
- **Radionuclides Acceptable in Waste.** Only the radionuclides named in the Tennessee Radioactive Materials License (see Appendix D) can be contained in the wastes received by DSSI for storage and subsequent treatment. A summary of the allowable radionuclides and permitted limits for each has been prepared (Table 3.3-3). The radioactive material limits are fairly low. Tritium is limited to 10 curies at any one time with an annual limit of 20 curies. Radioactive materials with an atomic number 1 through 91 may not exceed 5 curies at any one time. Radioactive materials with an atomic number greater than 92 may not exceed 1  $\mu$ curie at any one time. There are also limits for special nuclear materials and source materials.

### 3.3 Candidate Wastes for Treatment at DSSI

Only LANL LLMWs that meet DSSI waste acceptance criteria can be shipped to DSSI. The chemical and radiological characterization of each container of waste or each bulked-waste shipment must be determined by analysis or KOP and this information must be supplied with the waste.

LANL supplied information for this survey for 7,796 mixed waste containers now stored at LANL. Many contain identical wastes. Records for each container were reviewed to determine which wastes were candidates for treatment at DSSI. RCRA waste codes were matched and then wastes associated with the following were eliminated:

- solids
- sludges
- gases
- PCBs
- spray cans
- aqueous solutions
- liquids in absorbent
- inorganics
- poisons
- grease,
- paint.

Appendix A contains a listing of the 406 surviving candidate containers that were extracted from LANL records on stored mixed waste kept prior to October 1991. The 406 total candidate waste containers contained in Appendix A represent the first cut at determining wastes that are applicable for treatment at DSSI. The descriptions for many of these were incomplete, cryptic, or too general to make a final determination on acceptable chemical composition. Some containers are listed because insufficient information was available in the data base to disqualify them as candidates. Information on type and remaining wastes.

Table 3.3-1

## CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI

## LISTING BY CHEMICAL NAME

Chemical Name	Hazardous Waste Code
Acetaldehyde	U001
*Acetone	F003/U002
*Acetonitrile	U003
Acetophenone	U004
Acrylamide	U007
*Aniline	U012
*Arsenic	D004
*Barium	D005
*Benzene	D018/F005/U019
Bromomethane	U029
*2-Butenal	U053
n-Butyl alcohol	F003/U031
*Cadmium	D006
Carbon disulfide	F005/P022
*Carbon tetrachloride	D019/F001/U211
Chlordane	D020
Chlorobenzene	D021/F002/U037
*Chloroform	D022/U044
*Chromium	D007
o-Cresol	D023/F004/U052
m-Cresol	D024/F004/U052
p-Cresol	D025/F004/U052
*Cresol/Cresylic acid	D026/F004/U052
Cumene	U055
*Cyclohexane	U056
Cyclohexanone	F003/U057
2,4-D	D016
Dibromomethane	U068
*o-Dichlorobenzene/1,2-Dichlorobenzene	D027/F002/U070
m-Dichlorobenzene	U071
p-Dichlorobenzene	U072
1,1 Dichloroethane	U076
*1,2 Dichloroethane	D028/U077
*1,1-Dichloroethylene	D029/U078
1,2-Dichloropropane	U083
Dichloroisopropyl ether	U027
*2,4-Dinitrotoluene	D030
1,4-Dioxane	D001/U108
Dipropylamine	U110

Table 3.3-1

## CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI

## LISTING BY CHEMICAL NAME

Chemical Name	Hazardous Waste Code
Endrin	D012
*Ethanol	D001
*2-Ethoxyethanol	F005/U359
*Ethyl acetate	F003/U112
Ethyl benzene	F003
*Ethyl ether	F003/U117
*Ethylene glycol	D001
*Formaldehyde	U122
Furan	U124
Heptachlor (and its epoxide)	D031
*Heptane	D001
*Hexachlorobenzene	D032
*Hexachlorobutadiene	D033
Hexachloroethane	D034
*Hexane	D001
*Ignitable waste (unlisted)	D001
*Isoamyl alcohol	D001
*Isobutyl alcohol	F005/U140
Isooctane/2,2,4-Trimethylpentane	D001
*Lead	D008
Lindane	D013
*Mercury	D009
*Methanol	F003/U154
Methoxychlor	D014
*Methylene chloride	F001/F002/U080
*Methyl ethyl ketone	D035/F005/U159
*Methyl isobutyl ketone	F003/U161
Methyl pyrrole	D001
*Mineral spirits	D001
Naphthalene	U165
*Nitrobenzene	D036/F004/U169
2-Nitropropane	F005/U171
Nonane	D001
*Octane	D001
*Propanol	D001
Pentachlorophenol	D037
*Pentane	D001
2-Propenal	P003
Propylene glycol	D001
*Pyridine	D038/F005/P075/U196

Table 3.3-1

CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI

LISTING BY CHEMICAL NAME

Chemical Name	Hazardous Waste Code
*Selenium	D010
*Silver	D011
*Spent solvents	F001/F002/F003/F004/F005
*Tetrahydrofuran	U213
1,1,2,2-Tetrachloroethane	U209
1,1,1,2-Tetrachloroethane	U208
*Tetrachloroethylene	D039/F001/F002/U210
*Toluene	D001/F005/U220
o-Toluidine	D001/U328
m-Toluidine	D001
p-Toluidine	D001/U353
2,4,5-TP (Silvex)	D017
Toxaphene	D015
*1,1,1-Trichloroethane	F001/F002/U226
*1,1,2-Trichloroethane	F002/U227
*Trichloroethylene	F001/F002/U228
2,4,5-Trichlorophenol	D041
*2,4,6-Trichlorophenol	D042
Trichlorofluoromethane	F002/U121
1,1,2-Trichlorotrifluoroethane	F001/F002
Tris(2,3-dibromopropyl)phosphate	U235
*Vinyl chloride	D043
*Xylene	D001/F003/U239

Table 3.3-2

**CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI**  
**LISTING BY HAZARDOUS WASTE CODE**

Chemical Name	Hazardous Waste Code
*Ignitable waste (unlisted)	D001
1,4-Dioxane	D001
*Ethanol	D001
*Ethylene glycol	D001
*Heptane	D001
*Hexane	D001
*Isoamyl alcohol	D001
Isoctane/2,2,4-Trimethylpentane	D001
Methyl pyrrole	D001
*Mineral spirits	D001
Nonane	D001
*Octane	D001
*Propanol	D001
*Pentane	D001
Propylene glycol	D001
Toluene	D001
Toluidine	D001
*Xylene	D001
*Arsenic	D004
*Barium	D005
*Cadmium	D006
*Chromium	D007
*Lead	D008
*Mercury	D009
*Selenium	D010
*Silver	D011
Endrin	D012
Lindane	D013
Methoxychlor	D014
Toxaphene	D015
2,4-D	D016
2,4,5-TP (Silvex)	D017
*Benzene	D018
*Carbon tetrachloride	D019
Chlordane	D020
Chlorobenzene	D021
*Chloroform	D022
o-Cresol	D023
m-Cresol	D024
p-Cresol	D025
*Cresol/Cresylic acid	D026

Table 3.3-2

**CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI**  
**LISTING BY HAZARDOUS WASTE CODE**

Chemical Name	Hazardous Waste Code
*o-Dichlorobenzene/1,2-Dichlorobenzene	D027
*1,2-Dichloroethane	D028
*1,1-Dichloroethylene	D029
*2,4-Dinitrotoluene	D030
Heptachlor (and its epoxide)	D031
*Hexachlorobenzene	D032
*Hexachlorobutadiene	D033
Hexachloroethane	D034
*Methyl ethyl ketone	D035
*Nitrobenzene	D036
Pentachlorophenol	D037
*Pyridine	D038
*Tetrachloroethylene	D039
*Trichloroethylene	D040
2,4,5-Trichlorophenol	D041
*2,4,6-Trichlorophenol	D042
*Vinyl chloride	D043
*Spent solvents	F001
Carbon tetrachloride	F001
*Methylene chloride	F001
Tetrachloroethylene	F001
1,1,1-Trichloroethane	F001
*Trichloroethylene	F001
1,1,2-Trichlorotrifluorethane	F001
*Spent solvents	F002
Chlorobenzene	F002
o-Dichlorobenzene/1,2-Dichlorobenzene	F002
*Methylene chloride	F002
Tetrachloroethylene	F002
*1,1,1-Trichloroethane	F002
1,1,2-Trichloroethane	F002
*Trichloroethylene	F002
Trichlorofluoromethane	F002
1,1,2-Trichlorotrifluorethane	F002

Table 3.3-2

**CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI**

**LISTING BY HAZARDOUS WASTE CODE**

Chemical Name	Hazardous Waste Code
*Spent solvents	F003
*Acetone	F003
n-Butyl alcohol	F003
Cyclohexanone	F003
*Ethyl acetate	F003
Ethyl benzene	F003
Ethyl ether	F003
*Methanol	F003
*Methyl isobutyl ketone	F003
*Xylene	F003
*Spent solvents	F004
Cresol/Cresylic acid	F004
Nitrobenzene	F004
*Spent solvents	F005
Benzene	F005
Carbon disulfide	F005
2-Ethoxyethanol	F005
Isobutyl alcohol	F005
Methyl ethyl ketone	F005
2-Nitropropane	F005
Pyridine	F005
*Toluene	F005
2-Propenal	P003
Carbon disulfide	P022
Pyridine	P075

Table 3.3-2

## CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI

## LISTING BY HAZARDOUS WASTE CODE

Chemical Name	Hazardous Waste Code
Acetaldehyde	U001
*Acetone	U002
*Acetonitrile	U003
Acetophenone	U004
Acrylamide	U007
*Aniline	U012
*Benzene	U019
Dichloroisopropyl ether	U027
Bromomethane	U029
n-Butyl alcohol	U031
Chlorobenzene	U037
*Chloroform	U044
*Cresol/Cresylic acid	U052
2-Butenal	U053
Cumene	U055
*Cyclohexane	U056
Cyclohexanone	U057
Dibromomethane	U068
o-Dichlorobenzene/1,2-Dichlorobenzene	U070
m-Dichlorobenzene	U071
p-Dichlorobenzene	U072
1,1 Dichloroethane	U076
*1,2 Dichloroethane	U077
1,1-Dichloroethylene	U078
*Methylene chloride	U080
1,2-Dichloropropane	U083
1,4-Dioxane	U108
Dipropylamine	U110
Ethyl acetate	U112
Ethyl ether	U117
Trichlorofluoromethane	U121
*Formaldehyde	U122
Furan	U124
Isobutyl alcohol	U140
*Methanol	U154
*Methyl ethyl ketone	U159
*Methyl isobutyl ketone	U161

Table 3.3-2

CHEMICALS ACCEPTABLE FOR RECEIPT AT DSSI

LISTING BY HAZARDOUS WASTE CODE

Chemical Name	Hazardous Waste Code
*Naphthalene	U165
*Nitrobenzene	U169
2-Nitropropane	U171
*Pyridine	U196
1,1,1,2-Tetrachloroethane	U208
1,1,2,2-Tetrachloroethane	U209
*Tetrachloroethylene	U210
*Carbon tetrachloride	U211
*Tetrahydrofuran	U213
*Toluene	U220
*1,1,1-Trichloroethane	U226
*1,1,2-Trichloroethane	U227
*Trichloroethylene	U228
Tris(2,3-dibromopropyl)phosphate	U235
*Xylene	U239
o-Toluidine	U328
p-Toluidine	U353
2-Ethoxyethanol	

**Table 3.3-3**

**WASTE-RELATED RADIONUCLIDE FACILITY LIMITS AT DSSI**

I. The total combined isotopic activities of the following radioactive elements shall not exceed ten (10) curies at any one time:

*Bismuth 207	Gadolinium 153	Nickel 63
Cadmium 109	Gallium 67	*Phosphorus 32
Calcium 45	Gold 195	Phosphorus 33
*Carbon 14	*Hydrogen 3	Rubidium 86
*Cerium 141	Indium 111	*Scandium 46
*Cesium 137	*Iodine 125	*Selenium 75
Chlorine 36	Iodine 131	*Sodium 22
*Cobalt 57	Iron 55	*Sulfur 35
Cobalt 58	*Iron 59	Tin 113
*Cobalt 60	*Manganese 54	Tin 119
Copper 64	Mercury 203	Zinc 65

II. The individual isotopic activity of the following radioactive elements shall not exceed two (2) curies at any time:

Cesium 134  
Chromium 51  
Germanium 68  
\*Technetium 99

III. The total combined isotopic activities of any radioactive material with atomic numbers 1 through 83, except as listed in Sections I and II, shall not exceed one (1) curie at any one time.

IV. The isotopic activity of the following radioactive element shall not exceed ten (10) millicuries at any time:

\*Radium

V. The isotopic activity of the following radioactive element shall not exceed five (5) millicuries at any time:

\*Americium 241

VI. The total combined quantity of the following radioactive elements shall not exceed 200 kilograms at any one time:

\*Uranium (not U-233 or U-235)  
\*Thorium

Table 3.3-3

**WASTE-RELATED RADIONUCLIDE FACILITY LIMITS AT DSSI**

VII. The total quantity of the following special nuclear materials shall not exceed the amount indicated at any one time:\*

*Uranium 233	100 grams*
*Uranium 235	175 grams*
*Plutonium	100 grams*

For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified here for the same kind of special nuclear material. The sums of such ratios for all kinds of special nuclear material in combination shall not exceed 1 (unity).

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concentration/activity for radionuclides contained in each container of waste needs to be determined in more detail and checked against the DSSI waste acceptance criteria (see Table 3.3-3). Waste manifests for each container may provide enough information for many of the candidate wastes to qualify for DSSI. Chemical and/or radiological analyses will be required for some of the remaining wastes.

**3.4 Potential Costs for Waste Treatment**

DSSI does not provide specifics on costs of treatment. Costs range from an estimated \$18-\$20/gallon for clean solvents, scintillation fluids, etc. to over \$100/gallon for high metals/high solids streams. Each waste stream will require a complete RCRA/Radioactive waste characterization at a cost of approximately \$2100.00 per sample. DSSI's laboratory offers this service, but has a very limited throughput due to its small size. Other laboratories are options such as Clemson Technical Institute, however if disputes arise over the characterization, the waste would be rejected by DSSI and returned to LANL.

**3.5 Proposed Activities Prior to Shipment of Wastes to DSSI**

A number of parallel and sequential activities must occur before wastes can be shipped to DSSI for treatment. The interrelation of activities required before shipment of mixed waste to DSSI is illustrated in the attached activity flow diagram. As the flow diagram illustrates, progress towards the goal of offsite treatment and possible disposal relies on coordination and cooperation between many organizations.

General actions are discussed below:

- Fate of DSSI Treatment Residues. DOE must determine the fate of the residues that are generated at DSSI during treatment of LANL mixed wastes. The options are 1) to have all shipping containers and residues returned (including bag filters, activated carbon, HEPA filters, strainer cake, etc.), 2) to have some residues returned (perhaps only the boiler residues, and baghouse filter cake) and have DSSI dispose of LANL shipping containers, or 3) to have DSSI treat the resulting residues to LDR standards and have DSSI send the residues to an off-site commercial disposal site (such as Envirocare/Utah or Barnwell/South Carolina).
- Inspection Trip to DSSI. The trip to DSSI is designed to collect any information that LANL does not already have regarding their permits and operation. Of particular interest will be information

on their method of treating residues to LDR standards and their intentions for commercial disposal of residues.

- Selection of Specific Wastes to be Shipped. A specific subset of candidate wastes in Appendix A will be chosen for treatment at DSSI based on the consideration of factors presented in this section and the availability of alternatives to DSSI.
- Inspection Trip to the Recommended Commercial Disposal Facility. The trip to the recommended commercial disposal facility is to collect information on their licenses, permits, operation, and their performance assessment in general. Of particular interest will be the wastes types, activities, and volumes allowed under their U.S. Nuclear Regulatory Commission (NRC) license.
- Bulking vs. Non-Bulking of Wastes. LANL must examine the advantages and limitations of bulking wastes prior to shipment to DSSI and determine their course of action. Bulking would significantly reduce the number of waste shipments to DSSI and might eliminate hassles between LANL and DSSI over DSSI's emptying and cleaning nonstandard containers. However, bulking by LANL would require a significant amount of time for setup and operation of bulking equipment.
- Agreements with DSSI. Much of the timing of this project depends on DSSI having their operation in order and how soon LANL and DSSI can agree on wastes to be shipped and shipping dates. There could be a considerable backlog of DSSI clients before LANL and DSSI reach agreement.

The time required for each of these activities has been estimated in the following two Gantt charts. The activities illustrated in Case 1 are reflective of an assumption that DSSI treatment residues will be disposed of at an off-site commercial disposal site. The activities illustrated in Case 2 are reflective of an assumption that DSSI treatment residues will be segregated by DSSI and returned to LANL. LANL will review its LLMW in storage to determine which specific waste may be appropriate for treatment at DSSI. The waste characterization information developed as part of the FFCA Milestone HLL 100 (Low-Level Mixed Waste Characterization Plan) will be reviewed to determine appropriate waste streams for treatment at DSSI. Additionally, as waste streams are identified for off-site treatment, these activities will be reported as part of FFCA Milestone OSS 200 (Annual Action Plan for Off-Site Shipment of Waste). Case 1 will require at least eleven months to complete and Case 2 at least 15 months.

Appendix B  
DSSI Federal NESHAP Approval for Construction and Operation



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

APR 11 1989

4APT-AC

Mr. James T. McVey  
Executive Vice President  
Diversified Scientific Services, Inc.  
P.O. Box 863  
Kingston, Tennessee 37763

Subject: NESHAP Construction/Operation Approval Letter for Diversified Scientific Services, Incorporated (DSSI) Scintillation Fluid Burning System

Dear Mr. McVey:

In accordance with the provisions of 40 CFR 61, we have reviewed information submitted on June 16, 1988; October 13, 1988; January 20, 1989; and March 9, 1989, to determine the ability of the referenced facility to comply with the NESHAP radionuclide emission standards promulgated at 40 CFR 61, Subpart I. Based upon this review, approval is hereby given for the construction and operation of the scintillation fluid burning system at DSSI's Kingston site, based upon the regulations currently in effect, i.e. those promulgated at 50 FR 5195 on February 5, 1985.

Although approval for the burner is being issued on the basis of it being able to comply with the regulations currently in effect, you should be aware of the potential impact that recently proposed revisions to 40 CFR 61, Subpart I may have on your facility. For your information, we have enclosed the full text of the revisions proposed on March 7, 1989. The portions of the package which are of primary importance to you are the regulations in §61.100 to §61.108 and the compliance demonstration procedures outlined in Appendices B, D and E. One important fact you should keep in mind is that EPA is proposing dose standards that correspond to four different control approaches and that, based upon which of the four approaches is chosen at promulgation, the dose standard for NRC-licensed facilities could range anywhere from 0.03 mrem/yr to 10 mrem/yr effective dose equivalent (ede).

The dose standards for the proposed regulations are calculated differently than the whole body and critical organ dose standards in the current regulation. Since the 10 mrem/yr ede standard under approaches A and B in the proposed regulation is roughly equivalent to the 25 mrem/yr whole body standard in the existing regulation, we would not anticipate you having any trouble complying with the emission standard in approaches A or B if the burner is constructed and operated as described in the Application. If the standards in approaches C or D are chosen for the promulgated standards, then you would either have to reduce the quantity of radionuclides processed in the burner or would have to install additional pollution controls. Since construction of the burner will begin after proposal of the Subpart I revisions, the burner will be considered to be a new source under the new regulations also. Therefore, the revised standards

will apply to your facility upon promulgation and you will not be eligible for a compliance waiver under the provisions of 40 CFR §61.10 and §61.11.

In addition to the provisions of 40 CFR 61, Subparts A and I, approval to construct and operate the burner is also contingent upon compliance with the following additional terms and conditions:

1. The facility shall be designed, constructed, and operated as described in the NESHAP application dated October 13, 1988, and additional information dated June 16, 1988; January 20, 1989; and March 9, 1989, (hereinafter referred to as the Application), unless superseded by a more stringent condition below.
2. All flue gas from the burner shall pass through an air pollution control system consisting of a prefilter, HEPA filter, and carbon adsorber.
3. The Applicant shall maintain a log of all radioactive receipts for the facility and shall include the following information in the log: the date of shipment, the radionuclide inventory at the time of shipment, the date of receipt, verification results when conducted, and comparison of the verification results with the reported inventory. A separate log shall be maintained and shall include a cumulative inventory for each radionuclide received and treated. In addition, the Applicant shall notify the Agency whenever the cumulative inventory of radionuclides in the waste burned in a calendar year exceeds either of the quantities listed below:
  - a. Total tritium and carbon-14 :22.5 Ci
  - b. Total for radionuclides other than tritium and carbon-14 :1.5 Ci
4. For any radionuclide not listed in the Application, the Applicant shall establish a Maximum Acceptable Quantity (MAQ) of the radionuclide to be treated each year if that quantity is likely to exceed a minimum amount. The minimum amount is based on the quantity of the radionuclide that would result in a calculated effective dose equivalent of 1/100 of the NESHAP standards. Upon receiving a request for disposal of a radionuclide for which a MAQ has not been established and which is greater than the minimum amount, the Applicant shall perform a dose equivalent assessment for the radionuclide prior to establishing a MAQ. The dose equivalent assessment shall be conducted using the same techniques and data bases as outlined in the Application, with the exception that assessment must be performed only at the previously established point of maximum impact. Concurrent with the notification to the generator of waste acceptance, and prior to receiving the first shipment for a new radionuclide, which exceeds the minimum amount, the Applicant shall notify the Agency in writing of its intent to receive a waste containing a radionuclide not originally analyzed in the Application. The notification shall include the MAQ established for the new radionuclide, the

composition of the waste, the expected quantity of waste to be received annually, and the estimated dose resulting from treating the waste in combination with all other doses associated with activities at DSSI's Kingston site.

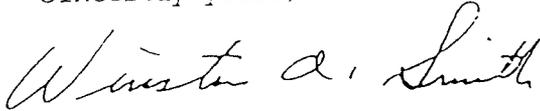
5. The exhaust stack shall be provided with testing facilities as follows:
  - a. Sampling ports adequate for test methods applicable to such facility.
  - b. Safe sampling platform(s).
  - c. Safe access to sampling platform(s).
  - d. Utilities for sampling and testing equipment.
6. Procedures in §61.107 of the Subpart I revisions to be promulgated on or about August 31, 1989, shall be used for determining radionuclide emissions from the burner. If the burner starts up prior to August 31, 1989, procedures in the version of §61.107 proposed on March 7, 1989, shall be used to determine the burner's radionuclide emissions in the period of time between proposal and promulgation of the revisions. The Applicant shall maintain a record of all radionuclides emitted and shall notify the Agency whenever the cumulative emissions during a calendar year exceed either of the quantities listed below:
  - a. Total tritium and carbon-14 :22.5 Ci
  - b. Total for radionuclides other than tritium and carbon-14 :1.5 Ci
7. Within 90 days after the effective date of the Subpart I revisions to be promulgated on or about August 31, 1989, the Applicant shall notify the Agency as to whether or not the burner will be capable of complying with the offsite dose standard in the promulgated regulation. Details of this notification appear at 40 CFR 61.10.
8. Thirty (30) days after the end of each calendar quarter, the Applicant shall report the radionuclide release rate from the facility (expressed as curies per month for each radionuclide emitted) during each of the previous three months.
9. No condition presented herein precludes the Applicant from adherence to additional or more stringent conditions or requirements of any other Federal, State, or local approval or permit.
10. Failure to comply with the conditions of this approval may result in revocation of the approval and/or enforcement action by the Agency.
11. At all times, including periods of startup, shutdown, and malfunction, the burner shall be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions.

12. All notifications, reports, and correspondence shall be submitted to the Chief, Air Compliance Branch, Air, Pesticides and Toxics Management Division, U.S. EPA, 345 Courtland Street, Atlanta, Georgia 30365 with copies to the Director, Tennessee Division of Radiological Health; and Director, Tennessee Division of Air Pollution Control.

This approval is granted solely under Section 112 of the Clean Air Act and implementing regulations at 40 C.F.R. 61 and in no way affects approvals under other Federal or State regulatory authorities.

If you have questions concerning this approval, please contact me at 404/347-3043.

Sincerely yours,



Winston A. Smith, Director  
Air, Pesticides and Toxics  
Management Division

Enclosure

cc: Mr. Harold Hodges, Director  
Division of Air Pollution Control  
Tennessee Department of Public Health  
Customs House, 4th Floor  
701 Broadway  
Nashville, Tennessee 37219-5403

Mr. Michael Mobley, Director  
Division of Radiological Health  
Tennessee Department of Health and Environment  
150 9th Avenue, North  
TERRA Building  
Nashville, Tennessee 37219-5404

**Appendix A**  
**Candidate Wastes for Shipment to DSSI, LANL Mixed-Waste Database**

Appendix C  
DSSI State Part B Hazardous Waste TSD Permit

State of Tennessee  
Department of Health and Environment  
Division of Solid Waste Management

Hazardous Waste Management Program  
4th Floor, Customs House  
701 Broadway  
Nashville, Tennessee 37219-5403  
(615) 741-3424

PERMIT

Permittee: Diversified Scientific Services Incorporated  
Route 3, Gallaher Road  
P.O. Box 863  
Kingston, Tennessee 37763  
Installation Identification Number: TND 98 210 9142  
Permit Number: TNHW-024

Pursuant to the Tennessee Hazardous Waste Management Act, as amended (Tennessee Code Annotated 68-46-101 et seq.), and regulations (Chapter 1200-1-11) promulgated thereunder by the Tennessee Solid Waste Disposal Control Board, a permit is issued to Diversified Scientific Services Incorporated (hereinafter called the Permittee or DSSI), to construct and operate a hazardous waste storage facility to be located at Gallaher Road near Interstate 40 just outside Kingston, Tennessee, Roane County at latitude  $35^{\circ} 52' 05''$  and longitude  $84^{\circ} 27' 10''$ . The Permittee will be allowed to store and recycle hazardous waste subject to the terms of this permit.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in Rule Chapter 1200-1-11, as specified in the permit. Applicable regulations are those which are in effect on the date of issuance of the permit, except for the applicable fee requirements of Rule 1200-1-11-.08, applicable land disposal restriction requirements of Rule 1200-1-11-.10, and the permit continuation, transfer, modification, revocation and reissuance, and termination provisions at Rule 1200-1-11-.07(9). Any lawfully promulgated modification made to these excepted regulations during the effective life of this permit shall be considered applicable regulations.

Continuation, Transfer, Modification, Revocation and Reissuance, and Termination of this permit must comply with and conform to Rule 1200-1-11-.07(9).

This permit is based on the assumption that the information submitted in the original permit application and subsequent modifications thereto (hereinafter referred to as the application) is accurate and that the facility will be constructed, operated, maintained, and closed as specified in the application. The Permittee's failure in the application to disclose fully all relevant facts, or the Permittee's misrepresentation of any relevant facts at any time may be grounds for termination of this permit and potential enforcement action. The Commissioner may modify this permit if information is received which was not available at the time of permit issuance and which justifies the application of different permit conditions at the time of issuance. The Permittee must inform the Tennessee Department of Health and Environment, Division of Solid Waste

Management, of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This permit is effective as of August 4, 1989, and shall remain in effect until August 4, 1999, unless revoked and reissued, or terminated, or continued.



---

Tom Tiesler, Director  
Division of Solid Waste Management  
Tennessee Department of Health and Environment

JTT/kl



STATE OF TENNESSEE  
CUSTOMS HOUSE  
701 BROADWAY  
DEPARTMENT OF HEALTH AND ENVIRONMENT  
NASHVILLE, TENNESSEE 37247

January 23, 1991

Mr. James T. McVay  
Diversified Scientific Services, Inc.  
P.O. Box 863  
Kingston, TN 37763

Dear Mr. McVay:

The Tennessee Division of Solid Waste Management acknowledges your request of December 14, 1990 for a major modification pursuant to the rules governing Tennessee Rule Chapter 1200-1-11-.07(9)(c)(5)(xiii)(I) to add the additional EPA waste codes (Attachment 1).

The modification to your permit will be processed under the now pending regulations dealing with the new TCLP and modification classifications by March 1, 1991.

This letter serves as notice that the facility can handle the new waste codes until the final modification is made to the facility permit No. TNHW-024.

If there are any additional concerns, please feel free to contact Ms. Hymelia Norris of my staff at (615) 741-3424.

Sincerely,

A handwritten signature in cursive script, appearing to read "Tom Tiesler".

Tom Tiesler, Director  
Division of Solid Waste Management

JTT/F5081022

cc: James Scarbrough, EPA, Region IV  
Dale Ozier  
Jack Crabtree, Knoxville F.O.  
Rick Brown, Knoxville F.O.  
Jacqueline Okoreeh-Baah, Chief Hazardous Permitting

1019131211019111412

XIV. Description of Hazardous Wastes (continued)

Line Number	EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES									
				(1) PROCESS CODES (enter)			(2) PROCESS DESCRIPTION (if a code is not entered in D(1))						
1	U 0 0 0 1	240,000	G	T	0	4	S	0	1	S	0	2	Included above
2	U 0 0 0 1	Included above	"										
3	U 0 0 0 2												
4	U 0 0 0 3												
5	U 0 0 0 4												
6	U 0 0 0 7												
7	U 0 0 1 2												
8	U 0 0 1 9						Y						
9	U 0 0 2 7	Y											Y
10	U 0 0 2 9				Y					Y			
11	U 0 0 3 1												
12	U 0 0 3 7												
13	U 0 0 4 4		Y										
14	U 0 0 5 2												
15	U 0 0 5 3												
16	U 0 0 5 5						Y						
17	U 0 0 5 6									Y			
18	U 0 0 5 7												
19	U 0 0 6 8												
20	U 0 0 7 0	Y											Y
21	U 0 0 7 1												
22	U 0 0 7 2					Y							
23	U 0 0 7 6												
24	U 0 0 7 7		Y										
25	U 0 0 8 0												
26	U 0 0 8 3							Y					
27	U 1 0 8												
28	U 1 1 0												
29	U 1 1 2												
30	U 1 1 7												
	U 1 2 1												
32	U 1 2 2	Y											
35	U 1 2 4	Y	Y		Y		Y		Y				

EPA ID Number (enter from page 1)

Secondary ID Number (enter from page 1)

TWN 1019 5 2 10 19 114 2

Description of Hazardous Wastes (continued)

Line Number	A. EPA HAZARDOUS WASTE NO. (enter code)			B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES					
						(1) PROCESS CODES (enter)					(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	U	1	4	0	included as above						
2	U	1	5	4							
3	U	1	5	9			Y				
4	U	1	6	1				Y		Y	
5	U	1	6	5							
6	U	1	6	9							Y
7	U	1	7	1		Y					
8	U	1	9	5							
9	U	2	0	3			Y				
10	U	2	0	9		Y					
11	U	2	1	0							
12	U	2	1	1							
13	U	2	1	3						Y	
14	U	2	2	0							
15	U	2	2	6							
16	U	2	2	7				Y			Y
17	U	2	2	8							
18	U	2	3	5							
19	U	2	3	9							
20	U	3	2	8							
21	U	3	5	3		Y		Y			
22	U	3	5	9							
23	F	0	0	1						Y	
24	F	0	0	2							Y
25	F	0	0	3							
26	F	0	0	4							
27	F	0	0	5				Y			
28	P	0	0	2							
29	P	0	0	3							
30	P	0	7	5							
31											
32											
33						Y	Y	Y	Y	Y	Y





Appendix D  
DSSI State Radioactive Materials License



STATE OF TENNESSEE  
DEPARTMENT OF HEALTH AND ENVIRONMENT  
CORDELL HULL BUILDING  
NASHVILLE, TENNESSEE 37219-5402

August 10, 1990

Diversified Scientific Services, Inc.  
508 N. Kentucky Street  
Kingston, TN 37763

Attention: James T. McVey, RSO

Gentlemen:

Attached to this letter is your Tennessee Radioactive Material License numbered R-73014-H95 issued to expire on August 31, 1995.

A copy of 'State Regulations for Protection Against Radiation' referred to in Condition 12 of the license conditions is being sent to you by a separate mailing. Your attention is directed to State Regulations and to specific license Conditions 11 through 27 which are to be followed in the use of this license.

Also attached to this letter are several copies of Form RHS 8-3 for posting as noted on that form.

If we can be of further assistance to you, please contact us.

Sincerely,

Robert N. Young  
Health Physicist  
Division of Radiological Health

Attachments:

RNY/ry

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
 DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Pursuant to Tennessee Department of Health and Environment Regulations, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess and transfer radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules and regulations of the Tennessee Department of Health and Environment and orders of the Division of Radiological Health, now or hereafter in effect and to any conditions specified below.

LICENSEE		3. License number
1. Name	Diversified Scientific Services, Inc.	R-73014-H95
2. Address	508 N. Kentucky Street Kingston, TN 37763	4. Expiration date August 31, 1995
		5. File no. R-73014

6. Radioactive Material (Element and Mass Number)	8. Chemical and/or physical form	9. Maximum Radioactivity and/or quantity of material which licensee may possess at any one time.
SEE SUPPLEMENTARY SHEETS		

10. Authorized Use

SEE SUPPLEMENTARY SHEETS

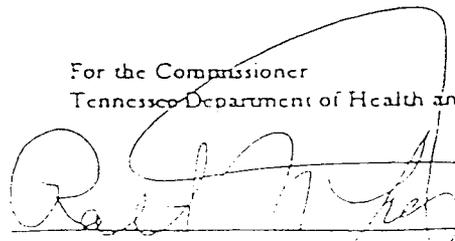
CONDITIONS

11. Unless otherwise specified, the authorized place of use is the licensee's address stated in item 2. above.

SEE SUPPLEMENTARY SHEETS

Date of Issuance August 10, 1990

For the Commissioner  
 Tennessee Department of Health and Environment



DIVISION OF RADIOLOGICAL HEALTH

Robert W. Young  
 Health Commissioner

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

SUPPLEMENTARY SHEET

Page 2 of 8 Pages

License Number R-73014-H95

5. Radioactive Material (Element and Mass Number)	8. Chemical and/or Physical Form	9. Maximum Radioactive Material Which Licensee May Possess at Any One Time
A. Hydrogen 3	A. Any as associated with liquid scintillation type fluids, solutes, solvents, and associated materials.	A. The total combined isotopic activities shall not exceed 10 Curies at any one time.
B. Carbon 14	B. Same as in 8A.	B. See Item 9A.
C. Sulfur 35	C. Same as in 8A.	C. See Item 9A.
D. Chlorine 36	D. Same as in 8A.	D. See Item 9A.
E. Calcium 45	E. Same as in 8A.	E. See Item 9A.
F. Iron 55	F. Same as in 8A.	F. See Item 9A.
G. Iron 59	G. Same as in 8A.	G. See Item 9A.
H. Cesium 137	H. Same as in 8A.	H. See Item 9A.
I. Cobalt 60	I. Same as in 8A.	I. See Item 9A.
J. Cobalt 58	J. Same as in 8A.	J. See Item 9A.
K. Cobalt 57	K. Same as in 8A.	K. See Item 9A.
L. Gadolinium 153	L. Same as in 8A.	L. See Item 9A.
M. Zinc 65	M. Same as in 8A.	M. See Item 9A.
N. Phosphorus 32	N. Same as in 8A.	N. See Item 9A.
O. Phosphorus 33	O. Same as in 8A.	O. See Item 9A.
P. Sodium 22	P. Same as in 8A.	P. See Item 9A.
Q. Rubidium 86	Q. Same as in 8A.	Q. See Item 9A.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

SUPPLEMENTARY SHEET

CORRECTED COPY

Page 3 of 8 Pages

License Number R-73014-H95

R. Mercury 203	R. Same as in 8A.	R. See Item 9A.
S. Indium 111	S. Same as in 8A.	S. See Item 9A.
T. Gallium 67	T. Same as in 8A.	T. See Item 9A.
U. Manganese 54	U. Same as in 8A.	U. See Item 9A.
V. Scandium 46	V. Same as in 8A.	V. See Item 9A.
W. Selenium 75	W. Same as in 8A.	W. See Item 9A.
Y. Cadmium 109	X. Same as in 8A.	X. See Item 9A.
Y. Nickel 63	Y. Same as in 8A.	Y. See Item 9A.
Copper 64	Z. Same as in 8A.	Z. See Item 9A.
AA. Tin 113	AA. Same as in 8A.	AA. See Item 9A.
BB. Tin 119m	BB. Same as in 8A.	BB. See Item 9A.
CC. Iodine 125	CC. Same as in 8A.	CC. See Item 9A.
DD. Iodine 131	DD. Same as in 8A.	DD. See Item 9A.
EE. Bismuth 207	EE. Same as in 8A.	EE. See Item 9A.
FF. Cerium 141	FF. Same as in 8A.	FF. See Item 9A.
GG. Gold 195	GG. Same as in 8A.	GG. See Item 9A.
HH. Any Radioactive Material with Atomic numbers 1 through 95, inclusive (except U-233, U-235, and any isotope of plutonium)	HH. Sealed Source in plated encapsulated, embedded, or flame sealed (liquid) form.	HH. No single source to exceed 100 microcuries. Total not to exceed One (1) millicurie.
II. Nickel 63	II. Sealed Source (New England Nuclear Code: GEN-994)	II. Sealed Source not to exceed 20 millicuries each.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

SUPPLEMENTARY SHEET

Page 4 of 8 Pages

License Number R-73014-H95

10. Authorized use

- A. through GG. For the burning of liquid scintillation type fluids as fuel in accordance with statements, representations, and procedures contained in material referenced in Condition 27. of this license.
- HH. For use in instrument calibration and standardization.
- II. For use in Tracor Models 111019 or 115500 electron capture detectors as part of Tracor 540 gas chromatographs.

Conditions (continued)

The licensee shall comply with applicable provisions of 1200-2-4, 1200-2-5, and 1200-2-10 of "State Regulations for Protection Against Radiation".

- 13. Radioactive material authorized by this license shall be used only at Route 3 Gallaher Road, (Junction of Gallaher Road and I-40), Kingston, Tennessee 37763.
- 14. Radioactive material authorized by this license shall be used by, or under the supervision and in the physical presence of, James R. Sims, Joseph Crider, or James T. McVey.

The radiation safety officer for this license is James T. McVey.

- 15. Pursuant to 1200-2-8-.01 of "State Regulations for Protection Against Radiation", the licensee may dispose of radioactive material by incineration in accordance with procedures contained in application dated October 5, 1987, with attachments and material referenced in Condition 27 of this license. The quantity of radioactive material burned, by the licensee, in any one year shall not exceed Twenty Two and a half (22.5) Curies of Hydrogen 3 and Carbon 14 combined total and One and a half (1.5) Curies combined total of all other isotopes authorized by this license. In addition, no fluids shall be burned which have concentrations in excess of 0.05 microcurie/gram of Hydrogen 3 and Carbon 14 combined total and 0.05 microcurie/gram of all other isotopes authorized by this license.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

SUPPLEMENTARY SHEET

Page 5 of 8 Pages

License Number R-73014-H95

The radioactivity in the gaseous effluent from the facility shall not exceed the limits specified for air in either Schedule RHS 8-1, Table II, Column 1 of "State Regulations for Protection Against Radiation" or the National Emission Standards for Hazardous Air Pollutants; Standards for Radionuclides (40 CFR Part 61) which ever are more restrictive.

16. The licensee shall maintain complete and accurate records of the receipt and disposal of radioactive material. The licensee shall, for radioactive material no longer useful for any purpose and for any equipment or supplies contaminated with such material for which further use and decontamination is not planned, define those materials as radioactive waste and treat them as such in accordance with the following provisions:
- A. Radioactive waste material shall not be stored with non-radioactive waste.
  - B. A written record of all radioactive waste material shall be maintained until it has been determined by a suitable survey or radioassay that it has decayed to background levels or until it has been shipped to an authorized recipient in accordance with all applicable regulations. Accountability of radioactive waste material prepared for shipment but not yet shipped from the licensee's premises shall be maintained by the licensee by an internal record system such that the licensee is constantly aware of the material's location and the proposed time of shipment. Individuals who are involved in the shipping of such material and/or the storage of such material prior to shipment, shall be trained in the precautions necessary for such handling and storage.
  - C. For material which has decayed to background levels as determined by radioassay or external level as measured with appropriately calibrated instruments, records shall indicate that the material was determined to be no longer radioactive and will indicate the methods and results of the survey or analysis.
  - D. Shipment records of radioactive waste material shall be maintained and the licensee shall require written confirmation from the authorized recipient of such material that this material has been received.
  - E. All records and written confirmations required by this condition shall be maintained for inspection by the Department.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

SUPPLEMENTARY SHEET

Page 5 of 8 Pages

License Number R-73014-H95

The requirements for this condition are in addition to any other requirements for the handling and/or disposal of radioactive material contained in this license and "State Regulations for Protection Against Radiation".

17. A. Sealed sources authorized by this license shall be tested for leakage and/or contamination at intervals not to exceed three (3) years. In the absence of a certificate from a transferor indicating that a test has been made within six (6) months prior to transfer, the sealed source shall not be put into use until tested.
- B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surface of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak tests shall be kept in units of microcuries and maintained for inspection by the Department.
- C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Department regulations. A report shall be filed within five (5) days of the test with the Division of Radiological Health, Tennessee Department of Health and Environment, 150 9th Avenue North, Nashville, Tennessee, 37247-3201, describing the equipment involved, the test results, and the corrective action taken.
- D. Tests for leakage and/or contamination shall be performed in accordance with statements, representations, and procedures contained in application dated October 5, 1997, with attachments, and material reference in Condition 27 of this license or by persons specifically licensed by this Department, the U. S. Nuclear Regulatory Commission, or another Agreement State to perform such services.
18. Notwithstanding the periodic leak test required by Condition 17, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
19. Detector cells containing Nickel-63 authorized by this license shall be used in conjunction with a properly operating temperature control mechanism which prevents the temperature of the cell from exceeding 40°C sources contained.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

SUPPLEMENTARY SHEET

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License Number R-73014-H95

20. Maintenance and repair of detector cells containing radioactive material shall be performed only by the manufacturer or by other persons specifically authorized by the Department, the U. S. Nuclear Regulatory Commission or another Agreement State to perform such services.
21. Detector cells containing licensed material shall not be opened or the foil sources removed from the detector cell by the licensee.
22. When not installed in a gas chromatograph, detector cells containing licensed material shall be stored in a properly labeled container under lock and key to prevent access by unauthorized individuals.
23. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in 1200-2-5-.12(1) of "State Regulations for Protection Against Radiation", the licensee is hereby authorized to label detector cells and cell baths, containing byproduct material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement.
24. Survey instrument calibration shall be performed in accordance with statements, representations, and procedures contained in application dated October 5, 1987, with attachments, and material referenced in Condition 27 of this license.
25. No provision of this license relieves the licensee from compliance with other Federal, State and local laws, ordinances, and regulations applicable to the licensee's activities.
26. The licensee is authorized to perform instrument calibration and leak testing of sealed sources in accordance with statements, representations, and procedures contained in correspondence referenced in Condition 27 of this license.

The tests shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample, or in the case of radium, the escape of radon at the rate of 0.001 microcurie per 24 hours. The customer shall be furnished a report of the results in units of microcuries.

If the test reveals the presence of 0.005 microcurie or more of removable contamination, or in the case of radium, the escape of radon at the rate of 0.001 microcurie or more per 24 hours, the customer or the licensee shall be informed of the Department's requirements as follows: The

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

SUPPLEMENTARY SHEET

Page 8 of 8 Pages

License Number R-73014-H95

licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Department regulations."

A report shall be filed within five (5) days of the test with the Division of Radiological Health, Tennessee Department of Health and Environment, 150 9th Avenue North, Nashville, Tennessee 37247-3201, describing the equipment involved, the test results, and the corrective action taken.

27. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated October 5, 1987, with attachments, and letters dated August 18, 1987, with attachments, October 5, 1987, with attachments, November 10, 1987, with attachments, March 3, 1988, with attachments, April 13, 1988, with attachments, April 14, 1988, with attachments, June 14, 1988, with attachments, September 2, 1988, with attachments, June 5, 1989, with attachments, April 24, 1990, with attachments, July 5, 1990, with attachments, and August 7, 1990, with attachments.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 1

Page 1 of 3 Pages

License Number R-13014-H95

Diversified Scientific Services, Inc.  
P.O. Box 363  
Kingston, TN 37763

Attention: James T. McVey, Executive Vice President

Gentlemen:

As requested by James T. McVey and in accordance with his letters dated December 10, 1990, January 17, 1991, February 25, 1991 with attachments, March 5, 1991 with attachments, March 14, 1991 with attachments (two letters), and March 18, 1991, your Tennessee Radioactive Material license is amended as follows:

To add:

- |   |   |  |
|---|---|--|
| 6. Radioactive Material (Element and <u>Mass Number</u> )   | 8. <u>Chemical and/or Physical Form</u> | 9. Maximum Radioactivity and/or quantity of material which licensee may possess at <u>any one time</u> |
| JJ. Any radioactive material with atomic numbers 1 through 83, inclusive, except as in A. through II. and KK. through TT. | JJ. Same as in 8A.                      | JJ. The total combined isotopic activities <u>shall not exceed 1 Curie</u> at any one time.            |
| KK. Cr-51   | KK. Same as in 8A.                      | KK. 0 Curies   |
| LL. Cs-134  | LL. Same as in 8A.                      | LL. 0 Curies   |
| MM. Tc-99   | MM. Same as in 8A.                      | MM. 0 Curies   |

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 1

Page 2 of 3 Pages

License Number R-73014-H95

NN.	Ge-68	NN.	Same as in 8A.	NN.	2 Curies
OO.	Uranium (not U-233 or U-235)	OO.	Same as in 8A.	OO.	Total quantity authorized in Items OO. and PP. is 200 kilograms
PP.	Thorium	PP.	Same as in 8A.	PP.	See Item OO.
QQ.	Radium	QQ.	Same as in 8A.	QQ.	10 millicuries
RR.	Uranium 235	RR.	Same as in 8A.	RR.	175 grams*
SS.	Uranium 233	SS.	Same as in 8A.	SS.	100 grams*
TT.	Plutonium	TT.	Same as in 8A.	TT.	100 grams*

\* For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified here for the same kind of special nuclear material. The sums of such ratios for all kinds of special nuclear material in combination shall not exceed "1" (i.e., unity). In accordance with letter dated January 17, 1991 and signed by James T. McVey, the amount of special nuclear material allowed under this license is one-half of the amount defined in "State Regulations for Protection Against Radiation" 1200-2-4-.04(oo).

---

10. Authorized Use

JJ. through TT. Same as A. through GG.

---

To change Condition 27. This condition will now read as follows:

27. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated October 5, 1987 with attachments and letters dated August 12, 1987 with attachments, October 5, 1987 with attachments, November 10,

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 1

Page 3 of 3 Pages

License Number R-73014-H95

1987 with attachments, March 3, 1988 with attachments, April 13, 1988 with attachments, April 14, 1988 with attachments, June 14, 1988 with attachments, September 2, 1988 with attachments, June 5, 1989 with attachments, April 24, 1990 with attachments, July 5, 1990 with attachments, August 7, 1990 with attachments, December 10, 1990, January 17, 1991, February 25, 1991 with attachments, March 5, 1991 with attachments, March 14, 1991 with attachments (two letters), and March 18, 1991.

---

This amendment authorizes by reference the design and installation of air sampling probes in accordance with letters signed by James T. McVey dated February 25, 1991 with attachments, March 5, 1991 with attachments, and March 14, 1991 with attachments.

All other parts of this license remain unchanged.

Date: March 19, 1991

For the Commissioner  
Tennessee Department of Health  
and Environment

By:



John Hoffelt  
Environmental Specialist  
Division of Radiological Health

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 2

Page 1 of 2 Pages

License Number R-73014-H95

Diversified Scientific Services, Inc.  
P.O. Box 663  
Kingston, TN 37763

Attention: James T. McVey, Executive Vice President

Gentlemen:

As requested by James T. McVey and in accordance with his letter dated April 15, 1991, your Tennessee Radioactive Material License number R-73014-H95 is amended as follows:

To add Condition 26. This condition shall read as follows:

26. The licensee is authorized to store drums of materials described in letter dated April 15, 1991 in excess of 180 days not to exceed June 1, 1991.

To change Condition 27. This condition will now read as follows:

27. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated October 5, 1987 with attachments and letters dated August 10, 1987 with attachments, October 5, 1987 with attachments, November 10, 1987 with attachments, March 3, 1988 with attachments, April 13, 1988 with attachments, April 14, 1988 with attachments, June 14, 1988 with attachments, September 2, 1988 with attachments, June 5, 1989 with attachments, April 24, 1990 with attachments, July 5, 1990 with attachments, August 7, 1990 with attachments, December 10, 1990, January 17, 1991, February 25, 1991 with attachments, March 5, 1991 with attachments, March 14, 1991 with attachments (two letters), March 18, 1991, and April 15, 1991.

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All other parts of this license remain unchanged.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 2

Page 2 of 2 Pages

License Number R-73014-H95

Date: April 17, 1991

For the Commissioner  
Tennessee Department of Health  
and Environment

By:



John Hoffelt  
Environmental Specialist  
Division of Radiological Health

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 3

Page 1 of 2 pages

License Number R-73014-H95

Diversified Scientific Services, Inc.  
P.O. Box 863  
Kingston, TN 37763

Attention: James T. McVey, Executive Vice President

Gentlemen:

As requested by James T. McVey and in accordance with his letters dated August 16, 1991, and September 5, 1991, and as requested by Don R. McCombs of Chemical Waste Management, Inc., and in accordance with his letter dated September 19, 1991, your Tennessee Radioactive Material License number R-73014-H95 is amended as follows:

To change Condition 27. This Condition will now read as follows:

27. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated October 5, 1987, with attachments, and letters dated August 18, 1987, with attachments, October 5, 1987, with attachments, November 10, 1987, with attachments, March 3, 1988, with attachments, April 13, 1988, with attachments, April 14, 1988, with attachments, June 14, 1988, with attachments, September 2, 1988, with attachments, June 5, 1989, with attachments, April 24, 1990, with attachments, July 5, 1990, with attachments, August 7, 1990, with attachments, December 10, 1990, January 17, 1991, February 25, 1991, with attachments, March 5, 1991, with attachments, March 14, 1991, with attachments (two letters), March 18, 1991, April 15, 1991, August 16, 1991, September 5, 1991, and September 19, 1991, from Don R. McCombs.

---

This amendment authorizes by the references in Condition 27 the change in ownership of Diversified Scientific Services, Inc., from its present owners to Chemical Waste Management, Inc.

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TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 3

Page 2 of 2 pages

License Number R-73014-H95

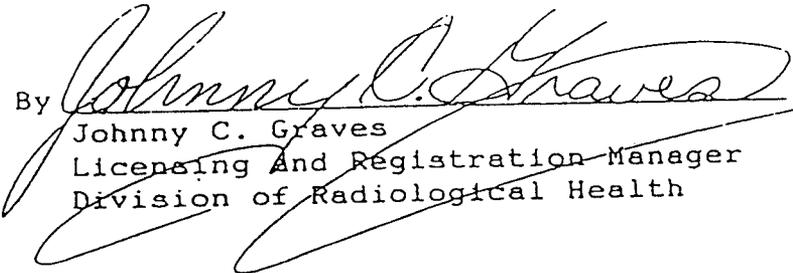
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All other parts of this license remain unchanged.

Date October 7, 1991

For the Commissioner  
Tennessee Department of Environment  
and Conservation

By

  
Johnny C. Graves

Licensing and Registration Manager  
Division of Radiological Health

10/21 - MHA  
TR  
MHS  
JCE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 1

Page 1 of 2 pages

License Number R-73014-H95

Diversified Scientific Services, Inc.  
P.O. Box 863  
Kingston, TN 37763

Attention: James T. McVey, Executive Vice President

Gentlemen:

As requested by James T. McVey and in accordance with his letters dated July 9, 1991, with attachments, August 23, 1991, August 27, 1991, September 26, 1991, and October 2, 1991, with attachments, your Tennessee Radioactive Material License number R-73014-H95 is amended as follows:

To add Condition 29. This Condition will read as follows:

29. The licensee is authorized to modify the facility by the installation of an additional air scrubber system as described in statements, representations, and procedures contained in letter dated July 9, 1991, with attachments.

To change Item 8A and Conditions 27 and 28. This Item and these Conditions will now read as follows:

8A. Any radioactive material as authorized by this license that contains hazardous constituents as permitted by the RCRA Hazardous Waste Permit (number TNHW-024) issued by the State of Tennessee, Division of Solid Waste Management. These constituents may include U001, F001 through F005 EPA categories plus the RCRA permitted "D", "U", and "P" categories as specified in the above referenced RCRA Hazardous Waste Permit.

27. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated October 5, 1987, with attachments, and letters dated August 10, 1987, with attachments, October 5, 1987, with attachments, November 10, 1987, with attachments, March 3, 1988, with attachments, April 13, 1988, with attachments, April 14, 1988, with attachments, June 14, 1988, with attachments, September 2,

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 4

Page 2 of 2 pages

License Number R-73014-H95

1988, with attachments, June 5, 1989, with attachments, April 24, 1990, with attachments, July 5, 1990, with attachments, August 7, 1990, with attachments, December 10, 1990, January 17, 1991, February 25, 1991, with attachments, March 5, 1991, with attachments, March 14, 1991, with attachments (two letters), March 18, 1991, April 15, 1991, August 16, 1991, September 5, 1991, letter from Don R. McCombs dated September 19, 1991, July 9, 1991, with attachments, August 23, 1991, August 27, 1991, September 26, 1991, and October 2, 1991, with attachments.

28. The licensee is authorized to store waste radioactive material authorized by this license in excess of 180 days, except that such possession shall not exceed 365 days and no more than 30% of the waste radioactive material shall be stored for a time period greater than 180 days.

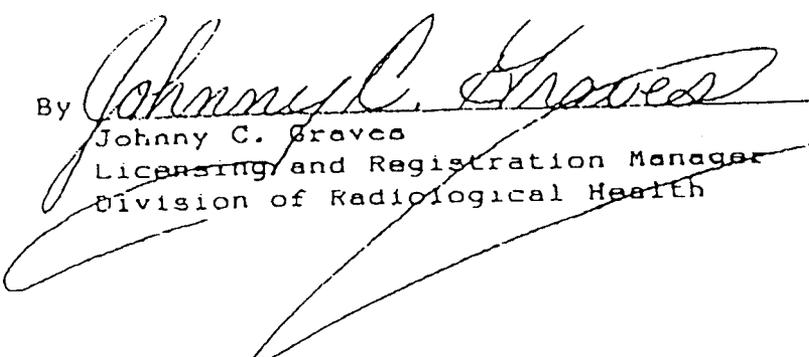
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All other parts of this license remain unchanged.

Date October 15, 1991

For the Commissioner  
Tennessee Department of Environment  
and Conservation

By

  
Johnny C. Graves  
Licensing and Registration Manager  
Division of Radiological Health

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 6

Page 1 of 2 Pages

License Number R-73014-H95

Diversified Scientific Services, Inc.  
P.O. Box 863  
Kingston, TN 37763

Attention: James T. McVey, Executive Vice President

Gentlemen:

As requested by James T. McVey and in accordance with his letter dated July 22, 1992, with attachments, your Tennessee Radioactive Material License number R-73014-H95 is amended as follows:

To change Condition 27. This Condition will now read as follows:

7. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated October 5, 1987, with attachments, and letters dated August 18, 1987, with attachments, October 5, 1987, with attachments, November 10, 1987, with attachments, March 3, 1988, with attachments, April 13, 1988, with attachments, April 14, 1988, with attachments, June 14, 1988, with attachments, September 2, 1988, with attachments, June 5, 1989, with attachments, April 24, 1990, with attachments, July 5, 1990, with attachments, August 7, 1990, with attachments, December 10, 1990, January 17, 1991, February 25, 1991, with attachments, March 5, 1991, with attachments, March 14, 1991, with attachments (two Letters), March 18, 1991, April 15, 1991, July 9, 1991, with attachments, August 16, 1991, August 23, 1991, August 27, 1991, September 5, 1991, (letter from Don R. McCombs dated September 19, 1991), September 26, 1991, October 2, 1991, with attachments, April 14, 1992, with attachments, and July 22, 1992, with attachments.

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This Amendment 6 recognizes the relocation of the "analytical laboratory" in accordance with the letter dated July 22, 1992, with attachments.

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 6

Page 2 of 2 Pages

License Number R-73014-H95

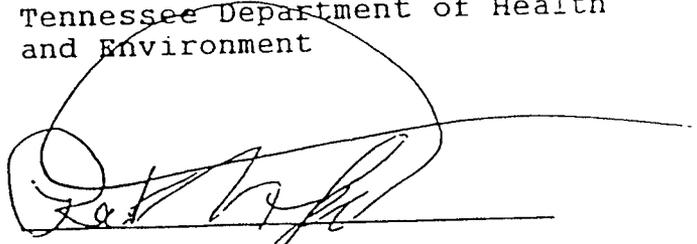
---

All other parts of this license remain unchanged.

ate September 21, 1992

For the Commissioner  
Tennessee Department of Health  
and Environment

BY



Robert N. Young  
Health Physicist  
Division of Radiological Health

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 7

Page 1 of 2 Pages

License Number R-73014-H95

Diversified Scientific Services, Inc.  
P.O. Box 863  
Kingston, TN 37763

Attention: James T. McVey, Executive Vice President

Gentlemen:

As requested by James T. McVey and in accordance with his letters dated July 21, 1990, August 17, 1990, and September 19, 1990, your Tennessee Radioactive Material License number R-73014-H95 is amended as follows:

To Add:

8. Radioactive Material (Element and Mass Number):

9. Chemical and/or Physical Form

9. Maximum Radioactivity and/or Quantity Material Which Licensee May Possess at Any One Time

UU. Americium 241

UU. Same as in 8A.

UU. Total not to exceed 5.0 millicuries

10. Authorized Use

UU. Same as A. through GG. and JJ. through TT.

To change Conditions 27 and 28. These Conditions will now read as follows:

27. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 8, 9, and 9 of this license in accordance with statements, representations, and procedures contained in application dated October 3, 1987, with attachments, and letters dated August 18, 1987, with attachments, October 5, 1987, with attachments, November 10, 1987, with attachments, March 3, 1988, with attachments, April 13, 1988, with attachments, April 14, 1988, with attachments, June 14, 1988, with attachments, September 2, 1988, with attachments, June 5, 1989, with attachments, April 14, 1990, with attachments, July 5, 1990, with attachments, August 7, 1990, with attachments, December 10, 1990, January 17, 1991, February 25, 1991, with attachments, March 5, 1991, with attachments, March 14, 1991, with attachments (two letters), March 19, 1991, April 15, 1991, July 9, 1991, with attachments, August 16, 1991, August 23, 1991, August 27, 1991, September 8, 1991, letter

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 7

Page 2 of 2 Pages

License Number R-73014-H95

from Don R. McCombs dated September 19, 1991), September 26, 1991, October 1, 1991, with attachments, April 14, 1992, with attachments, July 21, 1992, July 22, 1992, with attachments, August 17, 1992, and September 19, 1992.

- 18. No radioactive material excluding calibration and standardization sources or radioactive waste may be possessed under this license from its time of receipt until its disposal or transfer from the facility for a period of time greater than three hundred sixty five (365) days and no more than 20% of the waste radioactive material shall be stored for a time period greater than one hundred eighty (180) days. Exception as follows:

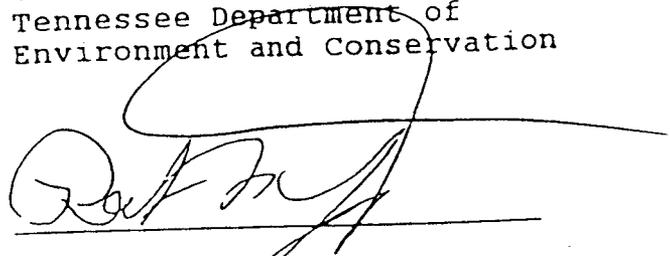
In accordance with the statements and representations contained in a letter of August 27, 1992 the licensee may exceed the specified time limits set forth above however, final processing of the material as referenced in this letter shall begin no later than February 4, 1993.

All other parts of this license remain unchanged.

Date October 20, 1992

For the Commissioner  
Tennessee Department of  
Environment and Conservation

BY



Robert N. Young  
Health Physicist  
Division of Radiological Health

**Appendix E**  
**DSSI State Air Contaminant Source Construction/Modification Permit**

TENNESSEE AIR POLLUTION CONTROL BOARD  
DEPARTMENT OF HEALTH AND ENVIRONMENT  
NASHVILLE, TENNESSEE 37247-3101



Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: AUG 16 1991

Permit Number:

Date Expires:

November 1, 1991

931365F

Issued To:

Installation Address:

Diversified Scientific Services, Inc.

I-40 & Gallaher Road  
Kingston

Installation Description:

Emission Source Reference No:

Dual Fuel Boiler: Modification to Expand From  
D001 Solvent to D001, F001 thru F005 Solvents;  
Dry Baghouse Scrubber and Packed Tower Control  
PES 01

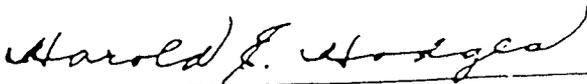
73-0137-01

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.  
This is not a permit to operate.

CONDITIONS:

1. This permit does not cover any air contaminant source that does not conform to the conditions of this permit and the information given in the approved application. This includes compliance with the following operating parameters:  
  
The rated heat input for this source shall not exceed 14.5 million Btu per hour.
2. Particulate matter emitted from this source shall not exceed 0.48 pounds per million Btu heat input (6.96 pounds per hour).
3. Hydrogen chloride emitted from this source shall not exceed 5.0 pounds per hour.
4. Chlorine gas emitted from this source shall not exceed 0.029 pounds per hour.
5. Gaseous fluoride (as hydrogen fluoride) emitted from this source shall not exceed 0.0124 pounds per hour.

(continued on the next page)

  
HAROLD E. HODGES, P.E.  
TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule or Regulation of the State of Tennessee or any of its Political Subdivisions.

F5221225

AUG 16 1991

931365F

6. Visible emissions shall not exceed 20% opacity as specified in Rule 1200-3-5-.01 of the Tennessee Air Pollution Control Regulations (aggregate count). Visible emissions from stacks will be determined by Tennessee Visible Emission Evaluation Method 2 as adopted by the Tennessee Air Pollution Control Board on August 24, 1984.
7. This permit shall serve as a temporary operating permit from initial start-up to the receipt of a standard operating permit, (regardless of the expiration date), provided the operating permit is applied for within thirty (30) days of initial start-up and the conditions of this permit and any applicable emission standards are met.
8. The Technical Secretary shall be notified in writing at least ten (10) days prior to start-up of the source.
9. Liquid propane gas, and the following solvents D001, F001 thru F005 only shall be used as fuel(s) for this source.
10. The boiler shall be operated at a temperature of at least 1,800°F.
11. This permit is valid only for the storage tank(s) listed below:

<u>Tank I.D.</u>	<u>Contents</u>	<u>Capacity</u>	<u>Turnovers/year</u>
01, 02, 03	D001, F001-F005 (mixture)	10,000 gallons (each)	55 (each)

12. A log of the boiler operating temperature and solvents burned (amount and type) on a daily basis must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than two years.
13. Within 90 days after the issued date of this permit, a source test for chloride shall be conducted. The owner or operator shall furnish the Technical Secretary a written report of the results of this emissions performance test within 45 days of testing. Chloride emissions shall be determined utilizing EPA Method 26 as promulgated in the Federal Register, Volume 56; Number 30, February 13, 1991, beginning on page 5770 with the contents of the third and fourth impingers being analyzed for chlorine utilizing ion chromatography.

(continued on the next page)

F5221225

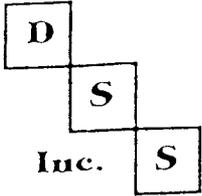
AUG 16 1991

931365F

14. Within 90 days after the issued date of this permit, a source test for gaseous fluorides shall be conducted. The owner or operator shall furnish the Technical Secretary a written report of the results of this emissions performance test within 45 days of testing. Gaseous fluoride emissions shall be determined utilizing either EPA Method 13A or 13B as published in the Federal Register, Vol. 45, No. 121, June 20, 1990, and subsequent amendments. For purpose of compliance with the gaseous fluoride emission standard contained in Condition 5 only the fluoride catch in the impingers will be considered. In conducting this testing the filter is to be placed between the probe and first impinger and the probe and filter shall be recovered and analyzed separately from the impingers.
15. The Technical Secretary shall be notified in writing at least 20 days prior to performing these compliance tests so that his representative may be present.
16. The chlorine and fluorine mass content of the fuel burned shall not exceed that which is equivalent to the contents in the fuel burned during the source tests required in conditions 13 and 14 of this permit.

F5221225

Appendix F  
DSSI Notice to Generators of Required State Waste Delivery License



MEMORANDUM

DATE: December 3, 1991

TO: To all Shippers of Material to Diversified Scientific Services, Inc.

FROM: James T. McVey *James T. McVey*

SUBJECT: Tennessee License for Delivery

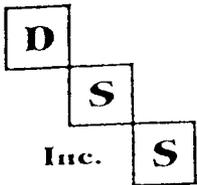
As required by new State of Tennessee Regulations found in 1200-2-10-.32 all generator's shipping waste material to our site or any site in the State of Tennessee must obtain a permit. This permitting process is supposedly non-cumbersome and one permit should allow access to any site in the State of Tennessee.

The State of Tennessee also enacted a tax of \$0.01 per pound on any materials entering the state. Some of the Tennessee disposal sites or waste processors have passed this tax on to you the generators and in most cases have also multiplied this tax by 3 to 5 times for handling etc., Diversified Scientific has elected to absorb this extra tax, at this time.

For further information about these two issues, please contact Ms. Mary Short with the State of Tennessee, Division of Radiological Health at 615/741-7812.

Appendix G  
DSSI Example Land Disposal Restriction Notification Form





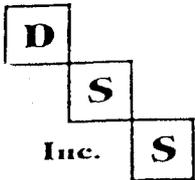
SECTION III - WASTE CHARACTERIZATION

\_\_\_ A. Spent Solvent Waste (268.30)

The above referenced waste(s) must be treated to meet the treatment standard expressed as Constituent Concentration in the Waste Extract as outlined in 40 CFR 268.41 Table CCWE below.

TABLE CCWE - CONSTITUENT  
CONCENTRATIONS IN WASTE EXTRACT

F001-F005 Spent Solvents	Concentration (in mg/l)	
	Wastewaters Containing Spent Solvents	All Other Spent Solvent Wastes
Acetone	0.05	0.59
n-Butyl alcohol	5.0	5.0
Carbon disulfide	1.05	4.81
Carbon tetrachloride	.05	.96
Chlorobenzene	.15	.05
Cresols (and cresylic acid)	2.82	.75
Cyclohexanone	.125	.75
1,2-Dichlorobenzene	.65	.125
Ethyl acetate	.05	.75
Ethylbenzene	.05	.053
Ethyl ether	.05	.75
Isobutanol	5.0	5.0
Methanol	.25	.75
Methylene chloride	.20	.96
Methylene chloride (from the pharmaceutical industry)	12.7	.96
Methyl ethyl ketone	0.05	0.75
Methyl isobutyl ketone	0.05	0.33
Nitrobenzene	0.66	0.125
Pyridine	1.12	0.33
Tetrachloroethylene	0.079	0.05
Toluene	1.12	0.33
1,1,1-Trichloroethane	1.05	0.41
1,1,2-Trichloro-1,2,2-		
Trifluoroethane	1.05	0.96
Trichloroethylene	0.062	0.091
Trichlorofluoromethane	0.05	0.96
Xylene	0.05	0.15



\_\_\_ B. CALIFORNIA LIST WASTE (268.32)

The above referenced waste(s) must be treated to meet the treatment standards as set forth in 40 CFR 268 Subpart D, or where specific treatment standards are not applicable, the waste must be treated in accordance with the requirements specified in 40 CFR 268.32 and RCRA Section 3004(d).

CALIFORNIA LIST CONSTITUENTS  
AND THEIR PROHIBITION LEVELS

Constituent	Concentration (MG/L)
Cyanides	1,000
Arsenic	500
Cadmium	100
Chromium VI	500
Lead	500
Mercury	20
Nickel	134
Selenium	100
Thallium	130
Liquids with pH $\leq$ 2.0	—
Hazardous Waste Liquids with PCB's	50 ppm
Wastes containing HOC's*	1,000 mg/kg

\*Halogenated Organic Carbon (See 40 CFR Appendix III).

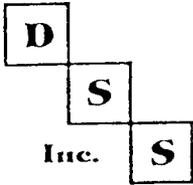
\_\_\_ B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS

The EPA hazardous waste number(s) \_\_\_\_\_ have been treated in compliance with the applicable performance standards specified in 40 CFR Part 268 Subpart D. Supporting data is available to be provided as requested by the receiving facility.

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based upon my inquiry of those individuals immediately responsible for obtaining this information. I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d) without dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

\_\_\_ B.2 RESTRICTED WASTES FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY (AND THE WASTE HAS BEEN TREATED BY THE SPECIFIED TECHNOLOGY)

"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." This treatment has been performed for EPA hazardous waste number(s) \_\_\_\_\_



\_\_\_ C. RESTRICTED WASTE SUBJECT TO A VARIANCE

The waste identified above is subject to a national capacity variance, a treatability variance, or a case-by-case extension which expires on \_\_\_\_\_. This variance applies to EPA hazardous waste number(s) \_\_\_\_\_. If disposal occurs in landfill or surface impoundment, the unit must meet the minimum technological requirements. (Note: Wastes destined for deepwell injection are subject to a separate set of variances. See instructions or 40 CFR Part 148.)

USEPA Hazardous Waste Code/  
Treatability Group (NWW or WW)

Extension Date

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_ D. RESTRICTED WASTE WHICH MAY BE LAND DISPOSED WITHOUT FURTHER TREATMENT

In accordance with 268.7(a)(2) and regarding those restricted waste(s) contained in this shipment, these waste(s) may be land disposed without further treatment. I submit the following certification statement.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

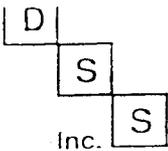
Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

A copy of this Notice must accompany each manifested load as required by 40 CFR 268.7 (a) (1).

Appendix H  
DSSI Example Waste Profile Sheet







CATEGORY II ISOTOPES (Continued)

TOTAL uCi/ml

Mn-54	_____
Ni-63	_____
Tc-99	_____
Zn-65	_____
OTHER _____	_____
OTHER _____	_____

ANY ISOTOPE NOT LISTED ABOVE AND SNM OR SOURCE MATERIALS IS CASE BY CASE BASIS.

THE ABOVE INFORMATION IS BASED ON: \_\_\_ ANALYSIS \_\_\_ ESTIMATE

GENERATOR: \_\_\_\_\_ DATE: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_

**Appendix I**  
**DSSI Example Service Contract Terms and Conditions**



DIVERSIFIED SCIENTIFIC SERVICES, INC.  
SERVICE CONTRACT  
TERMS AND CONDITIONS  
for Liquid Waste Treatment Services.

CHEM NUCLEAR SYSTEMS INC

This CONTRACT made this \_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, by and between Diversified Scientific Services, Inc. ("DSSI") and \_\_\_\_\_ ("COMPANY"),

BACKGROUND

DSSI is engaged in the business of providing a variety of Services for radioactive waste management and nuclear facility support. COMPANY, in anticipation of its needs for these Services, wishes to enter into this Contract with DSSI to establish the terms and conditions by which DSSI and COMPANY will be obligated with respect to each other when the Equipment and Services are needed and by which DSSI may quickly commence performance. DSSI (hereafter referred to as "Contractor") shall provide mixed waste solvent treatment services for acceptable waste forms facility for \_\_\_\_\_ (hereafter referred to as "Company").

Section 1. Definitions

- 1.1 Unless defined here or elsewhere in this Contract, terms used will have the customary meanings used by the nuclear industry.
- 1.2 Radioactive Material: Radioactive Material means material that is radioactive or contaminated but is not necessarily Waste.
- 1.3 Equipment: Equipment means the tools, supplies, and capital equipment used by DSSI or provided to COMPANY in the performance of the Services.
- 1.4 Proprietary Information: Proprietary Information means information that is claimed as proprietary by the disclosing Party ("Owner") who has a reasonable belief based on the confidential nature of the information that the disclosing Party may prevent the other Party ("Holder") from disclosing it to third parties.
- 1.5 Acceptable Waste: Waste that conforms to licenses, permits, etc. controlling Contractor's facility such as oil, scintillation cocktails, solvents, and other liquids that contain sufficient BTU value for incineration.
- 1.6 Containers: Bulk and drum holding vessels for waste, which comply with all Federal, State, and local laws, rules, regulations, ordinances and orders applicable to the containment of the type of waste delivered.



- 1.7 Non-Conforming Containers: All holding vessels for waste or Non-Conforming Waste which constitute containers or hold ~~Non-Conforming~~ materials.
- 1.8 Non-Conforming Materials: Any materials that are not waste or containers.
- 1.9 Waste: Materials accepted as conforming to specifications in accordance with the provisions of Section 5 hereof and which, in all respects, are permitted to be received and handled by Contractor under its State of Tennessee TSD Permit, its RCRA Part B Permit and its State of Tennessee Radioactive Materials License for the plant and whose characteristics and constituents are accurately and fully described in the Generator's Waste Profile Sheet, Company's Material Safety Data Sheet for the waste material, Company's Waste Shipment Manifest and/or Company's Certificate of Analysis for the waste material, copies of which documents are to be attached here to as Exhibit A and incorporated in this Agreement by the reference.
- 1.10 Non-Conforming Waste: Waste shall be considered non-conforming if it fails to meet the description provided to the Contractor in any material respect. The Contractor may revoke acceptance of the waste if it is determined to be non-conforming. The Contractor shall notify the Company of the non-conformity within ten (10) days of determination.

The revocation of acceptance shall be effective immediately upon receipt by the Company of verbal notice followed by written notice within seven (7) days of non-conformity.

Company shall notify the Contractor within seven (7) business days following receipt of written notice with directions for disposal of the waste. If Company and the Contractor cannot agree on disposal of the non-conforming waste, Company shall make arrangements for the removal of the non-conforming waste from the storage or disposal facility and shall pay to Contractor reasonable expenses incurred in handling the non-conforming waste.

## Section 2. Contract and Payments

- 2.1 If COMPANY wishes to use its Purchase Order for billing Services and equipment, that Purchase Order must state the following: Contract No. \_\_\_\_\_ between DSSI and COMPANY governs this Purchase Order. This Purchase Order is for billing purposes only; any conflicting or additional terms and conditions that are contained herein are without effect unless expressly approved by DSSI.



- 2.2 Term of payment unless specified otherwise in a Contract Exhibit is the net amount due within thirty (30) days of receipt of invoice. Invoices must be mailed to:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Attention

- 2.3 A service charge of 1-1/2% per month on the unpaid balance will be added to the net amount of invoices not paid when due.
- 2.4 DSSI may increase its prices on thirty (30) days' notice.
- 2.5 Company will pay all fees to Contractor for performance of requested services. Pricing for each project [sample taking, analysis and transportation] will be provided prior to the inception of the project. Disposal pricing will be provided upon receipt and approval of a Waste Profile Sheet for each unique stream. Pricing will be documented by an individual pricing schedule for each project.

### Section 3. Confidentiality

- 3.1 The Holder must keep Proprietary Information in confidence and not disclose it to any third Party.
- 3.2 If the Holder is required to disclose the Proprietary Information to a third Party, the Holder must first notify the Owner who may then disclose or allow disclosure of the Proprietary Information to the third Party, if it is reasonable to do so under the circumstances.
- 3.3 When Proprietary Information contained in documents provided by Owner is no longer needed or the Owner demands its return, it must immediately be returned. The obligation to keep the Proprietary Information in confidence ends five (5) years after the termination of this Contract.
- 3.4 This Contract is the Proprietary Information of both DSSI and COMPANY.

### Section 4. Termination

- 4.1 This Contract will continue in effect unless terminated in one of the ways specified below.
- 4.2 Either party may terminate this Contract on an anniversary of its effective date without termination charges by giving at least sixty (60) days' written notice.



- 4.3 Either party may terminate this Contract or an Exhibit at any time for convenience by giving at least thirty (30) days' written notice. If COMPANY so terminates, it must pay DSSI for Services provided plus reasonable expenses incurred as a result of termination.
- 4.4 If a party breaches the terms and conditions of this Contract or an Exhibit and fails to cure such breach within thirty (30) days after receiving notice of such breach, the nonbreaching party may terminate this Contract or Exhibit, respectively. Failure to terminate does not operate as a waiver of the nonbreaching party's right to terminate on subsequent breaches. Liability for breach of warranty is set forth in Section 6. In all other cases, the breaching party's liability is limited to direct damages.
- 4.5 If circumstances arise beyond the reasonable control of either party that prevents the Services of the Contract from being provided or removes the need for such Services, such as acts of government, embargoes, strikes, acts of God, etc., the affected Contract shall be terminated without liability to either party effective on the occurrence of the circumstances. Notice of termination shall be given as soon as practical.

#### Section 5. Contractor Responsibilities

- 5.1 The Contractor will provide all labor, supervision of labor, and equipment required to perform waste processing and disposal service for Company.
- 5.2 Contractor will, if requested, provide sample taking services.
- 5.3 Contractor will, if requested, provide liquid waste analysis and characterization for submittal by Company to the facility for approval.
- 5.4 Contractor will, if requested, provide liquid waste transportation services.
- 5.5 The Contractor shall provide the Company with a certificate of disposal in accordance with all federal, state, and local regulations, verifying such disposal or treatment. The Company shall have the right to request a report in writing for all non-disposed/treated waste any time during the contract.
- 5.6 Upon request, the Contractor will provide evidence of all federal, state, and local permits necessary to operate any facility used to treat, store or dispose of the Company's waste.



- 5.7 The Contractor will maintain all permits or other documents which are required for processing, treatment, disposal or transporting of the wastes received from the Company. The Contractor shall promptly notify the Company of any modification or cancellation of any permit or license required to service this contract. The Contractor shall furnish to the Company evidence of all new or renewed permits or other documents applicable to this specification upon Company's request.
- 5.8 The Contractor will provide required notification of receipt and acceptance of waste.
- 5.9 Waste Characterization - Contractor, upon request, will supply sample collection services. Contractor shall supply the labor and procedures to collect samples for waste analysis. When Contractor supplies this service, Company shall provide required support as necessary including, but not limited to, access, shipping containers, shipment for analysis, etc.
- 5.10 Contractor will provide transportation equipment and services, as available and on request, to transport Company's Waste from Company's facility. Such services will be performed in a professional manner in accordance with established regulations and Contractor's procedures.

Whenever Company desires to have Waste transported to Contractor's facility, Company will give notice to Contractor. The notice must contain the following information:

- (a) The location of the waste to be removed;
- (b) A description of the waste to be removed including representative radiation levels and authorization number for DSSI's facility;
- (c) The date on which the Company wants the shipment to be completed.

Contractor will then arrange for the waste to be transported to Contractor's facility in accordance with Company's shipment completion date as mutually agreed.

## Section 6. Company Responsibilities

- 6.1 Company is responsible for transportation of waste samples and/or waste to Contractor's facility. If requested, Contractor will provide transportation services.



- 6.2 Company will submit a completed Diversified Waste Profile Sheet and radiological data with supporting laboratory analysis as necessary to Contractor for approval prior to shipment of liquid waste material for processing. If requested by Company, Contractor will provide waste sampling protocol, sampling and analysis services.
- 6.3 Company represents and warrants an accurate and complete disclosure of the nature, chemical composition, physical properties, and radioactive characteristics of all the waste materials delivered to Contractor hereunder.
- 6.4 Company will provide accurate and complete material safety data information describing any toxic or otherwise hazardous characteristics of the waste materials and substances and/or the holding vessels if request by Contractor. If Company subsequently becomes aware of any toxic or other characteristics of the waste materials and/or the holding vessels which are or may be harmful to person or property or the environment in general, Company will immediately notify Contractor thereof.
- 6.5 With respect to the waste materials and substance delivered to Contractor and the containers therefore, Company has complied, and will comply, with all applicable federal, state, and local laws, rules, ordinances, regulations, and orders, including (but not limited to) those requiring Company to prepare any manifests and shipping papers.
- 6.6 In the event that Company submits materials or containers for processing which do not comply with applicable regulations, such submission shall be considered a change, and Contractor shall be entitled to an equitable adjustment in the contract price.
- 6.7 The holding vessels are sufficiently durable to contain the waste materials and to prevent leakage during loading, transportation and unloading. The holding vessels are accurately and specifically labeled or marked in accordance with all applicable federal, state, and local laws, rules, regulations, ordinances, and orders.
- 6.8 Company shall submit a completed Waste Profile Sheet and radiological data along with supporting laboratory analysis, as specified by Contractor, to Contractor for license compliance evaluation. All laboratory analysis shall be performed in accordance with EPA testing methodology SW-846.



- 6.9 Company hereby acknowledges that Contractor is relying upon Company to: (a) select holding vessels for the waste materials which are in compliance with all applicable federal, state, and local laws, rules, regulations, ordinances and orders; and (b) perform sufficient tests and analyses or provide further assurances to determine that the waste materials meet the requirements of Contractor's permits.
- 6.10 Contractor will have the right, but not the obligation, to analyze the waste materials received by it for conformity with the specifications set forth in its permits.
- 6.11 Company is responsible for obtaining and having the required Tennessee Radioactive Shipper's Permit.
- 6.12 Company shall screen (1/32 screen) liquid waste to insure that all extraneous material is removed.

#### Section 7. Delivery

- 7.1 Company must obtain from Contractor clearance and permission of specific date(s) and time periods in which the waste may be delivered to the plant due to license inventory constraints.
- 7.2 Contractor has the right to perform the Disposal Services on any day selected by it and allowed by its permits.
- 7.3 Company agrees to allow Contractor sufficient time to analyze customer's waste materials. Company will instruct the transporter of the waste materials shipped in a tanker to remain at Contractor's Plant until it is released by Contractor. Contractor may perform analyses on large bulk shipments as required by the Plant's RCRA Part B Permit, or Radioactive Materials License.

These analyses may require up to eight hours, depending on the type of Container. Demurrage charges for these excess hours will be borne solely by Company. Demurrage charges applicable to Contractor's retention of the transport for each hour in excess of this normal eight-hour period will be reimbursed by Contractor to Company upon receipt by Contractor of satisfactory evidence of such excess demurrage.

- 7.4 Upon Contractor's request, Company will instruct the transporter to return immediately to Company the waste materials delivered to Contractor's Plant if Contractor: (a) rejects such waste materials for any reason set forth in Section 6.2; or (b) after completing the waste analysis, rejects such materials as constituting Non-Conforming Materials.



## Section 8. Acceptance of Waste, Passage of Title and Limitation of Contractor Obligations

- 8.1 Provided that the waste materials meet the specification set forth in the permits and approved Waste Profile Sheets, Contractor shall be deemed to have accepted the waste materials, and title to the Waste shall thereupon pass to Contractor. Contractor's acceptance of delivery of the waste and the containers will not waive or impair any of Contractor's rights hereunder, including, without limitation, its rights under Section 6.2.
- 8.2 Ownership and title to any bulk transport tanker type containers at all times will remain in Company or Transporter. After the waste is removed from a bulk Transport Tanker, Company, at its expense, will pick up the bulk transport containers on a schedule agreed upon by Contractor and Company. Contractor will be responsible for removing the waste liquid from the tanker and performing the required rinses to result in an EPA cleaned container. Company shall retain sole responsibility for the proper cleaning of any bulk transport container and for the proper disposal of any residual contents therein after delivery of the waste to Contractor. Unless otherwise agreed to beyond the above the specified cleaning. Provided further, however, that Contractor will retain, clean and dispose of any drum type containers received.

## Section 9. Contractor's Warranties and Limitation of Liability

- 9.1 Contractor's duties, obligations, covenants, and warranties stated in this Agreement will be limited solely and exclusively to Waste and Containers and will not apply to any Non-Conforming Materials and/or Non-Conforming Containers delivered to Contractor.
- 9.2 Contractor will render the Disposal Services in accordance with Contractor's permits issued by the EPA and Tennessee. Except as provided in the foregoing sentence, Contractor makes no representations or warranties express or implied regarding the Services.
- 9.3 DSSI warrants that it will perform Services provided under this Contract properly, that is, in a manner consistent with sound, prudent commercial nuclear industry practice. Services improperly performed will be reperfomed at no additional charge if, in DSSI's opinion, reperformance would remedy improper performance. If proper performance in DSSI's opinion cannot be obtained, DSSI will refund 100% of payments made to it for the portion of the service that was improperly performed.



- 9.4 Company's exclusive remedy and Contractor's exclusive liability under this Agreement or otherwise (including negligence) will be for damages which will in no event exceed so much of the Base Fee as is applicable to that portion of the waste with respect to which damages are claimed. THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. DSSI WILL NOT BE LIABLE TO COMPANY FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM PERFORMANCE OF OR NON-PERFORMANCE OF THIS CONTRACT OR THE RESULTS OF A NUCLEAR INCIDENT.
- 9.5 To the extent stated in section 5.8.3, each party (COMPANY AND DSSI) agrees to indemnify and defend the other for claims, demands, liabilities, penalties, fines, causes of action and costs and expenses incidental thereto (including reasonable attorney's fees) arising out of personal injury, death, or loss or damage to property, to the extent such injury, death, or loss or damage results from such party's negligence, breach of contract or willful misconduct.

#### Section 10. Company's Representations and Warranties

- 10.1 Company represents and warrants that:
- (a) With respect to the waste materials and substances delivered to Contractor and the containers therefore, Company has complied, and will comply, with all applicable federal, state, and local laws, rules, ordinances, regulations, and orders, including (but not limited to) those requiring Company to prepare any manifest and shipping papers.
  - (b) The holding vessels are sufficiently durable to contain the waste materials and to prevent leakage during loading, transportation, and unloading.
  - (c) The holding vessels are accurately and specifically labeled or marked in accordance with all applicable federal, state and local laws, rules, regulations, ordinances, and orders.
  - (d) Company is under no legal restraint or order which would prohibit the transfer of or ownership in or title to the waste to Contractor for the performance of the Disposal Services hereunder.
- 10.2 Company represents and warrants an accurate and complete disclosure of the nature, chemical composition, physical properties, and radioactive properties of all the waste materials delivered to Contractor hereunder.



- 10.3 Company will provide accurate and complete material safety data information describing any toxic or otherwise hazardous characteristics of the waste materials and substances ~~and/or~~ the holding vessels if request by Contractor.

If Company subsequently becomes aware of any toxic or other characteristics of the waste materials and/or the holding vessels which are or may be harmful to person or property or the environment in general, Company will immediately notify Contractor thereof.

- 10.4 Company acknowledges and agrees that all of the Company's representations and warranties made in this Agreement are material in every respect and will survive the termination of this Agreement.

### Section 11. Liability

- 11.1 DSSI must maintain insurance of the following types:

- o Workman's Compensation - Statutory Limits.
- o Employers' Liability Coverage - At least \$500,000.
- o Comprehensive General Liability - At least \$500,000 combined single limit bodily injury and property damage.
- o Automobile Bodily Injury and Property Damage (Covering DSSI's vehicles used in connection with Services provided under this Contract) - At least \$1,000,000 combined single limit bodily injury and property damage.
- o Nuclear Liability Insurance, Barnwell, S.C. Disposal Site (Facility Form) - At least \$3,000,000.
- o Nuclear Liability Insurance (Suppliers and Transporters Form) - At least \$3,000,000.

- 11.2 COMPANY must maintain insurance as specified in Attachment I.

### Section 12. Miscellaneous

- 12.1 Contractor's waste classification and container size will govern, unless proven to be incorrect.
- 12.2 This Contract is to be governed by the laws of Tennessee.
- 12.3 The provisions of this Contract express the entire agreement of the parties. Any prior or contemporaneous understanding, promise, warranty, or condition has no effect.



- 12.4 If a provision of this Contract is held to be invalid, either party may suspend performance on the Contract, pending good faith renegotiation of the invalid provision. If neither party exercises such option, the remainder of the Contract will continue in effect.
- 12.5 (a) Notwithstanding any contrary provision here, Contractor will not be liable to Company and will not be deemed to breach this Agreement because of delays or non-performance resulting from any circumstances beyond Contractor's control or: strikes, lockouts, work stoppages or delays, labor disputes; inability to obtain labor, fuel, utilities, materials, equipment or other facilities; action or request of any governmental body, regulatory agency or judicial authority; war, riot, or sabotage, accident, explosion or fire; flood, storm or other acts of God; court injunction or court order; loss of permit(s); compliance with applicable federal, state or local laws, regulations, orders, or actions; or any other action or omission beyond Contractor's control.
- (b) Contractor without liability to Company will have the right upon notice to Company to terminate this Agreement and to refuse to perform the Service if in the sole judgment of contractor (i) Company has breached any of the terms of this Agreement; (ii) the performance of the Services would cause Contractor to violate its permits from the EPA and/or from Tennessee; or (iii), the performance of the Services would be economically, technically or commercially impracticable, or would otherwise be illegal.
- 12.6 This Contract will enure to the benefit of and be binding on the Parties' successors and assigns. COMPANY must not assign this Contract or any portion of it without prior written consent of DSSI. DSSI represents that it is wholly owned subsidiary of Chemical Waste Management, Inc. (CWM). DSSI further represents that it was acquired by CWM and that operationally, DSSI is a part of Chem-Nuclear Systems, Inc.
- 12.7 DSSI complies with Title VII of the Civil Rights Act of 1964, Section 503 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, the amendments to these acts, Executive Order 11246, and the regulations issued thereunder.



CHEM-NUCLEAR SYSTEMS INC

To show their agreement to the terms and conditions of the Contract, the Parties have authorized their representatives to sign their names below.

DIVERSIFIED SCIENTIFIC SERVICES, INC. COMPANY NAME  
(DSSI) (COMPANY)

BY: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

CANDIDATES FOR TR AMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1	1088	86005600	SCINT.VIALS	181.44	D001
2	1090	C93034656	SCINT.VIALS	97.52	D001
3	1417	86072200	SOLVENT DRUM#'S 745 H860722N	102.06	D001
4					F005
5		86172200	SOLVENT DRUM #746 H861722	102.06	D001
6					F005
7	Total:			204.12	
8	1437	86057500	VARIOUS SOLVENTS DRUM #666	158.76	D001
9	1568	86081700	ORGANIC 1A DRUM #875	199.58	D001
10					D003
11					U188
12	1749	87082800	TOLUENE,ETHANOL,TRICHLOROACETIC ACID,ISOPRO	102.06	D001
13					F005
14	1823	87022600	COMBINED SCINT. VIALS DRUM #1206	226.80	F003
15	1829	87022800	COMBINED SCINT. VIALS DRUM #1213	226.80	F003
16	1901	87044100	SCINTILLATION VIALS DRUM #1341	226.80	F003
17	2008	87073700	MERCURY IN OIL DRUM#1447	226.80	D009
18	2268	87121600	SCINTILLATION LIQUID DRUM #1759	45.36	D001
19	2450	88028800	LACQUER THINNER IN VERMICULITE #2245	158.76	F003
20	2481	88040400	WASTE OIL SOLVENTS DRUM #2262	181.44	D009
21					F005
22	2737	88162800	TRICHLOROACETIC ACID/ETHANOL DRUM# 3232	113.40	D001
23					D002
24	2833	88250100	AQUEOUS SOLUTION W/20% METHANOL, 5% ACETI	20.00	D001
25					F003

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
26	2911	89461800	SPENT CHROMIC ACID (12 EA-1 GAL)	49.90	D002
27					D007
28					F005
29	2912	88177400	BENZENE,HEXANE,TOLUENE, ACETONE, HEPTANE (24	90.72	F003
30	3086	89462200	LP1A DR #3854	181.44	F005
31	3108	88273600	PAINT STRIPPER DRUM #4025	68.04	F002
32					F003
33		88273700	PAINT STRIPPER DRUM #4026	68.04	F002
34					F003
35		88273800	PAINT STRIPPER DRUM #4027	68.04	F002
36					F003
37		88273900	PAINT STRIPPER DRUM #4028	68.04	F002
38					F003
39		88274000	PAINT STRIPPER DRUM #4029	68.04	F002
40					F003
41		88274100	PAINT STRIPPER DRUM #4030	68.04	F002
42					F003
43		88274300	PAINT STRIPPER DRUM #4032	68.04	F002
44					F003
45	Total:			476.27	
46	4049	89823100	WASTE OIL	56.70	D009
47					F003
48	1000022	C91020022	SCINTILLATION VIALS W/XYLENE	68.04	F003
49		C91022101	SCINT VIALS W/XYLENE (15)	68.04	F003
50	Total:			136.08	

CANDIDATES FOR T. . . . .MENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
51	1000156	C91020589	RESIDUAL LIQUID SCINT. WASTE	45.36	F003
52		C91020590	RESIDUAL LIQUID SCINT. WASTE	45.36	F003
53		C91020591	RESIDUAL LIQUID SCINT. WASTE	45.36	F003
54		C91020592	RESIDUAL LIQUID SCINT. WASTE	45.36	F003
55		C91020593	RESIDUAL LIQUID SCINT. WASTE	45.36	F003
56		C91020594	LIQUID SCINT. WASTE	90.72	F002
57					F003
58		C91020595	LIQUID SCINT. WASTE VIALS	9.07	F002
59					F003
60	Total:			326.59	
61	1000182	C91020177	LAL-2089/XYLENE, ACETONE	12.70	D001
62					F003
63					U239
64		C91020178	LAL-2090/XYLENE, ACETONE	12.70	D001
65					F003
66					U239
67		C91020179	LAL-2091/FLAMMABLE LIQUID	13.61	D001
68					D007
69					U056
70		C91020180	LAL-2092/FLAMMABLE LIQUID	13.61	D001
71					U161
72		C91020181	LAL-2093/"RQ" FLAMMABLE LIQUID (D008)	17.24	D001
73					D008
74					U002
75					U019

CANDIDATES FOR TRF 'ENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
76					U196
77					U239
78		C91020182	LAL-2094/EPOXY ENAMEL, ENAMEL PAINT	22.68	D001
79		C91020184	LAL-2096/ORM-A (LIQUID)	22.68	U044
80					U080
81					U211
82					U226
83					U227
84					U228
85	Total:			115.21	
86	1000221	C91020400	LIQUID SCINTILLATION VIALS	31.75	D001
87		C91020401	LIQUID SCINTILLATION VIALS	31.75	D001
88		C91020402	LIQUID SCINTILLATION VIALS	31.75	D001
89		C91020403	LIQUID SCINTILLATION VIALS	31.75	D001
90		C91020404	LIQUID SCINTILLATION VIALS	31.75	D001
91		C91020405	LIQUID SCINTILLATION VIALS	31.75	D001
92		C91020406	LIQUID SCINTILLATION VIALS	31.75	D001
93		C91020407	LIQUID SCINTILLATION VIALS	31.75	D001
94		C91020408	LIQUID SCINTILLATION VIALS	31.75	D001
95		C91020409	LIQUID SCINTILLATION VIALS	31.75	D001
96	Total:			317.52	
97	1000253	C91022137	LAL-3276/FLAMMABLE LIQUID	0.45	D001
98					U161
99					U159
100	1000292	C91020984	METHANOL	36.29	U154

CANDIDATES FOR T E N I F I C A T I O N AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
101	1000327	C92028382	CARBON TETRACHLORIDE	3.63	U211
102			METHYLENE CHLORIDE (4)	1.81	U080
103			TRICHLOROETHANE	0.45	U226
104		Total:		5.90	
105		C92028385	AFTA BRILLIANT SHINE	0.37	D001
106			BROMOBENZENE	2.00	D001
107			ETHANOL	7.26	D001
108			FLO-MASTER INK	0.45	D001
109		Total:		10.08	
110	Total:			15.98	
111	1000336	C91021545	WATER & SOLVENT	181.44	F002
112	1000448	C91020893	RAPID TAP CUTTING FLUID (2)	0.23	F002
113			TAP MAGIC CUTTING FLUID (10)	1.13	F002
114		Total:		1.36	
115		C91020894	CUTTING OIL (PETROLEUM DISTILLATES) (2)	0.17	D001
116			METHANOL (2)	1.00	D001
117			OATEY PURPLE-PRIMER MEK EPVC-PVC	0.91	D001
118			PIPE CEMENT/WELD-ON	0.91	D001
119		Total:		2.98	
120	Total:			4.35	
121	1000500	C92028052	1,1,1 TRICHLOROETHANE (INC-1)	199.58	U226
122		C92028059	REDI-SOLV (INC-8)	3.63	D001
123	Total:			203.21	
124	1000542	C92027047	FORMALDEHYDE (37%)	0.50	U122
125		C92027049	IODINE SOLUTION (.002N)	0.10	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
126			TETRAHYDROFURAN	0.50	D001
127					U213
128		Total:		0.60	
129	Total:			1.10	
130	1000761	C91023517	MIXED SOLV: ACETONE,TOLUENE,METHANOL (3)	36.29	D022
131					D038
132					F003
133					F005
134		C92027744	ORGANIC SOLVENTS ON DEBRIS & LIQUID	6.80	D001
135					D022
136					F003
137					F005
138					D038
139	Total:			43.09	
140	1000979	C91024589	MERCURY	0.03	D009
141			TRIPLE DISTILLED MERCURY	0.91	D009
142		Total:		0.94	
143		C92026360	BARIUM CHLORIDE	0.50	D001
144					D005
145			ENAMEL CLEANER & POLISH (WRV-8)	1.00	D001
146			HYDRAZINE DIHYDROCHLORIDE	0.10	D001
147			SHELL EPON RESIN 815	0.45	D001
148			THREE IN ONE HOUSEHOLD OIL	0.09	D001
149		Total:		2.14	
150		C92026362	ACETONE CONTAMINATED WIPES	3.63	D001

CANDIDATES FOR T      MENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
151					FO03
152			ADHESIVE TYPE 1	0.23	D001
153			PAINT THINNER & MINERAL SPIRITS	1.00	D001
154			PVC SOLVENT CEMENT	0.11	D001
155			THINNER DOPE & LACQUER (2) (WRV-4)	7.26	D001
156		Total:		12.23	
157		C92026363	ENAMEL PAINT (6)	6.00	D001
158					D008
159			LATEX HOUSE PAINT (WRV-3)	3.63	D001
160			OIL BASE PAINT	3.63	D001
161					D008
162		Total:		13.26	
163		C92026371	FREON 113 (WRV-9)	0.10	FO01
164		C92026376	3M TRIM ADHESIVE	0.14	D001
165			OATLEY PURPLE PRIMER	0.45	D001
166			TOLUENE	0.23	D001
167					U220
168			WELD-ON PVC CEMENT (JEF-4)	0.45	D001
169		Total:		1.28	
170	Total:			29.93	
171	1001090	C91025668	MIXED ORG SOLVENTS	28.50	D001
172					D004
173			MIXED ORG SOLVENTS (2)	11.40	D001
174					D004
175			SOLVENTS (ACETONE,TOLUENE)	5.70	D038

CANDIDATES FOR TITRATION AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
176					F005
177					F003
178			SOLVENTS (ACETONITRILE,DICHLOROMETHANE)	5.70	D001
179					D022
180	Total:			51.30	
181	1001118	C91023295	DYKEM BLUE LAYOUT FLUID (4)	1.36	D001
182			KRYLON-CLEAR ACRYLIC	0.37	D001
183			MOLYDRY LUBRICANT (3)	0.45	D001
184			SO SURE BLUE LACQUER	0.37	D001
185			SO SURE ORANGE LACQUER	0.37	D001
186			WD40 (3)	1.02	D001
187			WEEKEND SPRAY PAINT	0.37	D001
188					D001
189			ZYNOLITE CLEAR ACRYLIC (3)	1.11	D001
190		Total:		5.42	
191		C91023298	GE GLYPTAL ENAMEL (2)	1.81	D001
192			SCOTCHWELD ADHESIVE	0.11	D001
193					D008
194					D007
195			STRIP PAINT/VARNISH REMOVER	0.91	D001
196					F002
197			TAP MAGIC CUTTING FLUID (3)	1.36	D001
198		Total:		4.20	
199		C91023299	TAP MAGIC CUTTING FLUID	0.45	D001
200			TRICHLOROETHANE	0.11	U227

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
201		Total:		0.57	
202		C91023305	THREAD LUBRICANT	0.09	D011
203	Total:			10.26	
204	1001125	C91023322	OIL W/SOLVENTS (FREON,TCE,ACETONE,ETHANOL)	204.12	F001
205					F003
206	1001135	C91025422	ORG LIQUID 20% CH3CN,CH3OH,80% H2O	2.27	D001
207					F003
208					D002
209			ORG LIQUID 50% CH3OH,12% CH3COOH	2.27	D001
210					D002
211					F003
212	Total:			4.54	
213	1001158	C91025440	CHEM WASTE: AS,C6H6,N(CH)5,ACET,TOLUENE	25.00	D001
214					D018
215					D038
216					D004
217					F003
218					F005
219	1001242	C91025421	PHENOL/CHLOROFORM/ISOAMYL ALCOHOL (2)	22.68	D022
220	1001353	C91025110	H2O W/PHENYLARSINE OXIDE	2.50	D004
221	1001365	C92025906	10% FORMALIN (5)	56.70	D001
222		C92025907	10% FORMALIN	34.02	D001
223	Total:			90.72	
224	1001414	C91024922	BLACK ENAMEL	0.45	D001
225			BRUSHING LACQUER	0.06	D001

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
226		BUTYL ACETATE	0.45	D001
227		CASTOLITE HARDNER	0.03	D001
228		CONTACT CLEANER	0.11	D001
229		DENATURED ALCOHOL (2)	0.11	D001
230		EPOXY HARDENER & CATALYST (6)	0.68	D001
231		ISOPROPYL ALCOHOL	0.45	D001
232		MIRACLE REMOVER (2)	0.91	D001
233		MIXTURE OF VARNISH,TOLUENE,ETHANOL (MST-20)	0.45	D001
234		MOUNTING CEMENT	0.06	D001
235		MULTIPLE COAT VINYL (2)	7.26	D001
236		TRIM ADHESIVE	0.14	D001
237		Total:	11.17	
238	C91024926	MARAGLASS (5)	5.00	D001
239		SHELL EPON RESIN	3.00	D001
240		STAIN	1.00	D001
241		TURPENTINE	1.81	D001
242		UNI-POL LIGHT DUTY CLEANER	1.00	D001
243		VERSATEC TONER (8) (MST-25)	29.03	D001
244		Total:	40.84	
245	C91024931	CATALYST (11)	0.62	D001
246		CONTACT CLEANER (2)	0.11	D001
247		LIQUID SOLDER	0.03	D001
248		POLAROID DIPPIT (8)	0.91	D001
249		POLYSTYRENE DOPE (2)	0.11	D001
250		POLYURETHANE COATING (7)	0.40	D001

CANDIDATES FOR T...MENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
251		PRIMER (8)	0.45	D001
252		RESIN (10) (MST-14)	10.00	D001
253		RESIN,HARDENERS (6)	2.72	D001
254		SOLVENT (58)	3.29	D001
255	Total:		18.65	
256	C92026296	CURING AGENT (3)	3.00	D001
257		EPOXY CATALYST SOLUTION (2)	2.00	D001
258		OIL STAIN (2)	0.91	D001
259		PAINTS (ALL COLORS) (16)	58.06	D001
260		PAINTS (ALL COLORS) (8)	3.63	D001
261		PAINTS W/LEAD (9) (WRV-3)	9.00	D001
262				D008
263		PAINTS, ALL COLORS (19) (WRV-3)	19.00	D001
264		VARNISH #1202	0.45	D001
265	Total:		96.05	
266	C92026297	CAT-A-LAC, REDUCER	3.63	D001
267		NEOPRENE: N-29 COLD BOND	3.63	D001
268				D008
269		PAINT (WHITE)	1.00	D001
270		PLASITE COLD SET COATING (5) (WRV-4)	18.14	D001
271		PLASITE, THINNER	3.63	D001
272		REZ-N-BOND	1.00	D001
273	Total:		31.03	
274	C92026298	PAINT (ALL COLORS) (WRV-5)	112.49	D001
275		PLASITE CATALYST	0.45	D001

CANDIDATES FOR T RIMMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
276		PLASITE CATALYST (6)	1.36	D001
277	Total:		114.31	
278	C92026299	CSC-500 RESITHANE (4) (WRV-6)	72.58	D001
279	C92026301	KEROSENE	3.63	D001
280		KEROSENE (WRV-8)	18.14	D001
281		PINE OIL SURFACTANT	3.63	D001
282		PLASITE THINNER	3.63	D001
283	Total:		29.03	
284	C92026302	CSC-500 RESITHANE (4) (WRV-9)	72.58	D001
285	C92026303	CSC-500 RESITHANE (WRV-10)	108.86	D001
286	C92026306	RAPID TAP CUTTING FLUID (8) (EWV-3)	0.91	U226
287	C92026311	ACETONE	0.45	D001
288		BLACK COATING	1.00	D001
289		EPOXY	0.11	D001
290			0.45	D001
291	Total:		0.57	
292		GRAY ENAMEL	3.63	D001
293		INDUSTRIAL ADHESIVE	0.14	D001
294		PIPE CEMENT (3) (EWV-1)	1.36	D001
295		POLYSTYRENE COIL DOPE	0.11	D001
296		PURPLE PRIMER (2)	2.00	D001
297		SYLON-CT	0.45	D001
298		TERPIN ELIXIR (48)	5.44	D001
299		THINNER	0.11	D001
300		VARNISH	0.45	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
301			WOOD DOUGH	0.14	D001
302			YELLOW PAINT W/ZINC CHROMATE	3.63	D001
303		Total:		19.50	
304		C92026314	GOODYEAR COLD PATCHING CEMENT	0.10	D001
305			LIQUID ELECT. TAPE	0.11	D001
306			PEMATEX AVIATION (2)	0.91	D001
307		Total:		1.12	
308	Total:			616.62	
309	1001420	C91024940	OIL BASE ENAMELS	3.63	D001
310					D001
311					D001
312					D001
313		C91024941	OIL BASE ENAMELS	3.63	D001
314					D001
315					D001
316					D001
317		C91024942	DUPONT 25P ACTIVATOR	3.63	D001
318			DUPONT 50PK ACTIVATOR	3.63	D001
319			GLID-GUARD SPEED ENAMEL	3.63	D001
320			OIL BASE ENAMELS	3.63	D001
321			PITTSBURG OIL BASE ENAMEL (2)	7.26	D001
322			WELBORNE OIL BASE ENAMEL	3.63	D001
323		Total:		25.40	
324		C91024943	TRAFFIC PAINT	3.63	D001
325	Total:			36.29	

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
326	1001542	C91025434	REPACK-MERCURY, METALLIC	199.58	D009
327	1001546	C92027739	BUTYL ACETATE	0.34	D001
328				0.84	D001
329			Total:	1.18	
330			TOLUENE	0.46	D001
331					U220
332	Total:			1.64	
333	1001608	C92026076	MERCURY	0.03	D009
334			MERCURY (2)	2.27	D009
335	Total:			2.30	
336	1001638	C92025969	REPACK-ORM-E	199.58	F001
337	1001651	C92026063	C6H5H3,XYL,CH3CN,C6H5NO2	2.63	D001
338					F003
339					F004
340					F005
341	1001668	C92026524	MERCURY, LIQUID	34.02	D009
342			MERCURY, LIQUID (3)	102.06	D009
343	Total:			136.08	
344	1001692	C92027514	LASER DYES W/METHANOL,COUMARIN (3)	102.06	D001
345					F003
346		C92027515	LASER DYES W/METHANOL,COUMARIN (2)	68.04	D001
347					F003
348	Total:			170.10	
349	1001773	C92026412	RAD OIL WASTE W/SPENT SOLVENTS	68.04	F001
350	1001792	C92026739	BROMOFORM	0.91	U225

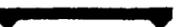
CANDIDATES FOR TITRATION AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
351			CHLOROFORM	0.45	U044
352			TRICHLOROETHYLENE	0.45	U228
353	Total:			1.81	
354	1001802	C92026650	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
355		C92026651	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
356		C92026652	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
357		C92026653	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
358		C92026654	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
359		C92026655	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
360		C92026656	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
361		C92026657	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
362		C92026658	LIQUID SCIN VIALS (READY VALUE)	31.75	D001
363	Total:			285.77	
364	1001875	C92026855	PSEUDOCUMENE SCINTILLATION COCKTAIL	36.29	D001
365					F003
366	1001914	C92027057	PSEUDOCUMENE SCINTILLATION COCKTAIL	36.29	D001
367	1001953	C92027291	LIQUID SCINT. VIALS (PSEUDOCUMENE,P-XYLENE)	45.36	D001
368					F003
369	1001986	C92027349	PHENYL ARSINE OXIDE IN H2O	2.00	D004
370	1002013	C92027471	KOH,ETHANOL,ISOPROPANOL	15.00	D001
371					D002
372	1002021	C92027618	XYLENE	0.50	D001
373					U239
374			XYLENE (4)	14.52	D001
375					U239

# CASE 1

ID	Name	Duration	Year 1															
			Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13			
1	Decision for Offsite Disposal of Residues	8.6w		Critical														
2	Inspection Trip to DSSI	21d		Summary														
3	Travel to DSSI	5d		Critical														
4	Analyze DSSI Information	18d		Critical														
5	Inspection Trip to Disposal Facility	22d			Summary													
6	Travel to Disposal Facility	5d			Critical													
7	Analyze Disposal Facility Information	17d			Critical													
8	Waste Selection	85d		Summary														
9	Determine Wastes Suitable for DSSI	21d		Critical														
10	Prepare Candidate Waste List	55d		Summary														
11	NEPA Documentation	109d				Summary												
12	Determine Required NEPA Documentat	22d				Critical												
13	Prepare Required NEPA Documentatio	87d				Summary												
14	Exemption From DOE Orders	151d				Summary												
15	Prepare Request for 5820.2A Exempti	85d				Critical												
16	Finalize Request With DOE/AEO	43d					Summary											
17	Finalize Request With DOE/HQ	64d					Summary											
18	Waste Preparation	198d		Summary														
18	Install Waste Bulking Equipment	85d		Critical														
20	Bulk Scintillation Vials	85d				Summary												
21	Bulk Labpacks/Other	131d			Summary													
22	Analyze Bulked Wastes	132d			Summary													
23	Prepare Waste Profile Sheets	131d				Critical												
24	Prepare Waste Shipping Manifests	131d				Summary												
25	DSSI Treatment	152d				Summary												
26	Include DSSI in LANL/CWM Contract	85d				Critical												
27	Finalize Waste Profile Sheets with DS	84d					Summary				Critical							
28	Negotiate Waste Shipment Schedule	20d										Critical						
29	Ship Wastes to DSSI	23d												Critical				

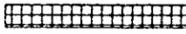
Project:  
Date: 01/10/7

Critical  
 Noncritical  
 Progress  
 Milestone  
 Summary  
 Rolled Up 

## CASE 2

ID	Name	Duration	Year 1									Year 2							
			Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17
1	Decision for Return of Residues to LANL	8.6w		Critical															
2	Inspection Trip to DSSI	21d		Summary															
3	Travel to DSSI	5d		Critical															
4	Analyze DSSI Information	16d		Critical															
5	Waste Selection	85d		Summary															
6	Determine Wastes Suitable for DSSI	21d		Critical															
7	Prepare Candidate Waste List	55d		Summary															
8	NEPA Documentation	88d			Summary														
9	Determine Required NEPA Documentat	22d			Critical														
10	Prepare Required NEPA Documentatio	44d			Summary														
11	Waste Preparation	188d		Summary															
12	Install Waste Bulking Equipment	85d		Critical															
13	Bulk Scintillation Vials/Labpacks/Other	131d		Summary															
14	Analyze Bulked Wastes	110d			Critical														
15	Prepare Waste Profile Sheets	109d			Critical														
16	Prepare Waste Shipping Manifests	109d			Summary														
17	DSSI Treatment	218d			Summary														
18	Include DSSI in LANL/CWM Contract	88d			Critical														
18	Finalize Waste Profile Sheets with DS	41d								Critical									
20	Negotiate Waste Shipment Schedule	20d									Critical								
21	Ship Wastes to DSSI	23d										Summary							
22	Clean Complete DSSI Treatment Syste	5d															Critical		
23	Treat Wastes at DSSI	10d															Critical		
24	Clean LANL Residues from Treatment	7d															Critical		
25	Treat/Package Residues to LDR Stand	11d															Critical		
26	Return Treatment Residues to LANL	21d																Critical	

Project: \_\_\_\_\_  
 Date: 8/1/83

Critical 
 Noncritical 
 Progress 
 Milestone 
 Summary 
 Rolled Up 

CANDIDATES FOR TYPING AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
376	Total:		15.02	
377	C92027619	CRYSTAL CLEAR/KRYLON (13)	2.58	D001
378		MIKRO KLEER (2)	0.45	D001
379		NO-RUST/SLIDE (4)	1.81	D001
380		PRIMER COATING ALKYD	0.37	D001
381		WD-40	0.45	D001
382	Total:		5.67	
383	C92027621	ACETONE	0.45	D001
384				U002
385		BENZENE	3.63	D001
386				U019
387				D018
388		ETHYL ALCOHOL	0.45	D001
389		HEXANES (3)	10.89	D001
390		ISOBUTYL ALCOHOL (4) (CMR-4)	1.81	D001
391		METHANOL ALCOHOL	3.63	D001
392				U154
393		METHYL ALCOHOL (METHANOL)	0.45	D001
394				U154
395		OCTYL ALCOHOL	1.00	D001
396		TOLUENE	0.45	D001
397				U220
398			4.00	D001
399				U220
400	Total:		4.45	

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
401	Total:		26.77	
402	C92027622	ANTISEIZE COMPOUND	0.45	D008
403		ARSENOPHENYLAZOL 4,5	0.11	D004
404		LINAGRAPH FIXER (10)	9.07	D011
405		SILVER CONDUCTIVE PAINT	0.23	D011
406	Total:		9.87	
407	C92027625	90% HEXANE,9% ETHYL ACETATE	0.45	D001
408		CYCLOHEXANE	0.45	D001
409				U056
410		CYCLOHEXANE (2)	0.17	D001
411				U056
412		DYKEM STEEL BLUE (3)	1.36	D001
413		ETHYL FORMATE	0.25	D001
414		FIBERLAY (STYRENE MONOMER)	0.45	D001
415		HEPTANE	0.06	D001
416			0.25	D001
417		Total:	0.31	
418		METHYCYCLOHEXANE (PRACTICAL)	1.00	D001
419		NITROMETHANE	0.45	D001
420		OCTANE (PRACTICAL)	0.25	D001
421		PHENYLETHYL ALCOHOL	0.06	D001
422		PROPIONIC ACID	0.45	D001
423		REJUV-8,HEXAMETHYLDISILAZANE	0.06	D001
424		TETRAHYDROFURAN	0.50	D001
425				U213

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
426		TETRAHYDROFURAN (6) (CMR-7)	6.00	D001
427				U213
428		THINNER (PETROLEUM DISTILLATES)	0.45	D001
429	Total:		12.67	
430	C92027628	1-HEXADECENE (2)	0.91	D001
431		2-OCTANOL	1.00	D001
432		3-IN-1 OIL	0.06	D001
433		DIGLYME	0.03	D001
434		FLO-MASTER BLACK INK	1.00	D001
435		GRAY LACQUER ENAMEL	0.23	D001
436		HANOVIA LIQUID BRIGHT PLATINUM	0.23	D001
437		HYSOL DISSOLVER	0.45	D001
438		ISOPAR H CUTTING FLUID	3.63	D001
439		KEROSINE	1.00	D001
440		LIQUI-MOLY GREASE	0.45	D001
441		N,N DIMETHYL ACETAMIDE (2)	0.91	D001
442		PENETRATING OIL (2)	0.91	D001
443		PROPANDIOL	0.03	D001
444		RED ENAMEL PAINT	1.00	D001
445		SINCLAIRS ENAMEL PAINT	0.45	D001
446			1.00	D001
447		Total:	1.45	
448		SOLVENT (DIETHYLENE GLYCOL)	0.03	D001
449		TAP MAGIC CUTTING FLUID (3)	0.34	D001
450		TURPENTINE	1.00	D001

CANDIDATES FOR TMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
451		VARNISH	0.45	D001
452			1.00	D001
453		Total:	1.45	
454		Total:	16.10	
455	C92027630	HYDRAZINE,HYDRATE (CMR-12)	1.00	D001
456				U133
457	C92027631	1500 THINNER	0.45	D001
458		20% ISOOCATANE,20% DODECANE	0.06	D001
459		70% ACETONITRILE,20% METHANOL	1.00	F003
460		70% DODECANE,10% ETHYL HEXANOL	1.00	D001
461		80% ACETONITRILE,20% ACETATE	1.00	D001
462		ACETONE (CMR-13)	1.81	D001
463				U002
464		ACETONITRILE	0.45	D001
465				U003
466			1.00	D001
467				U003
468		Total:	1.45	
469		BULE INK	0.06	D001
470		DRAWING INK (3)	0.34	D001
471		EMERSON & CUMING CATALYST	0.45	D001
472		EPOCAST RELEASE	1.00	D001
473		ETHYL ACETATE,ISOPROPYL ALCOHOL	0.03	D001
474		GLU-BOND ADHESIVE (2)	0.17	D001
475		HEXANE,ETHYL ACETATE,ISOPROPYL ALCOHOL	1.00	D001

CANDIDATES FOR TITRATION AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
476		ISOPROPYL ALCOHOL (3)	3.00	D001
477		MESITYL OXIDE	1.00	D001
478		METHANOL	0.06	D001
479				U154
480		PAINT THINNER	1.00	D001
481		PETROLEUM ETHER	3.63	D001
482		PLEX-WELD ACRYLIC CEMENT	0.11	D001
483		RUBBER CEMENT	0.03	D001
484		SINCLAIRS ENAMEL PAINT	0.45	D001
485		TETRAHYDROFURAN	1.00	D001
486				U213
487		TOLUENE	0.45	D001
488				U220
489		TOLUENE W/BIPHENYL	0.06	D001
490		VELVOLEUM PROTECTOR	0.03	D001
491		WASH ACETONE	1.00	D001
492				D022
493				D040
494				F002
495				F003
496				F005
497		WATER/ACETONITRILE	3.63	D001
498	Total:		25.28	
499	C92027633	1-DODECANE (2)	0.23	D001
500		1-EICOSENE	0.09	D001

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
501			0.11	D001
502		Total:	0.20	
503		1-OCTADECENE	0.11	D001
504				D001
505		1-TETRADECENE	0.11	D001
506				D001
507				D001
508		2-METHOXY-4-PROPENYLPHENOL	0.09	D001
509		DODECANE	0.06	D001
510		ENAMEL PAINT	1.81	D001
511		GLYPTAL ENAMEL PAINT	1.00	D001
512		HEXADECANE	0.11	D001
513		HEXYL ALCOHOL	1.00	D001
514		N,N-DIMETHYLFORMAMIDE	2.00	D001
515		PYRIDINE-1-OXIDE	0.03	D001
516		Total:	6.75	
517	C92027635	1,1,1 TRICHLOROETHANE	0.45	U226
518		CHLOROFORM	0.06	D022
519				U044
520		FORMALDEHYDE GR SOLUTION	0.45	U122
521		FORMALDEHYDE SOLUTION,37% (2)	0.91	U122
522		FREON (SPENT)	0.06	F002
523		TETRACHLOROETHYLENE	0.06	D039
524				U210
525		TRICHLOROETHYLENE	0.23	D040

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
526				D040
527				U228
528				U228
529		TRICHLOROETHYLENE (3) (CMR-17)	1.36	D040
530				U228
531		TRICHLOROETHYLENE,CHLOROFORM,MEOH	1.81	F002
532				F003
533		Total:	5.39	
534	C92027644	DICHLROMETHANE (CMR-26)	4.00	U080
535	C92027645	1,2 DICHLOROETHANE	1.00	D001
536				D028
537				U077
538		1-PHENYLHEPTANE	0.03	D001
539		1-PHENYLPENTADECANE	0.03	D001
540		2,3 DIMETHYL PENTANE	0.06	D001
541		ACCELERATOR	0.03	D001
542		ADHESIVE	0.45	D001
543		ALCOHOL,ANHYDROUS (2) (CMR-27)	7.26	D001
544		CH2CL2/CUTTING OIL	0.03	D001
545				F003
546		CLEANING SOLVENT W/METHANOL (3)	0.34	D001
547				U154
548		COLLODION,FLEXIBLE	0.45	D001
549		CONTACT ADHESIVE	1.00	D001
550		CONTACT CEMENT	1.00	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
551			DECANE	0.11	D001
552			DIMETHYL CARBONATE	0.11	D001
553			DUCO CEMENT (ACETONE)	0.06	D001
554			DYMO THINNER (PETROLEUM DISTILLATES)	3.63	D001
555			GA-1A ACCELERATOR	0.03	D001
556			RED INK	0.03	D001
557			TRIMETHYL ORTHOFORMATE	0.11	D001
558			TUMBLER CLEANING COMPOUND	1.00	D001
559			VCAR CEMENT LIQUID	0.45	D001
560		Total:		17.21	
561		C92027649	ETHANOL	18.14	D001
562			METHANOL	7.26	D001
563					U154
564			METHYL ETHYL KETONE (CMR-31)	18.14	D001
565					D035
566					U159
567		Total:		43.55	
568		C92027651	STODDARD'S SOLVENT (CMR-33)	18.14	D001
569		C92027652	3-CHLOROPROPYLTRIMETHOXYSILANE (CMR-34)	0.06	D001
570					D002
571	Total:			207.47	
572	1002052	C92027678	TRIMETHYLBENZENE,MINERAL OIL,SCINT CHEMICALS	8.71	D001
573	1002054	C92027687	ORG. SOLVENTS: ACETONE,CH2CL2,TOLUENE)	45.36	F001
574					F003
575					F005

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
576	1002097	C92027677	CHEM WASTE F/SYNTHETIC CHEM	25.00	D001
577					D004
578					D007
579					D038
580					F003
581					F005
582	1002101	C92027747	CARBON TETRACHLORIDE	0.45	U211
583			FORMALDEHYDE MIXTURE	0.03	U122
584			GLID-STRIP METHYLENE CHLORIDE	3.63	U080
585			TOOL-GRIP W/1,1,1 TCE	0.45	U226
586			TRICHLOROETHYLENE (CMR-37)	3.63	U228
587		Total:		8.19	
588		C92027748	CHLOROETHENE (CMR-38)	18.14	U226
589		C92027749	1,1,1 TRICHLOROETHANE (CMR-40)	18.14	U226
590		C92027750	CHLOROETHENE (CMR-39)	18.14	U226
591		C92027751	ANILINE	1.00	U012
592			M-CRESOL	0.45	U052
593			ORGANO ARSINE	0.06	D004
594			TRIMETHYL ARSINE (CMR-41)	0.06	D004
595			ZINC IN MERCURIC CHLORIDE SOL.	0.11	D009
596		Total:		1.68	
597		C92027752	CONCRETE PRIMER (MINERAL SPIRITS)	10.89	D001
598			GUM TURPENTINE (CMR-42)	10.89	D001
599			KEROSENE (2)	7.26	D001
600			SILVER EPOXY	0.09	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
601					D011
602		Total:		29.12	
603	Total:			93.42	
604	1002235	C92028125	RAD OIL WASTE W/SOLVENTS	45.36	F001
605	1002443	C92028837	REPACK-91022353,4648,905420 (RMMA)	4.54	D009
606	1002483	C92030958	LIQUID SCINTILLATOR (PSEUDOCUMENE)	1.36	D001
607				7.71	D001
608					D001
609					D001
610					D001
611					D001
612					D001
613	Total:			9.07	
614	1002527	C92029258	ACETONE (7) (INC-5)	31.75	F003
615		C92029270	ACETONE (7) (INC-6)	31.75	F003
616		C92029271	SODIUM CYANIDE/ETHANOL SOL (INC-7)	0.45	D001
617					D003
618					D001
619					D003
620		C92029272	HEPTANE,TBP,HCL (INC-8)	4.54	D001
621					D002
622				18.14	D001
623					D002
624		Total:		22.68	
625		C92029273	HEPTANE,TBP,HCL (2) (INC-9)	36.29	D001

CANDIDATES FOR ATTMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
626				D002
627	C92029274	ETHANOL W/IR,AG (INC-1)	4.54	D001
628				D011
629		ETHYL ACETATE (5) (INC-1)	22.68	F003
630		MEK,ACETONE,CHLOROFORM (INC-1)	4.54	D022
631				F003
632				F005
633		O-XYLENE W/TTA (2) (INC-1)	9.07	D001
634	Total:		40.82	
635	C92029280	ACETONE (2) (INC-10)	9.07	F003
636		ACETONE (INC-10)	0.45	D003
637				F003
638		ACETONE,METHYL METHACRYLATE (INC-10)	0.45	F003
639		DIETHYL ETHER,BARIUM CHLORIDE (INC-10)	0.91	D001
640				D005
641		HEPTANE (INC-10)	3.63	D001
642		HEXANE,DIISOBUTYL KETONE (INC-10)	0.45	D001
643		MEK,CHLOROFORM (2) (INC-10)	7.26	D001
644				D035
645				D022
646		METHANOL,TOLUENE,ALIQUOT 336 (INC-10)	0.45	F003
647				F005
648		TOLUENE,ETHANOL,TRACE ARSENIC (INC-10)	4.54	D004
649				F005
650		XYLENE (INC-10)	2.27	F003

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
651	Total:		29.48	
652	C92029282	ACETONE, HYDROCHLORIC ACID (INC-12)	4.54	D002
653				F003
654		DIETHYLHEXYLPHOSPHORIC ACID (INC-12)	4.54	D002
655				F003
656		HCL, ETHANOL, MANDELIC ACID (INC-12)	0.45	D001
657				D002
658		HCL, HEXANE (INC-12)	0.45	D001
659				D002
660		HNO3, HEXANE, HF (INC-12)	4.54	D001
661				D002
662		HNO3, HF, HEPTANE (INC-12)	0.23	D001
663				D002
664	Total:		14.74	
665	C92029283	CARBON TETRACHLORIDE (INC-13)	1.81	D019
666		CHLOROFORM (INC-13)	0.91	D022
667	Total:		2.72	
668	C92029284	ACETONE, OCTANE (INC-14)	4.54	F003
669		CYCLOHEXANE (INC-14)	4.54	D001
670		ETHYL ACETATE (INC-14)	0.45	F003
671	Total:		9.53	
672	C92029285	MEK, CHLOROFORM, SODIUM HYDROXIDE (INC-15)	0.91	D001
673				D022
674				D035
675				D002

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
676			MEK,SODIUM HYDROXIDE (INC-15)	4.54	D001
677					D002
678					D022
679					D035
680		Total:		5.44	
681		C92029286	AQUEOUS SOL W/BA,CD,AG (INC-16)	0.91	D005
682					D006
683					D011
684			NA2CRO4,NH4OH,CH3COOH,HCL (INC-16)	0.91	D007
685		Total:		1.81	
686	Total:			227.48	
687	1002639	C92029542	DIPHENYL CARBAZIDE W/ACETONE	2.27	F003
688	1002740	C92030275	ORGANIC SCINTILLATION COCKTAIL	5.00	D001
689	1002791	C92031839	1-HEXANOL (EM-4)	2.27	D001
690		C92031840	SODIUM CHLORIDE SOLUTION W/SILVER NITRATE (E	0.23	D011
691	Total:			2.49	
692	1002808	C92030070	MERCURY WASTE, LIQUID	9.07	D009
693	1002846	C92030166	TRITIUM SOLVENTS--1,1,1-TRICHLOROETHANE,FREO	36.29	D001
694					F002
695		C92030167	PUMP OIL CONTAMINATED W/TRITIUM, MERCURY	45.36	D009
696	Total:			81.65	
697	1002916	C93034699	ETHYLENE GLYCOL IN LIQUID SCINTILLATION COCKT	22.68	D001
698	1002921	C92030358	ISOPROPYL ETHER W/PU239	0.70	D001
699			METHYL ISOBUTYL KETONE W/PU239	2.45	F003
700				2.63	F003

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
701			Total:	5.08	
702	Total:			5.78	
703	1003038	C92030731	LIQUID SCINTILLATION COCKTAIL W/PU239	5.90	F003
704	1003072	C92031921	SOLVENTS W/TH232,U238	4.54	F003
705	1003077	C93033621	BROKEN HG THERMOMETER	0.00	D009
706		C93033622	SODIUM ARSENATE SOLUTION	0.10	D004
707		C93033623	DICHLOROMETHANE	5.00	F002
708		C93033624	ETHYL ETHER,DICHLOROMETHANE,ACETONE,XYLENE	5.00	F002
709					F003
710					F005
711	Total:			10.10	
712	1003190	C92031245	METHYLENE CHLORIDE (SUSPECT RAD)	4.54	F002
713					F002
714					F002
715					F002
716					F002
717					F002
718					F002
719					F002
720					F002
721					F002
722					F002
723					F002
724					F002
725					F002

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
726				F002
727				F002
728				F002
729				F002
730				F002
731				F002
732				F002
733				F002
734	C92031246	METHYLENE CHLORIDE (SUSPECT RAD)	4.54	F002
735				F002
736				F002
737				F002
738				F002
739				F002
740				F002
741				F002
742				F002
743				F002
744				F002
745	C92031247	METHYLENE CHLORIDE (SUSPECT RAD)	4.54	F002
746				F002
747				F002
748				F002
749				F002
750				F002

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
751					F002
752					F002
753					F002
754					F002
755					F002
756					F002
757					F002
758	Total:			13.61	
759	1003215	C92031777	P-32 AND ETHANOL (3)	68.04	D001
760	1003296	C92031981	WASTE CLEANING SOLUTION W/U238,TH232	18.14	D001
761					D002
762					F005
763		C92031982	WASTE MERCURY METAL W/U238,TH232	4.54	D009
764					F005
765		C92031983	WASTE ORGANIC SOLVENT W/U238,TH232	72.58	F003
766					F005
767	Total:			95.26	
768	1003660	C92032478	PLUTONIUM MIXED WASTE	9.07	D008
769	1003696	C92032548	PSEUDOCUMENE LIQUID COCKTAIL W/VACUUM PUM	6.80	D001
770	1003731	C92032550	PSEUDOCUMENE LIQUID SCINTILLATION COCKTAIL	1.81	D001
771		C92032551	PSEUDOCUMENE LIQUID SCINTILLATION COCKTAIL	36.29	F003
772	Total:			38.10	
773	1003793	C92032721	ORGANIC SOLVENTS W/TRACE U238,TH232	6.00	D001
774					F003
775	1003827	C92032769	METHYLENE CHLORIDE WASTE (8)	36.29	F002

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
776					
777	1003954	C93033287	RADIOACTIVE HALOGENATED SOLVENT WASTE F/CH	0.91	F002
778					D001
779					D019
780	1003988	C93033241	TRIMETHYLCUMENE		D018
781	1003989	C93033260	1,2,4 TRIMETHYLBENZENE & P-XYLENE	22.68	D001
782		C93033261	1,2,4 TRIMETHYLBENZENE & P-XYLENE	22.68	F003
783		C93033262	1,2,4 TRIMETHYLBENZENE & P-XYLENE	22.68	F003
784		C93033263	1,2,4 TRIMETHYLBENZENE & P-XYLENE	22.68	F003
785		C93033264	1,2,4 TRIMETHYLBENZENE & P-XYLENE	22.68	F003
786		C93033265	1,2,4 TRIMETHYLBENZENE & P-XYLENE	22.68	F003
787	Total:			22.68	F003
788	1003990	C93033257	PSEUDOCUMENE IN SCINTILLATION VIALS	136.08	
789	1003991	C93033271	CELLULAR EXTRACTS OF THEMIDINE	22.68	D001
790		C93033272	CELLULAR EXTRACTS OF THEMIDINE	22.68	D001
791		C93033273	CELLULAR EXTRACTS OF THEMIDINE	22.68	D001
792	Total:			22.68	D001
793	1004118	C93033752	METHYLENE CHLORIDE WASTE	68.04	
794	1004204	C93034971	PB202 (2)	2.27	F002
795	1004259	C93034054	LIQUID SCINTILLATION COCKTAIL	0.45	D008
796				2.00	D002
797		C93034055	LIQUID SCINTILLATION COCKTAIL		F005
798		C93034056	LIQUID SCINTILLATION COCKTAIL	2.00	F005
799	Total:			2.00	F005
800	1004263	C93034053	HIONIC-FLUOR (2)	6.00	
				0.91	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
801	1004320	C93034372	CONTAMINATED 2-ETHOXY ETHANOL (SUSPECT)	1.00	D001
802			CONTAMINATED DIMETHYL FORMAMIDE (SUSPECT)	20.00	F003
803			CONTAMINATED ISOPROPYL ALCOHOL (SUSPECT)	1.00	D001
804			CONTAMINATED ISOPROPYL ALCOHOL (SUSPECT) (1	4.54	D001
805			CONTAMINATED METHANOL (SUSPECT)	4.00	F003
806			CONTAMINATED METHYL ACETATE (SUSPECT)	1.00	D001
807			CONTAMINATED METHYL ACETATE (SUSPECT) (2)	1.00	D001
808			CONTAMINATED METHYLENE CHLORIDE (SUSPECT)	1.00	D001
809					F002
810			CONTAMINATED N-BUTYL ACETATE (SUSPECT)	0.25	D001
811			CONTAMINATED OCTANE (SUSPECT)	0.50	D001
812			CONTAMINATED PAINT THINNER (SUSPECT)	1.00	D001
813			CONTAMINATED Z-PROPANOL (SUSPECT) (8)	3.63	D001
814	Total:			38.91	
815	1004487	C93034972	AQUEOUS SOLUTION W/RAD INGREDIENTS	0.45	D004
816					D009
817					D011
818					D010
819					D011
820					D010
821					D009
822					D008
823					D007
824					D006
825					D005

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
826					D004
827					D008
828					D005
829					D006
830					D007
831	1004496	C93034640	NON-HALOGENATED ORGANIC SOLVENT WASTE	5.00	D004
832					F003
833		C93034944	HALOGENATED/HALIDE SOLVENT WASTE	5.00	D022
834					F005
835	Total:			10.00	
836	1004497	C93034652	ORGANIC SOLVENT W/THALLIUM RESIDUE & TH232	1.81	D038
837					F003
838		C93034653	AQUEOUS WASTE W/U238 & TH232	11.34	D018
839					D038
840	Total:			13.15	
841	1004535	C93034657	6/TAP MAGIC	0.68	D001
842			91004668/PAINT THINNER, ENAMEL PAINT	4.54	D001
843			91004671/CUTTING FLUID, CONTACT CLEANER, SILIC	4.54	D001
844			91004702/ETHANOL & HEXANE SOLN, 2,4-PENTANE	18.14	D001
845					F003
846			91022137/IODOBUTANE, CHLOROIDOMETHANE, CHL	0.45	D001
847					U159
848					U161
849			91023369/PVC CEMENT	0.45	D001
850			DUCO CEMENT	0.06	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
851			HEXANE	3.63	D001
852			METHANOL	0.91	D001
853			PAINT THINNER	0.91	D001
854			PROPANOL	0.50	D001
855			PVC PRIMER	0.91	D001
856			REPACK-91023439/ETHYL ACETATE	1.36	D001
857		Total:		37.07	
858		C93034659	91004378/COMBUSTIBLE LIQUID	45.36	D001
859					D008
860					D007
861			REPACK-91004377/COMBUSTIBLE LIQUID	45.36	D001
862					D007
863					D008
864		Total:		90.72	
865	Total:			127.79	
866	1004629	C93034904	SUSPECT RAD H2O W/METHYLENE CHLORIDE	272.16	F002
867		C93034905	METHYLENE CHLORIDE WASTE (11)	49.90	F002
868	Total:			322.06	
869	1004665	C93035173	SCINTILLATION COCKTAIL W/PSEUDOCUMENE, P-XYL	18.14	F003
870	1004742	C93035400	VACUUM PUMP OIL (NON-PCB)	181.44	D006
871					F001
872					F002
873					D008
874		C93035401	VACUUM PUMP OIL (NON-PCB)	181.44	D010
875					F001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
876					
877	Total:			362.88	F002
878	1004925	C93035766	SUSPECT RAD H2O W/METHYLENE CHLORIDE WASTE (	32.66	F002
879		C93035767	SUSPECT RAD H2O W/METHYLENE CHLORIDE WASTE (	32.66	F002
880		C93035769	METHYLENE CHLORIDE WASTE	27.22	F002
881			METHYLENE CHLORIDE WASTE (12)	54.43	F002
882		Total:		81.65	
883	Total:			146.97	
884	1004995	C93035863	ZIP-STRIP PAINT, VARNISH & STAIN REMOVER	0.09	F002
885	1005022	C93035857	SCINTILLATION VIALS W/PSEUDOCUMENE & P32	22.68	D001
886		C93035858	SCINTILLATION VIALS W/PSEUDOCUMENE & P32	22.68	D001
887	Total:			45.36	
888	1005053	C93036415	SCINTILLATION VIALS W/XYLENE-BASED COCKTAIL	22.68	F003
889	1005095	C93036662	1-BUTANOL OR 2-BUTANOL/WATER MIXTURE	0.25	D001
890			ETHANOL,TRICHLOROACETIC ACID (2)	0.14	D001
891		Total:		0.39	
892		C93036663	PHENOL,CHLOROFORM,ISOAMYL ALCOHOL MIXTURE	0.30	D022
893	Total:			0.69	
894	1005100	C93035942	VACUUM PUMP STATION F/C14 LASER SYSTEM	204.12	D006
895					D011
896	1005111	C93037583	HEXANE CONTAINING PU239,AM241	1.36	D001
897	1005137	C93036688	NON-HALOGENATED ORGANIC SOLVENT	10.00	F003
898					F005
899			SOLVENT WASTE WITH HALOGEN/HALIDE CONTAMI	2.00	F003
900	Total:			12.00	

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
901	1005170	C93037577	UNUSED BUT HARDENED PAINT	0.91	D001
902					D008
903			UNUSED BUT HARDENED PAINT (2)	7.26	D001
904					D008
905	Total:			8.16	
906	1005280	C93037556	BARRIUM IN 10MM MES	0.50	D005
907					D005
908			COLUMN W/BARIUM IN 10MM MES	0.10	D005
909	Total:			0.60	
910	1005456	C93038579	LIQUID ORGANIC WASTE CONTAINING: XYLENE,MIBK	18.14	F003
911	1005479	C93037321	LIQUID FROM REPACKS	204.12	D001
912	1005512	C93037592	LIQUID WASTE FROM VIAL CRUSHING (PSEUDOCUME	204.12	D001
913		C93037841	LIQUID WASTE FROM VIAL CRUSHING (PSEUDOCUME	204.12	D001
914	Total:			408.24	
915	1005558	C93037797	SUSPECT RAD WATER W/METHYLENE CHLORIDE WAST	2.72	F002
916					F002
917					F002
918					F002
919					F002
920					F002
921					F002
922					F002
923					F002
924					F002
925					F002
				27.22	F002

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
926				F002
927	Total:		29.94	
928	C93037798	METHYLENE CHLORIDE WASTE	4.54	F002
929				F002
930				F002
931				F002
932				F002
933				F002
934				F002
935				F002
936			27.22	F002
937				F002
938	Total:		31.75	
939	C93038041	SUSPECT RAD WATER W/METHYLENE CHLORIDE WAST	2.72	F002
940				F002
941				F002
942				F002
943				F002
944				F002
945				F002
946				F002
947				F002
948				F002
949	Total:		64.41	
950	1005604	C93038080 METHANOL AND 10% WATER	12.00	F003

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
951					
952	1005711	C93038463	SUSPECT RAD H2O W/APPROXIMATELY 2% METHYLE	2.72	F003
953					F002
954					F002
955					F002
956					F002
957				13.61	F002
958		Total:		16.33	
959		C93038464	SUSPECT RAD H2O W/APPROXIMATELY 2% METHYLE	2.72	F002
960					F002
961					F002
962					F002
963					F002
964				13.61	F002
965		Total:		16.33	
966	Total:			32.66	
967	1005743	C93038680	WATER SAMPLES W/METALS & PCBS & SOLVENTS & R	2.27	F002
968					F005
969		C93038681	WATER SAMPLES W/ RAD AND HEAVY METALS (DRU	4.54	D007
970	Total:			6.80	
971	1005766	C93038744	WATER SAMPLES W/SOLVENTS AND RAD	22.68	F002
972					F005
973		C93038745	WATER SAMPLES W/METALS AND SOLVENTS AND RA	22.68	D005
974					D030
975					D007

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
976					D008
977					D032
978					F003
979					D033
980	Total:			45.36	
981	1005767	C93038703	WATER SAMPLES W/SOLVENTS	6.80	D027
982					D030
983					D028
984					D032
985					D042
986					F001
987					F004
988					F005
989					F002
990					D043
991					D033
992	1005779	C93038770	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
993		C93038771	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
994		C93038772	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
995		C93038773	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
996		C93038774	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
997		C93038775	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
998		C93038776	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
999		C93038777	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
1000		C93038778	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001

CANDIDATES FOR TREATMENT AT DSSI

REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1001	C93038779	SCINTILLATION FLUID (PSEUDOCUMENE BASED)	204.12	D001
1002	Total:		2041.20	
1003	1005822	SUSPECT RAD H2O W/APPROX 2% METHYLENE CHLO	13.61	F002
1004	C93039073	SUSPECT RAD H2O W/APPROX 2% METHYLENE CHLO	2.72	F002
1005				F002
1006				F002
1007				F002
1008				F002
1009				F002
1010				F002
1011			13.61	F002
1012	Total:		16.33	F002
1013	C93039079	SUSPECT RAD H2O W/APPROX 2% METHYLENE CHLO	2.72	F002
1014				F002
1015				F002
1016				F002
1017				F002
1018				F002
1019				F002
1020			13.61	F002
1021	Total:		16.33	F002
1022	C93039080	SUSPECT RAD H2O W/APPROX 2% METHYLENE CHLO	2.72	F002
1023				F002
1024				F002
1025				F002

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1026					F002
1027					F002
1028					F002
1029					F002
1030				13.61	F002
1031		Total:			F002
1032	Total:			16.33	
1033	1005823	C93039078	SUSPECT RAD METHYLENE CHLORIDE	62.60	
1034				2.72	F002
1035					F002
1036					F002
1037					F002
1038					F002
1039					F002
1040					F002
1041					F002
1042					F002
1043					F002
1044					F002
1045					F002
1046					F002
1047					F002
1048					F002
1049					F002
1050				13.61	F002
					F002

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1051	Total:			16.33	
1052	1005863	C93039161	SCINTILLATION FLUID	204.12	F003
1053					F005
1054	1005928	C93039324	PACKARD READY-SOLV. SCINTILLATION FLUID	2.27	F003
1055	1005935	C93039502	SCINTILLATION FLUID	18.14	F003
1056					F005
1057		C93039503	SCINTILLATION FLUID	18.14	F003
1058					F005
1059		C93039504	SCINTILLATION FLUID	18.14	F003
1060					F005
1061		C93039505	SCINTILLATION FLUID	18.14	F003
1062					F005
1063		C93039506	SCINTILLATION FLUID	18.14	F003
1064					F005
1065	Total:			90.72	
1066	1005978	C93039586	LIQUID WASTE FROM OXIDIZER; H3 & 1,2,4 TRIMETH	13.61	D001
1067	19891207102142	900761	2 EA/TRICHLOROETHYLENE	36.29	D006
1068					U228
1069	19900226123718	902326	INSTAGEL	0.50	F003
1070					F003
1071					F003
1072					F003
1073					F003
1074					F003
1075		902328	SCINTILLATION VIALS W/INSTAGEL (XYLENE)	108.86	F003

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1076		902329	SCINTILLATION VIALS W/INSTAGEL (XYLENE)	108.86	F003
1077		902330	SCINTILLATION VIALS W/INSTAGEL	108.86	F003
1078		902332	SCINTI.VIALS W/OPTI FLUOR, ULTIMA GOLD	108.86	F003
1079	Total:			435.95	
1080	19900314100001	902597	5 EA/ADHESIVE	6.80	D001
1081			7 EA/ENAMEL PAINT	25.40	D001
1082			ACETONE (U002)	3.63	U002
1083			ACETONE (U002)	18.14	U002
1084			ADHESIVE	3.63	D001
1085			PETROLEUM BASE PRODUCT	0.91	D001
1086				18.14	D001
1087			Total:	19.05	
1088		Total:		76.66	
1089		902598	190 ETHANOL	0.91	D001
1090			2 EA/ADHESIVE	2.72	D001
1091			PAPER CEMENT	0.91	D001
1092		Total:		4.54	
1093		902607	HG	0.68	D009
1094			HG SWITCH	2.27	D009
1095		Total:		2.95	
1096		902610	1,1,1 TRICHLOROETHANE	3.63	U228
1097			CARBON TECTRACHLORIDE	7.26	U211
1098			TRICHLOROETHANE	0.45	F002
1099		Total:		11.34	
1100	Total:			95.48	

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1101	19900430114356	904528	ENAMEL, SILICONIZED	0.11	D001
1102			GENERAL ELECTRICAL THINNER 1500	0.45	D001
1103				0.91	D001
1104			Total:	1.36	
1105			GLYPTAL 1201 RED ENAMEL	0.45	D001
1106			NASON LACQUER PAINT	0.91	D001
1107			PAINT THINNER FOR LACQUER DOPE	3.63	D001
1108			PAINT, FLEX FINISH	0.45	D001
1109					D001
1110			RCT-9 DEGREASER	0.45	D001
1111			SINCLAIR ENAMEL PAINT	0.23	D001
1112			STRYPEEZE(TOLUOL,METH,ACE,METHYLENE CHL)	0.91	D001
1113			WELBORN PAINT (OIL BASE)	0.91	D001
1114		Total:		9.41	
1115		904529	LED-PLATE (LEAD)	0.45	D008
1116					U226
1117			SPOOT CHECK PENETRANT SKL-HF	0.29	D008
1118					U226
1119			SPOT CHECK DEVELOPER SKD-NF	0.45	D008
1120					U226
1121		Total:		1.19	
1122	Total:			10.60	
1123	19900730074431	906003	PAINT STRIPPER(CHEM STRIP)	90.72	D001
1124					F002
1125	19900801105235	906022	GLASS SCINTILLATION VIALS INSTAGEL	108.86	F003

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1126	19900810105936	906233	OIL W/SPENT SOLVENTS W/RAD CONTAMINATION	199.58	F001
1127					F003
1128		906234	OIL W/SPENT SOLVENTS W/RAD CONTAMINATION	199.58	F001
1129					F003
1130	Total:			399.16	
1131	19900928100132	907523	5% TCA/95% ETOH/32P LIQUID	25.00	F002
1132	19901001084337	907485	LIQUID SCINTIL. VIALS W/239PU	199.58	F003
1133	19901009110942	908280	WATER ETOH MEOH R(32P,35S)	20.00	D001
1134					F003
1135	19901025073402	908852	OIL W/SPENT SOLVENTS,RAD CONTAM.	199.58	F002
1136		908853	OIL W/SPENT SOLVENTS,RAD CONTAM.	199.58	F002
1137	Total:			399.16	
1138	19901029145957	909534	BENZENE	1.81	D018
1139					D018
1140					U019
1141					U019
1142					D018
1143					U019
1144			BUTYL ACETATE	0.10	D001
1145			NE561 REFLECTOR PAINT	1.36	D001
1146			NITROBENZENE	0.45	D036
1147					U169
1148			P-XYLENE	0.45	U239
1149			TOLUENE	0.45	U220
1150				2.72	U220

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1151		Total:		3.18	
1152		Total:		7.36	
1153		909546	CARBON TETRACHLORIDE	2.27	D019
1154					D019
1155					D019
1156					D019
1157			METHYLENE CHLORIDE	0.45	D019
1158					F001
1159		Total:		2.72	
1160	Total:			10.08	
1161	19901208091957	91000688	CHAIN OF ALKYL BENZENES WITH SCINTILLATOR	108.86	D001
1162		91000689	CHAIN OF ALKYL BENZENES WITH SCINTILLATOR	108.86	D001
1163		91000690	CHAIN OF ALKYL BENZENES WITH SCINTILLATOR	108.86	D001
1164		91000691	CHAIN OF ALKYL BENZENES WITH SCINTILLATOR	108.86	D001
1165		91000692	CHAIN OF ALKYL BENZENES WITH SCINTILLATOR	108.86	D001
1166		91000693	CHAIN OF ALKYL BENZENES WITH SINTILLATORS	108.86	D001
1167	Total:			653.17	
1168	19910103111844	90000031	LIQUID SCINTILLATION WASTE	22.68	F003
1169		90000032	LIQUID SCINTILLATION WASTE	22.68	F003
1170		90000033	LIQUID SCINTILLATION WASTE	45.36	F003
1171		90000034	LIQUID SCINTILLATION VIALS	22.68	F003
1172		90000035	LIQUID SCINTILLATION VIALS	22.68	F003
1173		90000043	SCINTILLATION FLUID AND RINSATE	181.44	F003
1174		90000046	RESIDUAL SCINTILLATION WASTE	22.68	F003
1175		90000047	RESIDUAL SCINTILLATION WASTE	22.68	F003

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1176		90000048	RESIDUAL SCINTILLATION WASTE	22.68	F003
1177		90000049	RESIDUAL SCINTILLATION WASTE	22.68	F003
1178		90000050	RESIDUAL SCINTILLATION WASTE	22.68	F003
1179		90000051	RESIDUAL SCINTILLATION WASTE	22.68	F003
1180		90000052	RESIDUAL SCINTILLATION WASTE	22.68	F003
1181		90000053	RESIDUAL SCINTILLATION WASTE	22.68	F003
1182		90000054	RESIDUAL SCINTILLATION WASTE	22.68	F003
1183	Total:			521.63	
1184	19910207160245	91001181	MERCURIC CHLORIDE SOLUTION	1.50	D009
1185	19910320105707	91002623	LIQUID SCINTILLATION VIALS	45.36	D001
1186					F003
1187	19910403145414	91002989	RESIDUAL & ABSORBED LIQUID SCINTL WASTE	79.38	F003
1188		91003002	RESIDUAL & ABSORBED LIQ SCINTIL WASTE	22.68	F003
1189		91003003	RESIDUAL & ABSORBED LIQ SCINTIL WASTE	22.68	F003
1190		91003004	RESIDUAL & ABSORBED LIQ SCINTIL WASTE	22.68	F003
1191		91003005	RESIDUAL & ABSORBED LIQ SCINTIL WASTE	22.68	F003
1192		91003171	RESIDUAL & ABSORBED LIQ.SCINTIL WASTE	15.88	F003
1193	Total:			185.97	
1194	19910411084252	91003250	DICHLOROMETHANE	0.91	U080
1195		91003252	LUBRICATING COMPOUND	0.06	D001
1196			PAINT W/ETHERGLYCOL & XYLENE	1.81	D001
1197		Total:		1.87	
1198	Total:			2.78	
1199	19910415120614	91003357	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1200		91003358	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001

CANDIDATES FOI TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1201		91003359	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1202		91003360	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1203		91003361	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1204		91003362	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1205		91003363	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1206		91003364	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1207		91003365	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1208		91003366	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1209		91003367	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1210		91003368	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1211		91003369	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1212		91003370	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1213		91003371	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1214		91003372	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1215		91003373	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1216		91003374	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1217		91003375	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1218		91003376	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1219		91003377	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1220		91003378	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1221		91003379	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1222		91003380	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1223		91003381	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1224		91003382	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1225		91003383	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1226		91003384	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1227		91003385	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1228		91003386	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1229		91003387	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1230		91003388	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1231		91003389	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1232		91003390	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1233		91003391	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1234		91003392	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1235		91003393	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1236		91003394	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1237		91003395	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1238		91003396	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1239		91003397	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1240		91003398	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1241		91003399	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1242		91003400	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1243		91003401	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1244		91003402	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1245		91003403	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1246		91003404	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1247		91003405	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1248		91003406	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1249		91003407	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1250		91003408	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1251		91003409	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1252		91003410	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1253		91003411	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1254		91003412	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1255		91003413	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1256		91003414	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1257		91003415	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1258		91003416	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1259		91003417	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1260		91003418	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1261		91003419	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1262		91003420	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1263		91003421	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1264		91003422	UO3 POWDER,ISOPROPYL ALCOHOL,NH3,H2O	136.08	D001
1265	Total:			8981.14	
1266	19910418083327	91003577	PENTYLACETATE(71%)DITHIOL(.5%)ACE(28.5%)	2.00	F003
1267					F003
1268	19910515130001	91004379	LAL-689/ORM-A (LIQUID)	45.36	D002
1269					D019
1270		91004395	LAL-705/FLAMMABLE LIQUID	18.14	D001
1271					U220
1272					D007
1273					D008
1274		91004396	LAL-706/FLAMMABLE LIQUID	18.14	D001
1275		91004397	LAL-707/FLAMMABLE LIQUID	18.14	D001

CANDIDATES FOR TREATMENT AT DSSI

	REQUEST ID	CONTAINER ID	DESCRIPTION	WIEGHT (kg)	EPACD
1276					P068
1277					U002
1278	Total:			99.79	
1279	19910530080621	91004584	CHEMICAL MIXES W/BA,MN,CU	0.06	D005
1280					D005
1281					D005
1282			CHEMICAL MIXES W/CR+3	0.05	D007
1283					D007
1284			X-RAY FILM FIXER	3.27	D011
1285	Total:			3.37	
1286	19910604130001	91004718	LAL-907 (REPACK-91000960)	18.14	D001
1287					U044
1288					D022
1289					F005
1290		91004729	LAL-918 (REPACK)	4.54	D001
1291	Total:			22.68	
1292	19910613151726	91004913	ORGANIC SOLVENT	40.82	D001
1293					F003
1294					F005
1295		91004914	ORGANIC SOLVENT	11.34	F003
1296					F005
1297	Total:			52.16	
1298	19910708093012	91005414	PHENOL W/H2O	0.50	U188
1299	Total:			25219.21	