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Closure Report for CAU 93: Area 6 Steam Cleaning Effluent Ponds Nevada Test Site

Volume I

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December 1997

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**CLOSURE REPORT FOR CAU 93:
AREA 6 STEAM CLEANING EFFLUENT PONDS
NEVADA TEST SITE**

**Prepared for U. S. Department of Energy
Nevada Operations Office
Under Contract No. DE-AC08-96NV11718**

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Remediation Projects**

November 1997

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CLOSURE REPORT FOR CAU 93: AREA 6 STEAM CLEANING EFFLUENT PONDS NEVADA TEST SITE

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LIST OF ACRONYMS AND ABBREVIATIONS

CAS	Corrective Action Site
CAU	Corrective Action Unit
CFR	Code of Federal Regulations
CGA	Combustible Gas Analyzer
cm	centimeter
COC	Constituents of Concern
DOE	United States Department of Energy
DOE/NV	United States Department of Energy/Nevada Operations Office
DSWA	United States Defense Special Weapons Agency
ERD	Environmental Restoration Division
eV	electron volts
FFACO	Federal Facility Agreement and Consent Order
ft	foot
gal	gallon
GC	Gas Chromatograph
in	inch
kg	kilogram
L	liter
m	meter
m ³	cubic meters

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

mg	milligram
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
M&O	Management & Operations Contractor
NAC	Nevada Administrative Code
NDEM	Nevada Division of Emergency Management
NDEP	Nevada Division of Environmental Protection
NTS	Nevada Test Site
PE	Professional Engineer
PID	Photo-ionization Detector
ppm	parts per million
QA	Quality Assurance
RCRA	Resource Conservation and Recovery Act
SCEP	Steam Cleaning Effluent Pond(s)
SVOC	Semi-Volatile Organic Compounds
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
TSDF	Treatment, Storage and Disposal Facility
UPS	United Parcel Service

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

VOC	Volatile Organic Compounds
yd ³	cubic yard

EXECUTIVE SUMMARY

The Area 6 Steam Cleaning Effluent Ponds Corrective Action Unit (CAU) 93 is composed of the following components (Figure ES-1):

- The Layout Pad.
- The Test Pad.
- The Building 6-623 Steam Cleaning Pad.
- The Building 6-623 Grease Trap.
- The North Steam Cleaning Effluent Pond Pipeline.
- The North Steam Cleaning Effluent Pond (Corrective Action Site [CAS] 06-47-01).
- Spill Release H910911D.
- The Building 6-800 Steam Cleaning Pad.
- The Building 6-800 Separator (CAS 06-99-05).
- Spill Release H920625B.
- The Old Abandoned Steam Cleaning Grate.
- The Building 6-621 Sump (CAS 06-13-01).
- The South Steam Cleaning Effluent Pond Pipeline.
- The South Steam Cleaning Effluent Pond (CAS 06-47-01).

The closure strategies for the components of CAU 93 were presented within the Closure Plan for CAU 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site (DOE, 1997). The closure plan was reviewed by the public and the Nevada Division of Environmental Protection and was formally approved on June 16, 1997. This closure report documents the strategy and analytical results that support the clean closure or closure in place of each of the components within CAU 93. In addition, the report documents all deviations from the approved closure plan and provides rationale for all deviations.

FIGURE ES-1
CAU 93 VICINITY MAP

CAU 93 CLOSURE ACTIVITY SUMMARY

Clean closure was achieved for the majority of the components within CAU 93. Seven components of the unit (Building 6-621 Sump (CAS 06-13-01), Building 6-800 Steam Cleaning Pad, Old Abandoned Steam Cleaning Grate Discharge Pipe, Layout Pad Grease Trap, Test Pad, Building 6-623 Steam Cleaning Pad, and North SCEP Pipeline) were closed in place (Figure ES-1). All required waste management and verification activities required to support the closure of the components of CAU 93 were conducted as specified.

The following activities were conducted during the closure of this unit:

- Investigated an historic hydrocarbon release in the vicinity of the North SCEP identified by the NDEM (release number H910911D).
- Investigation and closure of a grease trap east of Building 6-623.
- Investigation and closure of the Layout Pad and associated grease trap.
- Investigation and closure of the Test Pad and associated piping.
- Investigation and closure of the Building 6-623 Steam Cleaning Pad and associated piping.
- Investigation and closure of the Old Abandoned Steam Cleaning Grate.
- Excavated and properly disposed of the petroleum hydrocarbon impacted soil from the North SCEP (CAS 06-47-01).
- Backfilled the North SCEP (CAS 06-47-01) with clean fill following standard construction practices.
- Excavated and properly disposed of the RCRA-hazardous and petroleum hydrocarbon impacted soil (Zone 2) from the South SCEP (CAS 06-47-01).
- Excavated and properly disposed of the remaining petroleum hydrocarbon impacted soil (Zone 3) from the South SCEP (CAS 06-47-01).
- Backfilled the South SCEP (CAS 06-47-01) with clean fill following standard construction practices.
- Investigation and closure of the Building 6-800 Steam Cleaning Pad and the associated separator.

- Closure of the Building 6-621 Sump (CAS 06-13-01).
- Investigation and closure of the South SCEP asbestos concrete pipeline.

CLOSURE PLAN DEVIATIONS

Discovery of the Old Abandoned Steam Cleaning Grate

During the Building 6-800 Separator excavation an old abandoned steam cleaning grate was discovered. The steam cleaning grate was located approximately 1 m (3 ft) north of the eastern end of the separator. The steam cleaning grate was covered by approximately 0.3 m (1 ft) of soil. The steam cleaning grate, settling box, and a small section of the discharge pipe were excavated and temporarily stored in the Hazardous Waste Storage Area. The outfall for the discharge pipe was uncovered in a drainage ditch just west of the 6-05 Road.

A decision was made by DOE/ERD and the NDEP during an October 7, 1997 conference call to include this component within CAU 93. Three soil samples were collected from the old abandoned steam cleaning grate system. Based upon the analytical data, it was decided that sealing both ends of the discharge pipe with a quick setting cement was sufficient to close this component of CAU 93.

Deviations from the South Steam Cleaning Effluent Pond Influent Pipe Closure Strategy

Section 2.2.12 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the South SCEP Influent Pipeline. All of the piping between the South SCEP and the Building 6-800 Steam Cleaning Pad was to be removed and disposed of at an off-site TSDF as hazardous waste.

During the pre-excavation safety inspection (Goldak, "as built" review, and site walkover) numerous utilities were identified. During the excavation the following utilities were identified in a 8 m (26 ft) section of the pipeline:

- Four separate electrical conduits or direct buried electric wiring.
- One natural gas line.
- Fire protection water line.
- A buried telephone conduit.

After consultation with the NDEP Point of Contact during a June 24, 1997 site visit, it was decided that due to safety hazards the 8 m (26 ft) section of the pipeline would be closed in place. The pipe section was completely sealed with a cement grout.

Deviations from the South Steam Cleaning Effluent Pond (CAS 06-47-01) Closure Strategy

Section 2.2.13 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the South SCEP. This section is divided into five phases. The Phase 1 discussion indicated that the volume of Zone 2 soil (hazardous waste) was approximately 92 m^3 (120 yd^3). The Waste Management Plan (Appendix B of DOE, 1997) was based on this estimate.

During the excavation it was discovered that the volume of Zone 2 was considerably greater than the initial estimate. The total volume of Zone 2 soil that was excavated was 306 m^3 (400 yd^3). The increased volume of soil required a change in the management of the hazardous soil. The Waste Management Plan (Appendix B of DOE, 1997) deviations is documented in Section 2.2.15 of this report.

Deviation from the Waste Management Plan

A Waste Management Plan was developed for the Area 6 SCEP CAU 93 Closure Program. The Waste Management Plan was attached to the Area 6 SCEP Closure Plan (DOE, 1997) as Appendix B. In Section 3.3.2.1, Hazardous Soil, of the Waste Management Plan (Appendix B of the Area 6 SCEP Closure Plan (DOE, 1997)) the hazardous soil storage strategy is outlined for the South SCEP. The hazardous soil (Zone 2) was to be excavated and placed within on-site roll-off containers. After reviewing the waste analytical results, the roll-off would be classified for disposal. Roll-off containers containing hazardous materials would be transported off-site to a TSDF for disposal.

The Area 6 SCEP Characterization Report (DOE, 1996b) estimated that the volume of Zone 2 soil was approximately 92 m^3 (120 yd^3). The Waste Management Plan (Appendix B of DOE, 1997) hazardous waste handling procedures were based upon this estimate. However, soon after starting the excavation of Zone 2 soil, it was discovered that the volume of Zone 2 soil was considerably greater than the initial estimate. The total volume of Zone 2 soil that was excavated was 306 m^3 (400 yd^3).

The worst case South SCEP characterization waste profile sheet was given to the TSDF and based upon this waste profile sheet the Zone 2 soil was transported directly from the site to the TSDF. Prior to initiating this change, the NDEP Point of Contact was informed of the change in the Waste Management Plan during a June 19, 1997 conference call.

WASTE MANAGEMENT/DISPOSITION

The waste generated during the closure of the Area 6 SCEP CAU 93 was handled following the Waste Management Plan (Appendix B of DOE, 1997). The closure of the Area 6 SCEP unit generated five separate waste streams:

- RCRA hazardous soil.
- RCRA hazardous pipe and debris.
- Petroleum hydrocarbon impacted soil.
- Non-hazardous Personal Protective Equipment (PPE) and debris.
- Steam cleaning rinsate water.

Hazardous waste was manifested and transported to an off-site TSDF for proper disposal. Petroleum hydrocarbon impacted waste was transported to the Area 6 Hydrocarbon Landfill for disposal. All remaining non-hazardous waste was transported to the Area 9 10C Landfill for disposal.

CLOSURE VERIFICATION

Verification samples were collected from each unit of CAU 93 to confirm that the closure criteria was achieved. The closure criteria for each unit was specified within the Closure Plan (DOE, 1997). Closure criteria for each unit of CAU 93 was met and is documented in Section 4.0 of this report. Verification soil samples were collected to confirm all impacted soil had been removed from each clean closure unit. In addition, verification soil samples were collected around closure-in-place units to confirm that the soil outside of these units had not been impacted.

CLOSURE PETITION

The closure was completed in accordance with the approved Closure Plan for CAU No. 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site (DOE, 1997). Therefore, the Department of Energy/Nevada Operations Office requests that the Area 6 Steam Cleaning Effluent Ponds, CAU 93 be moved from Appendix III to Appendix IV of the Federal Facility Agreement and Consent Order.

1.0 INTRODUCTION

The Steam Cleaning Effluent Ponds (SCEP) waste unit is located in Area 6 at the Nevada Test Site (NTS) (Figure 1). The United States Department of Energy (DOE), Nevada Operations Office operates the NTS and has entered into a trilateral agreement with the State of Nevada and the United States Defense Special Weapons Agency (DSWA). The trilateral agreement, which is entitled the Federal Facilities Agreement and Consent Order (FFACO) (DOE, 1996a), provides a framework for identifying, characterizing, remediating, and closing environmental sites on the NTS and associated bombing ranges. Area 6 is in the southern part of Yucca Flat, and the locations of the various portions of the unit is found in Figure 2. The SCEP waste unit is identified in the FFACO as Corrective Action Unit (CAU) 93. The unit consists of:

- Two steam cleaning effluent ponds (CAS 06-47-01).
- Layout Pad and associated grease trap.
- Building 6-623 Steam Cleaning Pad.
- Test Pad.
- Building 6-623 Grease Trap.
- Building 6-800 Steam Cleaning Pad.
- Building 6-800 Separator (CAS 06-99-05).
- Old Abandoned Steam Cleaning Grate.
- Building 6-621 Sump (CAS 06-13-01).
- The concrete asbestos piping connecting these components to both SCEPs.

1.1 PURPOSE

The SCEPs are evaporation basins formerly used for the disposal of untreated liquid effluent discharged from steam cleaning activities associated with Buildings 6-623 and 6-800. The North SCEP was constructed in 1975 and became operational during the same year. It is rectangular (19.8 m [65 ft] wide, 27.5 m [90 ft] long, and 2.4 m [8.0 ft] deep) and surrounded by a wire

FIGURE 1
SITE LOCATION

fence. Rinsate water from the steam cleaning pad next to Building 6-623 (the Area 6 Machine and Welding Shop), Test Pad, and Layout Pad was piped to the North SCEP (Figure 2).

The South SCEP was constructed in 1969 and became operational in 1970. It is irregular in shape (approximately 27.5 meters [m] [90 feet (ft)] long, 26 m [85 ft] wide, and four meters [12 ft] deep) and is surrounded by a gravel berm. The rinsate water from the steam cleaning pad adjacent to Building 6-800 (the Heavy Duty Machine Shop) and the Building 6-621 (Welding Shop) Sump was piped to the South SCEP (DOE, 1996).

The piping, steam cleaning pads, separator, sump, and grease traps associated with the CAU were added to the SCEP system to meet the changing operational mission of the Fleet Operations Yard (DOE, 1996). Discharges to both SCEPs were discontinued in November 1992 when closed-loop, recirculating steam cleaning systems were installed. The piping from the steam cleaning pads to the separator or grease traps were subsequently plugged with cement.

Suspected Resource Conservation and Recovery Act (RCRA) regulated hazardous waste or hazardous waste constituents released into the SCEPs were degreasing solvents associated with equipment decontamination activities (methylene chloride and 1,1,1-trichloroethane) and petroleum hydrocarbon constituents (toluene, xylenes, and lead). No releases of RCRA-regulated hazardous waste or hazardous waste constituents have been discharged to either SCEP since 1988 (DOE, 1996). Prior to 1988, the volume of water discharged into the SCEPs was dependent on the amount of nuclear testing conducted each year. A detailed discussion of the unit activities can be found in the Resource Conservation and Recovery Act, Industrial Site Environmental Restoration Site Characterization Plan, Area 6 Steam Cleaning Effluent Ponds (DOE, 1996).

Three pre-characterization sampling events were completed at either the North or South SCEP in late summer 1994 and early fall 1995. These sampling events were in support of regulatory compliance activities or characterization scoping activities. The analytical data generated from these sampling events were evaluated and were used to develop the Area 6 SCEP Characterization Plan, (DOE, 1996). The Area 6 SCEP Characterization Plan was implemented in May 1996. The characterization activity was documented in Resource Conservation and Recovery Act, Industrial Site Environmental Restoration Site Characterization Report, Area 6 Steam Cleaning Effluent Ponds (DOE, 1996a). The Area 6 SCEP Characterization Report (DOE, 1996a) delineated the vertical and horizontal extent of impacted soil within the North and South SCEPs. The Area 6 SCEP Characterization Report (DOE, 1996a) also documented that the soil within the North SCEP was not hazardous under RCRA. The physical description of impacted soil within the North and South SCEP were used to develop the Area 6 SCEP Closure Plan (Closure Plan for CAU No. 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site, DOE, 1997).

1.2 SCOPE

Clean closure was achieved for the majority of the components within this CAU. Seven components of the unit (Building 6-621 Sump (CAS 06-13-01), Building 6-800 Steam Cleaning Pad, Old Abandoned Steam Cleanign Grate, Layout Pad Grease Trap, Test Pad, Building 6-623 Steam Cleaning Pad, and North SCEP pipeline) were closed in place. This closure report documents the strategy and analytical results that support the clean closure or closure in place of each of the individual components within CAU 93.

The following activities were conducted during the closure of this unit:

- Investigated an historic hydrocarbon release in the vicinity of the North SCEP identified by the NDEM (release number H910911D).
- Investigation and closure of a grease trap east of Building 6-623.
- Investigation and closure of the Layout Pad and associated grease trap.
- Investigation and closure of the Test Pad and associated piping.
- Investigation and closure of the Building 6-623 Steam Cleaning Pad and associated piping.
- Investigation and closure of the Old Abandoned Steam Cleaning Grate.
- Excavated and properly disposed of the petroleum hydrocarbon impacted soil from the North SCEP (CAS 06-47-01).
- Backfilled the North SCEP (CAS 06-47-01) with clean fill following standard construction practices.
- Excavated and properly disposed of the RCRA-hazardous and petroleum hydrocarbon impacted soil (Zone 2) from the South SCEP (CAS 06-47-01).
- Excavated and properly disposed of the remaining petroleum hydrocarbon impacted soil (Zone 3) from the South SCEP (CAS 06-47-01).
- Backfilled the South SCEP (CAS 06-47-01) with clean fill following standard construction practices.
- Investigation and closure of the Building 6-800 Steam Cleaning Pad and the associated separator.

- Closure of the Building 6-621 Sump (06-13-01).
- Investigation and closure of the South SCEP asbestos concrete pipeline.

1.3 CLOSURE REPORT CONTENTS

This Report has been developed to support the declaration that CAU 93 Area 6 Steam Cleaning Effluent Ponds has been closed following the approved Closure Plan (DOE, 1997). The format of this report is as follows:

- Introduction (purpose, scope, and report contents).
- Closure Activities (description of field activities, deviations from the approved Closure Plan, field closure schedule, and final site plan).
- Waste Disposition (type of wastes found and disposal strategy).
- Closure Verification (verification activities, analytical data tables, and sampling locations).
- Closure of NDEM release sites (per instructions from NDEP the two NDEM spills associated with CAU 93 will be closed in this document).
- Conclusions.

The closure report was developed using information and guidance provided in the following documents:

- Resource Conservation and Recovery Act, Industrial Sites, Environmental Restoration Site Characterization Report, Area 6 Steam Cleaning Effluent Ponds, DOE, 1996.
- Nevada Environmental Restoration Project, Project Management Plan, Revision 0, DOE, 1994.
- Nevada Environmental Restoration Project, Industrial Sites, Quality Assurance Project Plan, Nevada Test Site, Nevada, Revision 1, DOE, 1996.
- Closure Plan for CAU No. 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site, DOE, 1997.

2.0 CLOSURE ACTIVITIES

This section of the Closure Report details the specific activities involved in the closure of each component of CAU 93. This section also includes the rationale for deviations from the approved Closure Plan and a detailed closure schedule is included as a time line of the closure process.

2.1 DESCRIPTION OF CORRECTIVE ACTION ACTIVITIES

This portion of the report documents the specific activities conducted to close each portion of CAU 93. The corrective action does not follow the closure time line shown in Section 2.3. The discussion of closure activities is presented by area of activity. Information presented in this manner better illustrates the closure strategy than the piecemeal manner in which the closure activities were implemented.

Before presenting the detailed account of the closure of each component of CAU 93, a few common activities will be stated to avoid repeating in each closure section.

- Prior to excavating at any location, all subsurface sewer, water, and electrical lines were identified and marked. This was completed by reviewing Engineering Drawings and using "Goldak" equipment and/or metal detectors.
- The following sections do not include detailed figures or analytical data tables. These are provided in Sections 4.0 and 5.0. Sample summary sheets are provided within Appendix B.
- Analytical samples were collected using a hand trowel and were placed directly into sample containers. Analytical samples were collected out of the backhoe bucket at excavations which were too deep and/or unsafe for a sampler to enter.
- The use of the term "background" in this section refers to the ambient air total volatile organic compound (VOC) vapor concentrations measured either during excavation activities or within the plastic ziplock bag for headspace analysis. The photo-ionization detector (PID) which was the field instrument used to screen the work space and headspace samples was calibrated so that the background concentration was zero.
- An on-site laboratory was used extensively during the field program to give the project team guidance on volume of soil requiring excavation. The on-site laboratory is located in Area 5 and is not a certified laboratory. The on-site laboratory provided petroleum hydrocarbon testing of site soils. The analytical method used by the on-site laboratory differs from the contract laboratory methodology. The on-site laboratory used a non-

hazardous extraction solvent to reduce generation of hazardous waste. The analytical results provided by the on-site laboratory were used for field guidance, not for closure verification.

2.1.1 Layout Pad Grease Trap Closure

The Layout Pad Grease Trap was sealed with cement after the steam cleaning pad was closed in November 1992. The closure strategy for this unit was to confirm that the grease trap did not leak or spill petroleum hydrocarbons onto the surrounding soil during its operation. If the investigation and verification samples confirmed that the past operation of this component had not impacted the surrounding soil, the component would be closed in place.

No underground utilities were found in the vicinity of the grease trap, therefore hand excavation was not required. Two samples were collected using a hand trowel from under the influent and effluent pipes and a backhoe was used to collect a soil sample from under each end of the grease trap. The soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) to determine if the surrounding soil had been impacted by past operational activities.

A PID, with a lamp voltage of 11.7 eV was used to monitor VOCs in the breathing zone during excavation activities. PID readings during excavation activities did not register above background concentrations (i.e., 0 parts per million [ppm]) for VOCs. Examination of the soil from the excavation did not indicate any visual or instrumental signs of being impacted by past activities. Headspace readings of soil collected from the excavation were not above background concentrations (i.e., 0 ppm). The verification samples analytical results will be discussed in Section 4.0.

Based upon site observations, no additional soil was removed from the Layout Pad Grease Trap excavation. Therefore, a determination was made that the Layout Pad would be closed in place. The excavation was backfilled with the original soil after on-site laboratory analysis indicated that the subsurface soil was not impacted with petroleum hydrocarbons. If the off-site contract laboratory analytical results had indicated that the soil was impacted above the closure criteria the excavation would have been over-excavated and resampled. The excavation was closed prior to receiving the results of the off-site contract laboratory samples because of safety concerns of leaving an open excavation for a protract period of time.

2.1.2 Test Pad Closure

The Test Pad Drain Line was sealed with cement after the Test Pad was closed in November 1992. The closure strategy for this unit was to confirm that the Test Pad Pipeline did not leak or spill petroleum hydrocarbons onto the surrounding soil during its operation. If the investigation

and verification samples confirmed that the past operation of this component had not impacted the surrounding soil, the component would be closed in place.

No underground utilities were found in the vicinity of the Test Pad, therefore excavation by hand was not required prior to using the backhoe. Two samples were collected using a hand trowel from under Test Pad outflow pipeline joints. The soil samples were analyzed for TPH to determine if the surrounding soil has been impacted by past operational activities.

A PID, with a lamp voltage of 11.7 eV was used to monitor VOCs in the breathing zone during excavation activities. PID readings during excavation activities did not register above background concentrations for VOCs. Examination of the soil from the excavation did not indicate any visual or instrumental signs of being impacted by past activities. Headspace readings of soil collected from the excavation were not above background concentrations. The verification samples analytical results will be discussed in Section 4.0.

Based upon the physical condition of the soil within the excavation, no additional soil was removed from the Test Pad discharge pipeline excavation. Therefore, a determination was made that the Test Pad would be closed in place. The excavation was backfilled with the original soil after on-site laboratory analysis indicated that the subsurface soil was not impacted with petroleum hydrocarbons. If the off-site contract laboratory analytical results had indicated that the soil was impacted above the closure criteria the excavation would have been over-excavated and resampled. The excavation was closed prior to receiving the results of the off-site contract laboratory samples because of safety concerns of leaving an open excavation for a protracted period of time.

2.1.3 Building 6-623 Steam Cleaning Pad Closure

The Building 6-623 Steam Cleaning Pad Drain Line was sealed with cement after the Steam Cleaning Pad was closed in November 1992. The closure strategy for this unit was to confirm that the Building 6-623 Steam Cleaning Pad Drain Line did not leak or spill petroleum hydrocarbons on to the surrounding soil during its operation. If the investigation and verification samples confirmed that the past operation of this component had not impacted the surrounding soil, the component would be closed in place.

The Building 6-623 Steam Cleaning Pad Drain Line piping was excavated approximately 7.7 m (25 ft) south of the Building 6-623 Steam Cleaning Pad. This location was selected because the drain line was covered by a small building immediately south of the steam cleaning pad. By moving the excavation further south the condition of the junction between the Building 6-623 Steam Cleaning Pad Drain Line and the main North SCEP outfall pipeline could be observed.

No underground utilities were found in the vicinity of the Building 6-623 Steam Cleaning Pad

Drain Line, therefore hand excavation was not required prior to using the backhoe. A backhoe was used to expose the piping and two soil samples were collected from underneath pipe joints at the intersection between the Building 6-623 Steam Cleaning Pad Drain Line and the main North SCEP outfall pipeline. The soil samples were analyzed for TPH to determine if the surrounding soil has been impacted by past operational activities.

A PID, with a lamp voltage of 11.7 eV was used to monitor VOCs in the breathing zone during excavation activities. PID readings during excavation activities did not register above background concentrations for VOCs. Examination of the soil from the excavation did not indicate any visual or instrumental signs of being impacted by past activities. Headspace readings of soil collected from the excavation were not above background concentrations. The verification samples analytical results will be discussed in Section 4.0.

Based upon the physical condition of the soil within the excavation, additional soil was not removed from the Building 6-623 Steam Cleaning Pad Drain Line excavation. Therefore, a determination was made that the Building 6-623 Steam Cleaning Pad would be closed in place. The excavation was backfilled with the original soil after on-site laboratory analysis indicated that the subsurface soil was not impacted with petroleum hydrocarbons. If the off-site contract laboratory analytical results had indicated that the soil was impacted above the closure criteria the excavation would have been over-excavated and resampled. The excavation was closed prior to receiving the results of the off-site contract laboratory samples because of safety concerns of leaving an open excavation for a protracted period of time.

2.1.4 Building 6-623 Grease Trap Closure

The closure strategy for the Building 6-623 Grease Trap was to remove, clean out, and properly dispose of the grease trap in the Area 9 10C Landfill. The liquid within the Building 6-623 Grease Trap was removed in September 1996, however, petroleum hydrocarbon impacted sludge still remained in the bottom of the grease trap.

A number of underground utilities were found in the vicinity of the Building 6-623 Steam Cleaning Pad Drain Line. It was rapidly determined that the grease trap had been installed in a utility corridor. A 4,140 volt power line, a sewer line, water line, and buried telephone line are located within a few feet of the proposed excavation. Prior to extensive backhoe excavation, the soil in the vicinity of any suspected utility was excavated by hand.

The tank interior was monitored with a Combustible Gas Analyzer (CGA) to confirm that it did not have a hazardous atmosphere. The atmosphere of the grease trap was determined to be not explosive. A PID, with a lamp voltage of 11.7 eV, was in constant use during excavation activities. Elevated PID readings were not registered during the excavation of the grease trap.

The backhoe was used to excavate a sufficient volume of soil around the tank to allow its removal with a crane. All grease trap system pipes were removed from the grease trap and the access ports sealed with cement. The backhoe was used to collect a total of four soil samples from under the ends of the grease trap and surrounding soil. The soil samples were analyzed for VOCs, total petroleum hydrocarbons (TPH), and toxicity characteristic leaching procedure (TCLP) metals to determine if the surrounding soil has been impacted by past operational activities.

Examination of the soil from the excavation did not indicate any visual or instrumental signs of being impacted by past activities. Headspace readings of soil collected from the excavation did not exceed background concentrations. The verification samples analytical results will be discussed in Section 4.0.

Based upon the physical condition of the soil in the excavation, additional soil was not removed from the Building 6-623 Grease Trap excavation. The excavation was backfilled with the original soil and stockpiled Type II soil after off-site contract laboratory analysis indicated that the subsurface soil was not impacted with VOCs, petroleum hydrocarbons, or TCLP metals.

2.1.5 North Steam Cleaning Effluent Pond Spill H910911D Closure

Following the request of the NDEP Point of Contact, details of NDEM Spill Number H910911D will be presented as a stand alone section (Section 5.1) of the Closure Report. This will allow the NDEP to more easily close out this spill site. Historical information regarding the spill was presented within Appendix A of the Area 6 SCEP Closure Plan (DOE, 1997).

2.1.6 North Steam Cleaning Effluent Pond Influent Pipe Closure

The condition of the North SCEP Influent Pipeline was evaluated as part of the Layout Pad Grease Trap, Test Pad, Building 6-623 Steam Cleaning Pad, and Building 6-623 Grease Trap closure activities. The piping around these components were visually inspected and soil samples were collected from under pipeline joints.

Exposed lines did not have any visual signs of failure. No instrument or visual signs of leakage were detected in the soil surrounding the pipeline. Verification samples collected as part of the closure of the North SCEP components confirm that the pipeline is in excellent condition. Since the exposed ends of all inflow and outflow pipelines have been sealed with cement, this component of the North SCEP system was closed in place.

2.1.7 North Steam Cleaning Effluent Pond (CAS 06-47-01) Closure

The closure of the North SCEP was accomplished in three phases.

Phase 1

Phase 1 consisted of excavating the top one meter (3 ft) of soil from the North SCEP and disposing of this soil in the Area 6 Hydrocarbon Landfill. Soil was excavated using a front end loader, loaded into dump trucks, and transported to the hydrocarbon landfill (refer to Section 3.0 for waste management details). Approximately 642 cubic meters (m^3) (840 cubic yards [yd^3]) of petroleum hydrocarbon impacted soil was removed from the North SCEP.

Phase 2

Phase 2 consisted of collecting 23 verification samples from the excavated areas of the pond. The impacted areas of the North SCEP was divided into a 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grid pattern. Twenty-two of the cells were randomly selected (using the Math Cad™ random number generator) and sampled to verify that petroleum-hydrocarbon impacted soil above the NAC Action Level of 100 mg/kg had been removed from the North SCEP. In addition, one biased soil sample selected by the NDEP Point of Contact was collected in the vicinity of the outfall pipe.

The 23 verification samples were analyzed on-site as well as sent to an off-site contract laboratory. The on-site analysis indicated that three locations within the North SCEP had elevated petroleum hydrocarbon concentrations. These three locations were over-excavated (approximately [$3 yd^3$] of soil excavated at each location) and an additional verification sample collected from each over-excavation. The over-excavated soil was disposed in the Area 6 Hydrocarbon Landfill. Details on the verification sampling are found within Section 4.0.

Phase 3

Phase 3 was started after the Phase 2 verification samples confirmed that the petroleum hydrocarbon impacted soil above the TPH Action Level of 100 mg/kg had been removed from the North SCEP. Clean fill was brought to the site and placed into the open excavation. The excavation was backfilled using a performance standard of 85 percent compaction. The final 0.2 m (1 ft) of the excavation was filled with native playa soil and graded in a manner to promote runoff away from the former excavation.

2.1.8 Building 6-800 Steam Cleaning Pad Closure

The Building 6-800 Steam Cleaning Pad drain line was sealed with cement after the Steam Cleaning Pad was closed in November 1992. The closure strategy for this unit is to confirm that

the Steam Cleaning Pad Drain Line did not leak or spill petroleum hydrocarbons or RCRA F-listed waste on to the surrounding soil during its operation. If the investigation and verification samples confirmed that the past operation of this component had not impacted the surrounding soil, the component would be closed in place.

The Building 6-800 Steam Cleaning Pad Drain Line piping extends approximately 1 m (3 ft) from the Building 6-800 Steam Cleaning Pad to the Building 6-800 Separator. The drain line was buried approximately 0.6 m (2 ft) below the ground surface and was intact with no instrument or visual indications that any material had been released from the pipe.

Two water lines were found in the vicinity of the Building 6-800 Steam Cleaning Pad Drain Line, therefore hand excavation was required prior to using the backhoe.

A PID, with a lamp voltage of 11.7 eV was used to monitor VOCs in the breathing zone during the excavation of the 1 m (3 ft) section of pipe. PID readings during excavation activities did not registered above background concentrations for VOCs. Examination of the soil from the excavation did not indicate any visual or instrumental signs of being impacted by past activities. Headspace readings of soil collected from the excavation were not above background concentrations. Due to the limited extent of piping between the Building 6-800 Steam Cleaning Pad and the Building 6-800 Separator (1 m [3 ft]) the proposed activity was modified and the two scheduled verification samples were not collected (please refer to Section 2.2 for details).

Based upon the physical condition of the soil in the 1 m (3 ft) pipe excavation, additional soil was not removed from the Building 6-800 Steam Cleaning Pad Drain Line excavation. Therefore, a determination was made that the Building 6-800 Steam Cleaning Pad would be closed in place. The excavation was backfilled with clean fill that was brought to the site to backfill the Building 6-800 Separator excavation.

2.1.9 Building 6-800 Separator (CAS 06-99-05) Closure

The Building 6-800 Separator was clean closed. The soil around the separator was excavated and the separator was removed. Both the excavated soil and the separator were stockpiled in the Hazardous Waste Storage Area (Figure 2). During the excavation process, soil from all around the separator was evaluated using a PID in attempt to locate NDEM Spill Number H920625B. The only area where impacted soil was detected was soil between the two chambers of the Building 6-800 separator. Therefore, the information required to close out NDEM Spill Number H920625B will be discussed within this section as well as Section 5.2.

A high pressure air line was located approximately 1.5 m (4.5 ft) east of the Building 6-800 Separator, therefore hand excavation was required in this portion of the excavation prior to using the backhoe.

A backhoe was used to excavate a sufficient volume of soil around the two chambers of the separator to allow removal with a crane. All system pipes were disconnected from the separator prior to the separator being hoisted from the excavation. Precautions were taken to minimize the release of product during the disconnection of pipes by the use of spill buckets and mats.

A PID, with a lamp voltage of 11.7 eV was used to monitor VOCs in the breathing zone during the excavation of the Building 6-800 Separator and surrounding soil. PID readings during excavation activities did not register above background concentrations for VOCs. However, a strong petroleum odor was detected from soil excavated from around the separator. Examination of the soil from the excavation indicated physical signs of staining and petroleum odor. The impacted soil appeared to be primarily associated with past spills, there was no staining on the separator which would indicate that the separator was leaking. Headspace readings of soil collected from the excavation were significantly above background concentrations (>75 ppm). Headspace readings were used as a tool to direct the volume of soil required to be removed to achieve clean closure of this component of CAU 93.

Four samples were collected from the excavation to evaluate the conditions of the soil around the separator. A sample was collected from a depth of 0.6 m (2.0 ft) below the base of each end of the separator. Based on odor, soil staining, and instrumentation it was determined that the soil had been significantly impacted. Soil was removed to a depth of 6 m (20 ft) below ground surface. Approximately 176 m³ (230 yd³) of soil was removed from the excavation and transported to the Hazardous Waste Storage Area pending waste classification analytical results. During the excavation of the impacted soil associated with the Building 6-800 Separator removal, an old abandoned steam cleaning grate and discharge line were discovered. This steam cleaning grate was not present on any "as built" drawings reviewed prior to commencing excavation activities. The old steam cleaning grate, settling chamber, and short section of piping were removed along with the Building 6-800 Separator and stored in the Hazardous Waste Storage Area pending analytical results. The old abandoned steam cleaning grate was added to the components included within CAU 93. It will be discussed in greater detail in Sections 2.1.10 and 2.2.

The excavated soil was stockpiled on plastic sheeting in the Hazardous Waste Storage Area pending waste characterization analytical results. The impacted soil was determined to not be RCRA hazardous and was loaded into end dump trucks and transported to the Area 6 Hydrocarbon Landfill for proper disposal. The associated debris was classified as non-hazardous and disposed of in the Area 9 10C Landfill. Detailed waste disposal information is found in Section 3.0.

Based upon the confirmation samples collected from the base of the Building 6-800 Separator excavation, all of the impacted soil has been removed to the clean closure criteria and was backfilled with imported clean fill. The Building 6-800 Separator has been clean closed.

2.1.10 Old Abandoned Steam Cleaning Grate Closure

The old abandoned steam cleaning grate and associated piping were added to CAU 93 after they were discovered during the Building 6-800 Separator field closure activities. The old abandoned steam cleaning grate consisted of a 1.2 m (4 ft) by 0.6 m (2 ft) steel grate that covered a 1.2 m (4 ft) by 0.6 m (2 ft) by 1 m (3 ft) deep settling chamber. The steel settling chamber was connected to a 25 cm (10 in) steel pipe which discharged into the drainage ditch on the western side of the 6-05 Road.

The steam cleaning grate, settling chamber, and a 1 m (3 ft) section of the drainage pipe were excavated and disposed of along with the Building 6-800 Separator during that components field closure activities. In addition, approximately 9 m (30 ft) of the discharge pipe was exposed. The discharge pipe appears to be one continuous 18 m (60 ft) section of drill casing.

Three soil samples were collected in support of the closure of the old abandoned steam cleaning grate. The soil samples were analyzed for VOCs, TPH, and TCLP metals. The analytical results indicated that petroleum hydrocarbons were the principal constituent of concern (COC). In addition, the volatile organic compound acetone was detected within one surface soil sample.

After discussing the analytical results with the NDEP Point of Contact in a October 7, 1997 conference call, it was decided to seal both ends of the discharge pipe with a quick setting cement.

2.1.11 Building 6-800 Separator Spill H920625B Closure

Following the request of the NDEP Point of Contact, details of NDEM Spill Number H920625B will be presented as a stand alone section (Section 5.2) of the Closure Report. This will allow

the NDEP to more easily close out this spill site. Historical information regarding the spill was presented within Appendix A of the Area 6 SCEP closure plan (DOE, 1997).

2.1.12 Building 6-621 Sump (CAS 06-13-01) Closure

As outlined in the Area 6 SCEPs Closure Plan (DOE, 1997) this component of CAU 93 was closed in place by sealing the Building 6-621 Sump with cement. Approximately 0.4 m³ (0.5 yd³) of cement was poured into the Building 6-621 Sump on September 10, 1997.

2.1.13 South Steam Cleaning Effluent Pond Influent Pipe Closure

The South SCEP piping has been determined to contain RCRA hazardous waste, refer to Area 6 Closure Plan for details (DOE, 1997). Therefore, the closure strategy for this component of CAU 93 was to expose, remove, and properly dispose of the pipeline in an off-site TSDF.

The pipeline runs under an extensive utility corridor between the 6-05 Road and Building 6-800 Separator. Utilities within this section of the pipeline include numerous buried power lines, a gas line, a waterline, and buried telephone cables. Initial excavation in this portion of the pipeline resulted in a modification of the approved closure plan (please refer to Section 2.2 for details). Visual and instrumental inspection of the pipeline confirm the expectation that the piping had not been breached and impacted surrounding soil. Therefore, during a June 24, 1997 site visit by the NDEP Point of Contact it was decided that due to health and safety concerns, the piping through the most utility congested 6 m (20 ft) section of the pipeline could be completely sealed with a cement grout.

The 20 cm (8.0 in) concrete asbestos piping is constructed in 4 m (13 ft) long sections. One end of the pipe section has a male coupling and the other a female coupling. A backhoe attached by straps to the pipe coupling was used to pull the pipe sections apart. Special care was taken to limit impacted sludge from spilling from the pipe onto the surrounding soil during the removal process. This was accomplished by excavating under the coupling joints and placing absorbent pads under the pipe to collect any releases. In addition, absorbent pads were inserted into the ends of the piping to control any residual liquid associated with the pipe sludge.

After each pipe section had been removed, the pipe ends were covered with plastic which was sealed with tape. The pipe was then moved to the Hazardous Waste Storage Area and placed in a roll-off container until transported to an off-site TSDF.

Soil excavated under the pipeline was screened visually for signs of staining or wetness surrounding the piping. A PID was also used to evaluate both the breathing zone condition and the headspace of soil collected under pipe joints. Elevated PID instrument readings or visual signs of a release were not detected during the closure activities.

Samples were selected randomly from nine locations, under pipe joints, along the length of the South SCEP pipeline excavation. Based upon the analytical results from the nine verification samples collected from various locations along the South SCEP pipeline, two locations required additional soil removal. Location SSCEP-PIPE-7 was over-excavated and resampled for petroleum hydrocarbons. The second verification sample (SSCEP-PIPE-7B) confirmed that soil concentrations of petroleum hydrocarbons were below the NAC Action Level. Location SSCEP-PIPE-4 was over-excavated and resampled for VOCs. The second verification sample (SSCEP-PIPE-4B) confirmed that methylene chloride was not present above the method detection limit. Details regarding verification sample results are found in Section 4.0. The excavation was

backfilled with the original soil and stockpiled Type II soil after off-site laboratory analysis indicated that the subsurface soil was not impacted with VOCs or petroleum hydrocarbons. The 6-05 Road asphalt and Building 6-621 concrete that was removed as part of the pipeline removal was repaired with cement. This component of CAU 93 is considered to be clean closed.

2.1.14 South Steam Cleaning Effluent Pond (CAS 06-47-01) Closure

The clean closure of the South SCEP was accomplished in five phases.

Phase 1

Phase 1 began by reopening the ramp that was created during the characterization field work. The excavated soil was stockpiled on-site and then disposed of in the Area 6 Hydrocarbon Landfill along with soil generated during Phase 3.

The closure plan (DOE, 1997) specified the removal of approximately 0.6 m (2.0 ft) of discolored soil from the South SCEP walls. The discolored soil was identified as hazardous in the Area 6 SCEP Characterization Report (DOE, 1996b) and was classified as Zone 2 in the South SCEP profile. The characterization report estimated that the Zone 2 soil in the South SCEP was confined to the upper 0.6 m (2 ft) of the South SCEP walls. The characterization report indicated that approximately 92 m³ (120 yd³) of soil required removal.

However, soon after excavation began in the South SCEP it became apparent that the volume of Zone 2 soil had been underestimated. After consultation with the NDEP Point of Contact in a June 19, 1997 conference call, it was decided to attempt to excavate all of the hazardous (Zone 2) soil prior to the collection of verification samples. The Zone 2 soil removal process was changed to accommodate the increased volume of Zone 2 soil. Specific closure plan deviations are outlined within Section 2.2. A total of 306 m³ (400 yd³) of hazardous waste (Zone 2 soil) was excavated and placed directly into either end-dump trucks or roll-off containers and transported directly off-site to a TSDF for proper disposal.

Phase 2

Phase 2 activities consisted of the collection of 15 verification samples to confirm that all of the Zone 2 soil had been excavated from the South SCEP. The South SCEP was divided into a 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grid pattern. Thirteen of the cells were randomly selected (using the Math Cad™ random number generator) and sampled to verify that RCRA-regulated constituents had been removed from the pond (refer to Section 4.0 for details). In addition, two biased soil samples were collected in the vicinity of the outfall pipe.

Cleanup criteria for the Zone 2 soil was for all of the soil samples to have concentrations below detection limits for VOC and concentrations below the TCLP Regulatory Level for metals. Based upon the verification sample analytical results, four cells had detectable concentrations of VOCs. These four cells were over-excavated and resampled. Details are provided within Section 4.0.

Phase 3

Phase 3 activities began upon verification that the impacted soils had been successfully removed from Zone 2. Work consisted of excavating the remaining petroleum hydrocarbon impacted soils from within the South SCEP for disposal in the Area 6 Hydrocarbon Landfill. The total volume of soil excavated and disposed was 2,600 m³ (3,400 yd³). Material disposed included the stockpiled ramp removal soil, the South SCEP berm, and the interior of the South SCEP. Soil was excavated using a front-end loader, loaded into dump trucks, and transported to the Area 6 Hydrocarbon Landfill (refer to Section 3.0 for details).

Phase 4

Phase 4 consisted of the collection of 16 verification soil samples from excavated areas of the South SCEP. The South SCEP surface area exposed after the removal of the petroleum hydrocarbon (Zone 3) impacted soil, was divided into a 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grid pattern. Twelve of the cells were randomly selected (using the Math Cad™ random number generator) and sampled to verify that all of the soil with TPH concentrations above the NAC Action Level had been removed from the South SCEP. Four biased samples were selected by the NDEP Point of Contact and split samples were collected from these locations.

Replicates of the 16 verification samples were analyzed on-site as well as sent to a off-site laboratory. The on-site analysis indicated that six locations within the South SCEP had elevated (over 100 mg/kg) petroleum hydrocarbon concentrations. These six locations were over-excavated and an additional verification sample collected from each over-excavation. The over-excavated soil was disposed in the Area 6 Hydrocarbon Landfill. In addition, the NDEP informed the DOE Task Manager that one cell (No. 59), which was a split sampled location, had a TPH concentration of 130 mg/kg. The elevated petroleum hydrocarbon detected by the NDEP was not confirmed in the DOE sample (SSCEP-V3-059A), but additional soil was over-excavated from this cell and disposed within the Area 6 Hydrocarbon Landfill. Details on the verification sampling are found in Section 4.0.

Phase 5

Phase 5 activities were started after confirmation that the petroleum hydrocarbon impacted soil above the TPH Action Level of 100 mg/kg was removed from the South SCEP. Clean fill was brought to the site to backfill the open excavation. A performance standard of 85 percent

compaction was used. The final 0.3 m (1 ft) of the excavation was filled with native playa soil and graded in a manner to promote runoff away from the former excavation.

2.2 DEVIATIONS FROM CLOSURE PLAN AS APPROVED

Field activities within the approved Area 6 SCEP Closure Plan (DOE, 1997) were modified in the field to adjust to unexpected conditions, simplify activities, or increase worker safety. This section is organized so that the specific section of the Area 6 SCEP Closure Plan (DOE, 1997) that was affected is cited along with the field change. Where possible a detailed explanation/justification for the deviation is included.

2.2.1 Deviation from Building 6-623 Steam Cleaning Pad Closure Strategy

Section 2.2.3 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the Building 6-623 Steam Cleaning Pad. The closure was to be based upon the condition of the soil directly adjacent to the steam cleaning pad along the outflow pipe. The outfall piping would be excavated and two soil samples collected from the impacted soil or from under piping joints.

The verification samples were collected approximately 7.7 m (25 ft) south of the steam cleaning pad. The location was changed in the field for the following reasons:

- A small storage building was built along the south side of the steam cleaning pad blocking access to the discharge pipe.
- The Building 6-623 Steam Cleaning Pad outfall pipe connects to the main North SCEP outfall discharge pipeline 7.7 m (25 ft) south of the steam cleaning pad. Excavation at this location would verify the physical condition of the piping from both pipelines.

2.2.2 Deviations from the North Steam Cleaning Effluent Pond (CAS 06-47-01) Closure Strategy

Section 2.2.7 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the North SCEP. Phase 3 of the closure strategy outlines the procedure to backfill the North SCEP after all of the petroleum hydrocarbon impact soil above the NAC Action Level had been removed. Section 2.2.7 specified that the top 0.6 m (2 ft) of the North SCEP would be capped with native playa soil.

The thickness of the final native playa layer was modified because it is extremely difficult to work with. Attempts of placing native playa soil into excavations and compacting it in lifts were unsuccessful. The native playa consists of fine grained silt and clay which when excavated forms a light powder. The fine powder is hard to compact in an excavation, and does not hydrate

uniformly upon wetting. This makes the material hard to work with, and placing the playa in multiple lifts is extremely time consuming.

For this reason a decision was made to change the thickness of the native playa soil layer from 0.6 m (2 ft) to 0.3 m (1 ft). Since the North SCEP is a clean closure, the change in cap thickness does not impact the closure performance.

2.2.3 Deviations from the Building 6-800 Steam Cleaning Pad Closure Strategy

Section 2.2.8 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the Building 6-800 Steam Cleaning Pad. The closure would be based upon the condition of the soil directly adjacent to the steam cleaning pad along the outflow pipe. The outfall piping would be excavated and two soil samples would be collected from impacted soil or from under piping joints.

During closure field work it was discovered that the Building 6-800 Steam Cleaning Pad and the Building 6-800 Separator were connected by a 1 m (3 ft) section of outflow pipe. Visual examination and PID headspace readings indicated that the soil along this section of outfall piping was not impacted. Therefore, the soil samples associated with the Building 6-800 Steam Cleaning Pad discharge pipe were not collected.

2.2.4 Deviations from the Building 6-800 Separator (CAS 06-99-05) Closure Strategy

Section 2.2.9 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the Building 6-800 Separator. The closure would be based upon the condition of the soil located 0.6 m (2 ft) under each end of the separator.

During the course of excavating and removing the Building 6-800 Separator and associated soil, it was discovered that the soil between the east and west chambers of the separator had been highly impacted by petroleum hydrocarbons. The source of the impacted soil is a historical spill (H920625B) which was partially remediated in June 1992. The spill impacted soil extended to a depth of 6 m (20 ft) below ground surface. In order to confirm that all of the impacted soil above closure criteria, two additional soil samples were collected from the base of the Building 6-800 Separator excavation.

2.2.5 Discovery of the Old Abandoned Steam Cleaning Grate

During the Building 6-800 Separator excavation an old abandoned steam cleaning grate was discovered. The steam cleaning grate was located approximately 1 m (3 ft) north of the eastern

end of the separator. The steam cleaning grate was covered by approximately 0.3 m (1 ft) of soil. The steam cleaning grate, settling box, and a small section of the discharge pipe were excavated and temporarily stored in the Hazardous Waste Storage Area. The outfall for the discharge pipe was uncovered in a drainage ditch just west of the 6-05 Road.

A decision was made by DOE/ERD and the NDEP during an October 7, 1997 conference call to include this component within CAU 93. Three soil samples were collected from the old abandoned steam cleaning grate system. Based upon the analytical data, it was decided that sealing both ends of the discharge pipe with a quick setting cement is sufficient to close this component of CAU 93.

2.2.6 Deviation from the Building 6-800 Separator Spill H920625B Closure Strategy

Section 2.2.10 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the Building 6-800 Separator, Spill Number H920625B. The closure would be based on confirmation that all of the impacted soil in the spill area has been removed to closure criteria. Historic data regarding Spill H920625B indicated that the west chamber overflowed and the soil along the northeast end of the separator was impacted. Once the spill had been remediated, two verification samples would be collected.

However, during the course of excavating and removing the Building 6-800 Separator and associated soil, it was discovered that the source area for spill H920625B was located between the east and west chambers of the separator. A field decision was made and the verification samples were collected as part of the Building 6-800 Separator closure. The Building 6-800 Separator verification samples will be used to verify that spill H920625B has been remediated.

2.2.7 Deviations from the South Steam Cleaning Effluent Pond Influent Pipe Closure Strategy

Section 2.2.12 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the South SCEP Influent Pipeline. All of the piping between the South SCEP and the Building 6-800 Steam Cleaning Pad would be removed and disposed of at an off-site TSDF as hazardous waste.

During the pre-excavation safety inspection (Goldak, "as built" review, and site walkover) numerous utilities were identified. During the excavation the following utilities were identified in a 8 m (26 ft) section of the pipeline:

- Four separate electrical conduits or direct buried electric wiring.

- One natural gas line.
- Fire protection water line.
- A buried telephone conduit.

After consultation with the NDEP Point of Contact during a June 24, 1997 site visit, it was decided that due to safety hazards the 8 m (26 ft) section of the pipeline will be closed in place. The pipe section was completely sealed with a cement grout.

2.2.8 Deviations from the South Steam Cleaning Effluent Pond (CAS 06-47-01) Closure Strategy

Section 2.2.13 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the South SCEP. This section is divided into five phases. The Phase 1 discussion indicated that the volume of Zone 2 soil (hazardous waste) was approximately 92 m³ (120 yd³). The Waste Management Plan (Appendix B of DOE, 1997) was based on this estimate.

During the excavation it was discovered that the volume of Zone 2 was considerably greater than the initial estimated. The total volume of Zone 2 soil that was excavated was 306 m³ (400 yd³). The increased volume of soil required a change in the management of the hazardous soil. The Waste Management Plan (Appendix B of DOE, 1997) deviations will be document in Section 2.2.15.

2.2.9 Deviations from the South Steam Cleaning Effluent Pond (CAS 06-47-01) Closure Strategy

Section 2.2.13 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the South SCEP. This section is divided into five phases. Phase 5 of the closure strategy outlines the procedure required to backfill the South SCEP after all of the petroleum hydrocarbon impact soil above NAC Action Level was removed. Section 2.2.13 specified that the top 0.6 m (2 ft) of the South SCEP was to be capped with native playa soil.

The thickness of the final native playa soil layer was modified because it is extremely difficult to work with. Attempts of placing native playa into excavations and compacting it in lifts were unsuccessful. The native playa consists of fine grained silt and clay which when excavated forms a light powder. The fine powder is hard to compact within an excavation, and does not hydrate uniformly upon wetting. This makes the material hard to work with, and placing the playa in multiple lifts is extremely time consuming.

For this reason a decision was made to change the thickness of the native playa soil layer from 0.6 m (2 ft) to 0.3 m (1 ft). Since the South SCEP is a clean closure, the change in cap thickness does not impact the closure performance.

2.2.10 Deviations from the Spill H910911D (North SCEP) Verification Sampling

Section 3.5 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the verification sampling strategy for Spill H910911D. The spill area was estimated to extend over an area of 270 m² (3,000 ft²). A total of 12 verification samples were scheduled to be collected from this area.

During the pre-field work site walk-over of the spill, the area of the spill was increased to 1,125 m² (12,500 ft²). Therefore, the number of verification samples were increased from 12 to 50.

2.2.11 Deviation from the Building 6-800 Steam Cleaning Pad Verification Sampling

Section 3.7 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the verification sampling strategy for the Building 6-800 Steam Cleaning Pad. The outfall piping was to be excavated and two verification soil samples were to be collected from impacted soil or from under piping joints.

During closure field work it was observed that the Building 6-800 Steam Cleaning Pad and the Building 6-800 Separator were connected by a 1 m (3 ft) section of outflow pipe. Visual and PID headspace readings indicated that the soil along this section of outfall piping was not impacted. Therefore, the two verification samples associated with the Building 6-800 Steam Cleaning Pad discharge pipe were not collected.

The off-site contract laboratory missed the VOC holding times for the two additional soil samples. These verification locations were resampled for VOCs using a GeoProbe® soil collection system.

2.2.12 Deviation from the Building 6-800 Separator (CAS 06-99-05) Verification Sampling

Section 3.8 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the verification sampling strategy for the Building 6-800 Separator. The clean closure would be confirmed by the collection of two verification soil samples located 0.6 m (2 ft) under each end of the separator.

During the course of excavating and removing the Building 6-800 Separator and associated soil, it was discovered that the soil between the east and west chambers of the separator had been highly impacted. The source of the impacted soil is a historical spill (H920625B) which was partially remediated in June 1992. The spill impacted soil extended to a depth of 6 m (20 ft)

below ground surface. In order to confirm that all of the impacted soil above closure criteria was removed, two additional soil samples were collected from the base of the Building 6-800 Separator excavation.

2.2.13 Deviation from the Spill H920625B (Bldg. 6-800 Separator) Verification Sampling

Section 3.9 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the verification sampling strategy for Spill H920625B. The clean closure would be confirmed by the collection of two verification soil samples from the bottom of excavation.

The two verification samples were not collected because during the course of excavating and removing the Building 6-800 Separator and associated soil, it was discovered that the source area for Spill H920625B was between the east and west chambers of the separator. A field decision was made and the verification samples were collected as part of the Building 6-800 Separator closure. The Building 6-800 Separator verification samples were used to verify that spill H920625B has been remediated.

2.2.14 Deviation from Table 4 - Area 6 SCEP CAU 93 Verification Sampling Parameters

Table 4 of the Area 6 SCEP Closure Plan (DOE, 1997) specifies the number of samples that were to be collected and for what parameters, for each component of CAU 93. The deviations from the Closure Plan's Table 4 (DOE, 1997) are:

- Spill Release H910911D - change from 12 to 50 samples.
- North Steam Cleaning Effluent Pond - change from 26 to 23 samples.
- Building 6-800 Steam Cleaning Pad - change from 2 to 0 samples.
- Building 6-800 Separator - change from 2 to 4 samples.
- Spill Release H920625B - change from 2 to 0 samples.
- South SCEP Influent Pipe - change from 10 to 9 samples.
- South Steam Cleaning Effluent Pond - change from 9 to 15 VOC samples and from 25 to 35 TPH samples.

The rationale for the above listed changes have been provided in Sections 2.2.9 through 2.2.12 or

are the result of smaller or greater surface area (for the North and South SCEPs, respectively) than estimated in the closure plan (DOE, 1997).

2.2.15 Deviation from the Waste Management Plan

A Waste Management Plan was developed for the Area 6 SCEPT CAU 93 Closure Program. The Waste Management Plan was attached to the Area 6 SCEPT Closure Plan (DOE, 1997) as Appendix B. In Section 3.3.2.1, Hazardous Soil, of the Waste Management Plan (Appendix B of the Area 6 SCEPT Closure Plan (DOE, 1997)) the hazardous soil storage strategy is outlined for the South SCEPT. The hazardous soil was to be excavated and placed within on-site roll-off containers. Two waste characterization samples were to be collected from each roll-off. After review of the two sample analytical results the roll-off would be classified for disposal. Hazardous roll-off containers would be transported off-site to a TSDF for disposal.

The Area 6 SCEPT Characterization Report (DOE, 1996b) estimated that the volume of Zone 2 soil was approximately 92 m³ (120 yd³). The Waste Management Plan (Appendix B of DOE, 1997) hazardous waste handling procedures were based upon this estimate. However soon after starting the excavation of Zone 2 soil, it was discovered that the volume of Zone 2 soil was considerably greater than the initial estimate. The total volume of Zone 2 soil that was excavated was 306 m³ (400 yd³).

Possible alternative waste management options were discussed with Bechtel Nevada Waste Management personnel and the DOE Task Project Manager. A decision was made to use the characterization field activity waste profile sheets, developed in 1996. The worst case waste profile sheet was given to the TSDF and based upon this waste profile sheet the Zone 2 soil could be transported directly from the site to the TSDF. End dump trucks were brought to the South SCEPT and filled with Zone 2 soil, manifested and driven off-site to the TSDF for disposal. Prior to initiating this change the NDEP Point of Contact was informed of the change in the Waste Management Plan during a June 19, 1997 conference call.

2.3 CORRECTIVE ACTION SCHEDULE AS COMPLETED

A preliminary corrective action schedule was presented in Section 5.0 of the Area 6 SCEPT Closure Plan (DOE, 1997). The original corrective action schedule was based primarily upon the assumption that the contract analytical laboratory could provide a two week turn-around. Major portions of the corrective action fieldwork was conducted in phases. Verification samples were used to confirm that all of the impacted soil associated with that phase was removed. The average contract analytical laboratory turn-around was six weeks, and because of this the schedule was severely impacted.

The second major impact to the original corrective action schedule was the increased volume of impacted soil that required excavation and disposal. In the South SCEP alone, the volume of soil requiring excavation and disposal as hazardous increased from 92 m³ (120 yd³) to 306 m³ (400 yd³) and the volume of petroleum hydrocarbon impacted soil increased from 1,147 m³ (1,500 yd³) to 2,213 m³ (2,895 yd³).

The revised corrective action schedule is presented as Figure 3.

2.4 SITE PLAN

This section documents the final status of the Area 6 SCEP unit. The present condition of CAU 93 is shown in an "as built" drawing (Figure 4) and summarized below:

- Layout Pad and Layout Pad Grease Trap - closed in place.
- Test Pad - closed in place.
- Building 6-623 Steam Cleaning Pad - closed in place.
- Building 6-623 Grease Trap - clean closure.
- Spill H910911D (North SCEP) - clean closure.
- North SCEP Pipeline - closed in place, except where shown.
- North SCEP (CAS 06-47-01) - clean closure.
- Building 6-800 Steam Cleaning Pad - closed in place.
- Building 6-800 Separator (CAS 06-99-05) - clean closure.
- Old Abandoned Steam Cleaning Grate - closed in place.
- Spill H920625B (Bldg. 6-800 Separator) - clean closure.
- Building 6-621 Sump (CAS 06-13-01) - closed in place.
- South SCEP Pipeline - clean closure, except where shown.
- South SCEP (CAS 06-47-01) - clean closure.

Project Start: 01OCT96

Project Finish: 21MAY99

Data Date: 14OCT97

Run Date: 18NOV97

Legend:

- Early Bar
- Progress Bar
- Critical Activity

SCPI

FIGURE 3

AREA 6 SCEP CLOSURE

ACTIVITY SCHEDULE

Sheet 1 of 1

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AREA 6 "SCEPS" CLOSURE POINTS

POINT #	DESCRIPTION	NORTH	EAST	ELEV.
5.	C/L SOUTH "SCEPS" POND	6243299.969	555803.091	1196.13
6.	C/L NORTH "SCEPS" POND	6243374.153	555775.774	1195.62
7.	C/L NORTH SCEPS SPILL AREA	6243367.147	555806.262	1195.49
8.	BLDG. 6-623 GREASE TRAP	6243377.506	555698.614	1196.47
9.	6-623 STEAM CLEAN. EXCAVATION	6243360.767	555662.825	1196.68
10.	TEST PAD EXCAVATION POINT	6243294.097	555717.967	1197.50
11.	N.E. CORNER. CONC. TEST PAD	6243295.324	555725.309	1197.49
12.	N.W. CORNER. CONC. TEST PAD	6243289.132	555712.109	1197.51
13.	S.W. CORNER. CONC. TEST PAD	6243273.220	555719.593	1197.53
14.	BLDG. 6-800 SEPARATOR	6243216.766	555746.422	1198.42
15.	LAYOUT PAD GREASE TRAP	6243266.338	555664.122	1198.71
16.	N.W. CORNER. BLDG. 6-621	6243197.207	555759.256	1198.45
17.	N.E. CORNER. BLDG. 6-621	6243202.519	555770.473	1198.43
18.	BLDG. 6-621 SUMP	6243197.999	555765.992	1198.41
19.	6-623 STEAM CLEANING PAD	6243369.578	555658.008	1196.75
20.	S.E. CORNER CONC. TEST PAD	6243279.413	555732.794	1197.50
21.	END POINT OF REMAINING SSCPE INFLUENT PIPE	6243235.349	555777.906	1197.12
22.	END POINT OF OLD ABANDONED STEAM CLEANING GRATE DRAINAGE PIPE	6243221.492	555747.937	1198.50

NOTES

- ALL MEASURED VALUES TO BE BASED ON THE NORTH AMERICAN DATUM OF 1983, NEVADA STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, METERS.
- PRIOR TO EXCAVATION WITHIN UNIT BOUNDARY, CONTACT BECHTEL NEVADA REMEDIATION PROJECTS @ 295-7946.
- SEALED DRAINAGE PIPE CONTAINS PETROLEUM HYDROCARBON RESIDUES.
- PIPE CONTAINS HAZARDOUS MATERIAL GROUTED IN PLACE.

LEGEND

- APPROXIMATE UNIT BOUNDARY
- DISCHARGE LINE (REMOVED)
- DISCHARGE LINE (CLOSED IN PLACE)
- SS----- EXISTING SEWER/DISCHARGE LINE
- EXISTING UNDERGROUND UTILITY
- 6-621 EXISTING BUILDING/NUMBER
- x- EXISTING FENCE
- ⊙ POINT LOCATION

GRAPHIC SCALE

U.S. DEPARTMENT OF ENERGY			
NEVADA OPERATIONS OFFICE		LAS VEGAS, NEVADA	
NEVADA TEST SITE		AREA 6	
FIGURE 4 FINAL SITE PLAN			
		DATE	11/20/97
		SKETCH NUMBER	SK-006-97-C252
P.O. BOX 98521 LAS VEGAS, NV 89193-8521		FILE	C4U4A00E
		ACTIVITY CODE	q:/dgn/98024006

3.0 WASTE MANAGEMENT/DISPOSITION

The waste generated during the closure of the Area 6 SCEP CAU 93 was handled following the Waste Management Plan (Appendix B of DOE, 1997). The closure of the Area 6 SCEP unit generated five separate waste streams:

- RCRA hazardous soil.
- RCRA hazardous pipe and debris.
- Petroleum hydrocarbon impacted soil.
- Non-hazardous Personal Protective Equipment (PPE) and debris.
- Steam cleaning rinsate water.

The following sections describe the volume and origin of the waste. In addition, each section describes how the waste was managed and where it was disposed.

3.1 RCRA HAZARDOUS SOIL

The RCRA hazardous soil was generated from the removal of Zone 2 from the South SCEP (CAS 06-47-01). The primary COCs are methylene chloride, xylene, and acetone (F001 and F002). The concentrations of these COCs are below established land ban restrictions. The Zone 2 soil was placed into either roll-off containers or directly into end-dump trucks. A manifest was generated for each hazardous waste load (Appendix A). Hazardous waste was shipped off-site to the Chemical Waste Management TSDF in Kettleman, California. The total volume of RCRA hazardous soil shipped was 306 m³ (400 yd³).

3.2 RCRA HAZARDOUS PIPE AND DEBRIS

The RCRA hazardous pipe and debris was generated from the removal of the South SCEP pipeline and old debris from within the South SCEP. The piping and debris has been classified as hazardous either because it contains hazardous sludge (South SCEP pipeline) or the debris had prolonged contact with the hazardous soil. Therefore, the pipeline and the debris retain the same waste classification as the RCRA hazardous soil (methylene chloride, xylene, and acetone [F001 and F002]). The concentrations of these COC are below established land ban restrictions.

The South SCEP pipeline was placed into a roll-off container in 4 m (13 ft) lengths. The ends of each pipe section were covered with plastic and sealed with tape. The pipeline was primarily constructed using Transite™ which is a concrete-asbestos mixture that is commonly used for drain lines. The Chemical Waste Management TSDF in Kettleman, California cut the 4 m (13 ft) pipe sections into 1 m (3 ft) pieces. Each 1 m (3 ft) piece was vitrified and buried in a metal container in the Chemical Waste Management TSDF hazardous waste landfill.

The hazardous debris (sampling equipment, outfall piping, and concrete pad) were shipped off-site to the Chemical Waste Management TSDF in the same roll-off container as the South SCEP piping. The debris placed within the roll-off container all meet the size restrictions required by the Chemical Waste Management TSDF hazardous waste landfill. The total volume of RCRA hazardous debris shipped was 10.7 m³ (14 yd³). Copies of the Uniform Hazardous Waste Manifests are located in Appendix A.

3.3 PETROLEUM HYDROCARBON IMPACTED SOIL

The petroleum hydrocarbon impacted soil was generated from the excavation of the North SCEP (CAS 06-47-01), Spill H910911D (North SCEP), Building 6-800 Separator (CAS 06-99-05), and the South SCEP's (CAS 06-47-01) Zone 3 soil. The petroleum hydrocarbon impacted soil was placed directly into end-dump trucks. A separate waste tracking label was generated for each petroleum hydrocarbon load. One on-site manifest was generated for each day of petroleum hydrocarbon excavation and disposal (Appendix A). Each end-dump truck of petroleum hydrocarbon impacted waste was shipped to the Area 6 Hydrocarbon Landfill. The total volume of petroleum hydrocarbon impacted soil shipped was 3,313 m³ (4,335 yd³).

3.4 NON-HAZARDOUS PPE AND DEBRIS

Non-hazardous material was disposed at the Area 9 10C Landfill. Non-hazardous debris includes PPE, the Building 6-623 Grease Trap, Building 6-800 Separator (CAS 06-99-05), Old Steam Cleaning Grate, fencing around the North and South SCEP, and the heavy equipment steam cleaning liner. This material was loaded directly into a end-dump truck, assigned an On-site Waste Manifest, and transported to the Area 9 10C landfill for proper disposal. The total volume of non-hazardous material disposed was two end-dump truck loads (23 m³ [30 yd³]). Copies of the On-site Waste Manifests are located in Appendix A.

3.5 HEAVY EQUIPMENT STEAM CLEANING RINSATE WATER

Three separate steam cleaning rinsate waste streams were created during the CAU 93 closure activities. The rinsate waste streams were separated according to each component of CAU 93 and further grouped into hazardous, petroleum hydrocarbon, and unknown contamination. The heavy equipment was steam cleaned after each component of CAU 93 was completed (except if the anticipated COCs were the same, i.e., North SCEP pipeline investigation). The rinsate was pumped into 55-gallon drums and the source identified on the label.

The hazardous rinsate generated from steam cleaning the front-end loader used to excavated all of the South SCEP (CAS 06-47-01) Zone 2 soil (methylene chloride, xylene, and acetone) was placed within a 208 liter (L) (55 gallon [gal]) drum. Approximately 76 L (20 gal) of rinsate was generated. The rinsate was mixed with Zone 2 soil in a roll-off container and solidified prior to transport to an off-site TSDF. A copy of the Uniform Hazardous Waste Manifests is located in Appendix A.

The petroleum hydrocarbon impacted rinsate was generated from steam cleaning the backhoe use to excavate the Building 6-623 Grease Trap and the front-end loader used to excavate the North SCEP and Zone 3 (petroleum hydrocarbon) soil from the South SCEP. The rinsate water was placed into two 208 L (55 gal) drums. Approximately 265 L (70 gal) of rinsate was generated. The rinsate was solidified with bentonite. The solidified drum was labeled and disposed in the Area 6 Petroleum Hydrocarbon Landfill. A copy of the On-site Waste Manifests is located in Appendix A.

The third waste stream was generated from the excavation of the South SCEP Pipeline. Upon excavation of each 4 m (13 ft) section of South SCEP pipe, the pipe section was carefully lifted up and held over a 208 L (55 gal) drum. Loose sludge from the pipe was allowed to fall by gravity into the 208 L (55 gal) drum. Approximately 76 L (20 gal) of RCRA hazardous sludge was generated during the South SCEP pipeline closure field activities. The rinsate was solidified with bentonite and was properly labeled and was transported to an off-site TSDF for proper disposal. A copy of the Uniform Hazardous Waste Manifest is located in Appendix A.

4.0 CLOSURE VERIFICATION RESULTS

This section of the report addresses the closure disposition of each component of CAU 93. The components closure criteria is discussed and verification analytical results discussed. A complete set of data summary sheets are located in Appendix B. In addition, the certification of clean closure from the DOE Nevada Operations Office and an independent professional engineer (PE) are located in Appendix C.

Verification samples were collected using methodologies outlined within the Industrial Sites Quality Assurance Project Plan (DOE, 1996). Each sample was collected using a decontaminated stainless steel trowel. The stainless steel trowel was used to remove excess soil from the sample location. Soil was placed directly into the sample container for VOCs and TPH analysis. At duplicate or split sample locations soil was stockpiled within stainless steel bowls. Sufficient soil was placed within the bowl to fill all required sample containers. The soil within the bowl was thoroughly mixed and then placed into the designated sample containers using the stainless steel trowel. Duplicate samples were collected as specified in the closure plan or after 20 samples had been collected. A daily trip blank was also sent for laboratory analysis along with the VOC soil samples.

In general, the type of petroleum hydrocarbon detected in components within the SCEP CAU were heavy oils. The more volatile constituents were either below method detection limits or existed in much lower concentrations than the heavy oil fraction.

4.1 LAYOUT PAD CLOSURE VERIFICATION

The Layout Pad drainage line was sealed with cement in November 1992. The Layout Pad Grease Trap was steam cleaned and sealed with cement in June 1993. The closure in place criteria for the Layout Pad and associated grease trap, are TPH soil concentrations below the NAC Action Level of 100 mg/kg.

Four verification samples were collected as part of the closure of the unit. Two soil samples were collected from under both the grease trap and the drainage pipe. Figure 5 provides the sample locations for the four verification samples. Table 1 provides the analytical results associated with the four samples. The Layout Pad and Grease Trap are considered closed. No closure verification soil samples (Table 1) had detectable concentrations of petroleum hydrocarbons.

FIGURE 5
NORTH SCEP PIPELINE VERIFICATION SAMPLING LOCATIONS

TABLE 1: SUMMARY OF NORTH SCEP PIPELINE VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCs ^b (mg/kg)	TCLP ^c METALS (mg/l)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
BUILDING 6-623 STEAM CLEANING PAD SAMPLES COLLECTED JULY 17, 1997							
Collected Below Pipe Joint	NSCEP-SP-001	0-15.2 [0-6]	ND	ND	ND	NA	NA
Collected Below Pipe Joint	NSCEP-SP-002	0-15.2 [0-6]	ND	ND	ND	NA	NA
Collected Below Pipe Joint	NSCEP-SP-003 (Duplicate of 002)	0-15.2 [0-6]	ND	ND	36	NA	NA
LAYOUT PAD GREASE TRAP SAMPLES COLLECTED JULY 21-22, 1997							
Below West Pipe Joint	NSCEP-LP-001	0-15.2 [0-6]	ND	ND	ND	NA	NA
Below East Pipe Joint	NSCEP-LP-002	0-15.2 [0-6]	ND	ND	ND	NA	NA
Below West End of Grease Trap	NSCEP-LP-003	0-15.2 [0-6]	ND	ND	ND	NA	NA
Below East End of Grease Trap	NSCEP-LP-004	0-15.2 [0-6]	ND	ND	ND	NA	NA
TEST PAD SAMPLES COLLECTED JULY 22, 1997							
Below North Pipe Joint	NSCEP-TP-001	0-15.2 [0-6]	ND	ND	ND	NA	NA
Below North Pipe Joint	NSCEP-TP-002	0-15.2 [0-6]	ND	ND	ND	NA	NA
BUILDING 6-623 GREASE TRAP SAMPLES COLLECTED MAY 19, 1997							
Below West Bottom of Grease Trap	6-623-GT-01	304 [120]	ND	ND	ND	ND	Ba 0.552 Ag 0.026
Below West Bottom of Grease Trap	6-623-GT-02 (Dulicate of -01)	304 [120]	ND	ND	ND	ND	Ba 0.556 Ag 0.020

TABLE 1: SUMMARY OF NORTH SCEP PIPELINE VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCs ^b (mg/kg)	TCLP ^c METALS (mg/l)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
BUILDING 6-623 GREASE TRAP SAMPLES COLLECTED MAY 19, 1997 (CONT.)							
Below East Bottom of Grease Trap	6-623-GT-03	304 [120]	ND	ND	ND	ND	Ba 0.572
Below Bottom of Grease Trap	6-623-GT-04	304 [120]	ND	ND	ND	ND	Ba 0.715
Below Bottom of Grease Trap	6-623-GT-05	304 [120]	ND	ND	ND	ND	Ba 0.550

Notes:

^a **TPH 8015M:** Total Petroleum Hydrocarbons Method 8015 Modified.

^b **VOCs:** Volatile Organic Compounds.

^c **TCLP:** Toxicity Characteristic Leaching Procedure.

Ba Barium

Ag Silver

SCEP: Steam Cleaning Effluent Pond

ND: Not Detected

NA: Not Analyzed

cm: centimeter

mg/kg: milligrams per kilogram

mg/l: milligrams per liter

4.2 TEST PAD CLOSURE VERIFICATION

The Test Pad drainage line was sealed with cement in November 1992. The closure in place criteria for the Test Pad, was TPH soil concentrations below the NAC Action Level of 100 mg/kg.

Two verification samples were collected as part of the closure of this unit. Two soil samples were collected from under the drainage pipe. The sample locations for the two verification samples are in Figure 5. The analytical results associated with the two samples are found in Table 1. The Test Pad is considered closed. No closure verification soil samples (Table 1) had detectable concentrations of petroleum hydrocarbons.

4.3 BUILDING 6-623 STEAM CLEANING PAD CLOSURE VERIFICATION

The Building 6-623 Steam Cleaning Pad drainage line was sealed with cement in November 1992. The closure in place criteria for the Building 6-623 Steam Cleaning Pad, is TPH soil concentrations below the NAC Action Level of 100 mg/kg.

Two verification samples were collected as part of the closure of this unit. Two soil samples were collected from under the drainage pipe. The sample locations for the two verification samples are found in Figure 5. The analytical results associated with the two samples are in Table 1. The Building 6-623 Steam Cleaning Pad is considered closed. The duplicate TPH sample from NSCEP-SP-002 had a TPH concentration of 36 mg/kg. This is less than the closure criteria presented within the Area 6 SCEP Closure Plan (DOE, 1997) of 100 mg/kg.

4.4 BUILDING 6-623 GREASE TRAP CLOSURE VERIFICATION

The Building 6-623 Grease Trap was excavated and removed in May 1997. The clean closure criteria for the Building 6-623 Grease Trap are no concentrations of VOCs (above the method detection limit), TPH soil concentrations below the NAC Action Level of 100 mg/kg, and no concentrations of TCLP metals above the Title 40 CFR 261.24 Table 1 guidelines (DOE, 1997).

Four verification samples were collected. Two soil samples were collected from under both ends of the grease trap and two from under the center of the grease trap. These last two locations were randomly selected as no elevated headspace readings or visual signs of staining were detected. The sample locations for the four verification samples are in Figure 5. The analytical results associated with the four samples are in Table 1. The Building 6-623 Grease Trap is considered closed. Closure verification soil samples did not have detectable concentrations of VOCs or

petroleum hydrocarbons. The only TCLP metals detected were barium and silver at concentrations well below the Title 40 CFR 261.24 Table 1 TCLP guidelines.

4.5 NORTH SCEP PIPELINE CLOSURE VERIFICATION

The North SCEP Pipeline was closed in placed based upon the analytical data generated for the closure of the Layout Pad, Test Pad, Building 6-623 Steam Cleaning Pad, and Building 6-623 Grease Trap (Table 1). The analytical data from under the pipeline joints along with a visual inspection of the piping, verified that the petroleum hydrocarbon residue inside the piping is contained. All North SCEP pipeline access openings have been sealed and the remaining piping covered with at least 1 m (3 ft) of soil (Figure 5).

4.6 NORTH STEAM CLEANING EFFLUENT POND (CAS 06-47-01) CLOSURE VERIFICATION

The post removal (top 1 m [3 ft] layer of material) surface area of the North SCEP was 662 m² (7,125 ft²). The North SCEP excavated area was divided into 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grids. The grid system created 285-2.3 m² (25 ft²) cells, each labeled using a grid coordinate system that was created in the field. A random number generator was used to select 22 of the cells. In addition, one biased sample was selected by the NDEP in the vicinity of the outfall pipe. A surface soil sample was collected from the center of each of the 23 cells. The North SCEP clean closure criteria requires that the petroleum hydrocarbon soil concentration be below the NAC Action Level of 100 mg/kg at all verification locations. The sample locations for the 23 verification samples are in Figure 6. Analytical results associated with the two samples are in Table 2.

The NDEP and the DOE/ERD collected split samples at two locations (cell numbers 90 and 106). These cells were selected as they were located near where the outfall pipe was located. Samples were analyzed for petroleum hydrocarbons. The NDEP analytical results confirmed the DOE/ERD results, that cell 90 had petroleum hydrocarbon concentrations above the NAC Action Level of 100 mg/kg (≥ 173.5 mg/kg).

To facilitate the North SCEP closure process all 23 soil samples were screened on-site with a Gas Chromatograph (GC) to give the SCEP project team preliminary data to evaluate closure status. The on-site GC screening indicated that three cells (90, 176, and 332) potentially had elevated concentrations of petroleum hydrocarbons. A field decision was made to over-excavate the soil at these three locations and collect additional verification samples. The laboratory analysis (Table 2) confirmed the on-site GC results for two of the three locations (cells 90 and 176). The

FIGURE 6
VERIFICATION SOIL SAMPLING LOCATIONS
NORTH STEAM CLEANING EFFLUENT POND

TABLE 2: SUMMARY OF NORTH SCEP VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M*		
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)
SAMPLES COLLECTED AUGUST 27, 1997					
Cell No. 3	NSCEP-V1-3	0-15.2 [0-6]	ND	ND	ND
Cell No. 90	NSCEP-V1-90	0-15.2 [0-6]	ND	25.5	148
	NSCEP-V2-90	0-15.2 [0-6]	ND*	ND*	36
Cell No. 102	NSCEP-V1-102	0-15.2 [0-6]	ND	ND	ND
Cell No. 106	NSCEP-V1-106	0-15.2 [0-6]	ND	ND	ND
Cell No. 145	NSCEP-V1-145	0-15.2 [0-6]	ND	ND	ND
Cell No. 176	NSCEP-V1-176	0-15.2 [0-6]	ND	25.1	120
	NSCEP-V2-176	0-15.2 [0-6]	ND	ND	ND
Cell No. 178	NSCEP-V1-178	0-15.2 [0-6]	ND	ND	ND
Cell No. 187	NSCEP-V1-187	0-15.2 [0-6]	ND	ND	ND
Cell No. 208	NSCEP-V1-208	0-15.2 [0-6]	ND	ND	ND
Cell No. 226	NSCEP-V1-226	0-15.2 [0-6]	ND	ND	ND
Cell No. 231	NSCEP-V1-231	0-15.2 [0-6]	ND	ND	ND
Cell No. 235	NSCEP-V1-235	0-15.2 [0-6]	ND	ND	ND
Cell No. 261	NSCEP-V1-261	0-15.2 [0-6]	ND	ND	ND
Cell No. 283	NSCEP-V1-283	0-15.2 [0-6]	ND	ND	ND
Cell No. 286	NSCEP-V1-286	0-15.2 [0-6]	ND	ND	ND
Cell No. 287	NSCEP-V1-287	0-15.2 [0-6]	ND	ND	ND
Cell No. 300	NSCEP-V1-300	0-15.2 [0-6]	ND	ND	ND

TABLE 2: SUMMARY OF NORTH SCEP VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a		
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)
SAMPLES COLLECTED AUGUST 27, 1997					
Cell No. 322	NSCEP-V1-322	0-15.2 [0-6]	ND	ND	ND
Cell No. 323	NSCEP-V1-323	0-15.2 [0-6]	ND	ND	ND
Cell No. 332	NSCEP-V1-332	0-15.2 [0-6]	ND	ND	ND
	NSCEP-V2-332	0-15.2 [0-6]	ND	ND	ND
Cell No. 368	NSCEP-V1-368	0-15.2 [0-6]	ND	ND	ND
Cell No. 384	NSCEP-V1-384	0-15.2 [0-6]	ND	ND	ND

Notes:

^a **TPH 8015M:** Total Petroleum Hydrocarbons Method 8015 Modified.

SCEP: Steam Cleaning Effluent Pond

ND: Not Detected

cm: centimeter

mg/kg: milligrams per kilogram

ND^{*}: Analyzed 2 days after holding time due to sample extraction bottle breaking.

second round of verification samples are included in Table 2 and verify that the concentration of petroleum hydrocarbons in the soil have been reduced below the NAC Action Level.

The North SCEP has met the closure criteria and is considered clean closed, based upon the two rounds of verification sample analytical results provided in Table 2.

4.7 BUILDING 6-800 SEPARATOR (CAS 06-99-05) CLOSURE VERIFICATION

The Building 6-800 Separator was excavated and removed in July 1997. The clean closure criteria for the Building 6-800 Separator, are no concentrations of VOCs (above method detection limit), TPH soil concentrations below the NAC Action Level of 100 mg/kg, and no concentrations of TCLP metals above the Title 40 CFR 261.24 Table 1 guidelines (DOE, 1997).

Four verification samples were collected from this unit. Two soil samples were collected from under both ends of the separator. These samples were collected from soil that was grossly impacted by NDEM Spill No. H920625B. These two samples (SSCEP-6800-002 and SSCEP-6800-003) were submitted to the laboratory for VOC, TPH, and TCLP metals analysis. However, due to the United Parcel Service (UPS) strike, the sample cooler arrived late at the laboratory and the temperature inside the cooler was 27 degrees Celsius (°C). Therefore, upon consultation with the laboratory, it was decided to cancel the VOC and gasoline TPH analyses for these two samples. The samples could not be resampled as the excavation had been enlarged to remove all of the impacted soil. The sample locations for these two verification samples are found in Figure 7.

The final two soil samples (SSCEP-6800-004 and SSCEP-6800-005) were collected from the base of the Building 6-800 Separator excavation (6 m [20 ft] below ground surface). These samples were collected after the on-site GC indicated that the petroleum hydrocarbon concentrations within the soil are below the NAC Action Level. The soil samples were analyzed for VOCs, TPH, and TCLP metals. It was later determined that the Contract Laboratory Program (CLP) mandated holding time for VOC analysis had been exceeded before the samples were analyzed. Therefore, these locations were resampled (SSCEP-6800-007 and SSCEP-6800-008) on October 21, 1997 and analyzed for VOCs. The locations were resampled using Geoprobe equipment which eliminated the need for reexcavation. The sample locations for these verification samples are found in Figure 7.

In addition to the verification samples collected from the Building 6-800 Separator excavation, one waste characterization sample was collected from the Building 6-800 Separator soil pile. The most visually impacted portion of the soil pile was selected for the waste characterization sample.

FIGURE 7
VERIFICATION SOIL SAMPLING LOCATIONS SOUTH SCEP PIPELINE

TABLE 3: SUMMARY OF BUILDING 6-800 SEPARATOR VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCS ^b (mg/kg)	TCLP ^c METALS (mg/L)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED JULY 28, AUGUST 13 & 20, AND OCTOBER 21, 1997							
Closure Plan Verification Sample Under East Side of Separator	SSCEP-6800-002 (7/28/97)	305-313 [120-126]	NA	ND	530	NA*	Ba 0.841 Pb 0.010
Closure Plan Verification Sample Under West Side of Separator	SSCEP-6800-003 (7/28/97)	305-313 [120-126]	NA	ND	1,200	NA*	As 0.062 Ba 1.270 Cd 0.010 Cr 0.352 Pb 0.156
Final Closure Verification Sample East Side of Excavation	SSCEP-6800-004 (8/13/97)	610 [240]	ND	ND	ND	ND ^d	Ba 0.444
Final Closure Verification Sample East Side of Excavation - Resample	SSCEP-6800-007 (10/21/97)	610 [240]	NA	NA	NA	ND	NA
Final Closure Verification Sample West Side of Excavation	SSCEP-6800-005 (8/13/97)	610 [240]	ND	ND	27.6	ND ^d	Ba 0.481
Final Closure Verification Sample West Side of Excavation - Resample	SSCEP-6800-008 (10/21/97)	610 [240]	NA	NA	NA	ND	NA
6-800 Separator Soil Pile Waste Characterization Sample	SSCEP-6800-006 (8/20/97)	NA	ND	ND	1,200	ND	Ba 0.670

Notes:

SCEP: Steam Cleaning Effluent Pond

^a TPH 8015M: Total Petroleum Hydrocarbons Method 8015 Modified; ^b VOCs: Volatile Organic Compounds; ^c TCLP: Toxicity Characteristic Leaching Procedure.

ND^d: While no detectable VOCs were found within the sample, the sample had been analyzed 1-day after the CLP mandated holding time.

ND: Not Detected; NA: Not Analyzed; NA*: VOC analysis cancelled due to samples were received at 27 degrees Celsius

The analytical results from the six verification samples and one waste characterization sample confirmed that no detectable VOCs and that no metals exceeded the Title 40 CFR 261.24 Table 1 guidelines were presented within the Building 6-800 Separator excavation soil. These analytical results also showed that the soil around the Building 6-800 Separator were grossly impacted with petroleum hydrocarbons (Table 3). The final two samples verified that all of the soil above the closure criteria were removed. Therefore, the Building 6-800 closure met the closure criteria specified within the Area 6 SCEP Closure Plan (DOE, 1997).

4.8 SOUTH STEAM CLEANING EFFLUENT POND INFLUENT PIPE CLOSURE VERIFICATION

The South SCEP pipeline closure verification required the collection of verification samples along the length of the pipeline. Sample locations were to be skewed to areas where pipe breaks were observed during the removal or under pipe joints. No areas of pipe failures were observed during the South SCEP pipeline removal activities. Therefore soil under nine pipe joints were selected (Figure 7) for verification analysis. Each sample was analyzed for TPH, VOC, and TCLP metals. The South SCEP pipeline clean closure criteria are no concentrations of VOCs (above method detection limit), TPH soil concentrations below the NAC Action Level of 100 mg/kg, and no concentrations of TCLP metals above the Title 40 CFR 261.24 Table 1 guidelines (DOE, 1997).

The analytical data results from the nine South SCEP pipeline verification samples are provided in Table 4. Closure criteria was exceeded at two locations, SSCEP-PIPE-004 for methylene chloride and SSCEP-PIPE-007 for petroleum hydrocarbons. Both of these sample locations were re-excavated and additional soil (approximately 0.4 m³ [0.5 yd³]) was removed. The soil was placed within the appropriate waste stream for disposal (Section 3.0). An additional verification sample was collected from the base of each over-excavated sample location. The analytical results are provided in Table 4. The second verification samples have been differentiated from the first sample by placing a "B" after the sample location number.

Based upon the two rounds of verification sample analytical results provided in Table 4, the South SCEP Influent Pipeline has met the closure criteria and is considered clean closed.

4.9 OLD ABANDONED STEAM CLEANING GRATE CLOSURE VERIFICATION

The old abandoned steam cleaning grate was discovered during the closure of the Building 6-800 Separator. The steam cleaning grate, settling chamber, and 1 m (3 ft) of discharge pipe were

TABLE 4: SUMMARY OF SOUTH SCEP INFLUENT PIPE VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCs ^b (mg/kg)	TCLP ^c METALS (mg/l).
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED JUNE 23, JULY 15, 16, & 29, AND OCTOBER 9, 1997							
West of South Pond	SSCEP-PIPE-1	91-106 [36-42]	ND	ND	ND	ND	Ba 0.994
West of South Pond	SSCEP-PIPE-2	91-106 [36-42]	ND	70	ND	ND	Ba 1.130
End of Iron Pipe East of 6-05 Road	SSCEP-PIPE-3	91-106 [36-42]	ND	ND	ND	ND	Ba 0.620
End of Pipe Joint East of Boxcar	SSCEP-PIPE-4	91-106 [36-42]	ND	ND	96	Methylene Chloride 0.008	Ba 0.633
End of Pipe Joint East of Boxcar	SSCEP-PIPE-4B	91-106 [36-42]	NA	NA	NA	ND	NA
7th Iron Ring Joint SE 6-800 Separator	SSCEP-PIPE-5	37-152 [54-60]	ND	ND	ND	ND	Ba 0.816 Ag 0.017
5th Iron Ring Joint SE 6-800 Separator	SSCEP-PIPE-6	37-152 [54-60]	ND	ND	47	ND	Ba 0.545
Intersection Trench 6-800 and 6-621	SSCEP-PIPE-7	37-152 [54-60]	ND	ND	110	ND	Ba 0.727
Sample Point 7 After Additional Excavation	SSCEP-PIPE-7B	98-213 [78-84]	ND	ND	ND	NA	NA
2nd pipe elbow SE 6-800 Separator	SSCEP-PIPE-8	37-152 [54-60]	ND	ND	ND	ND	Ba 0.813

TABLE 4: SUMMARY OF SOUTH SCEP INFLUENT PIPE VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCs ^b (mg/kg)	TCLP ^c METALS (mg/l)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED JUNE 23, JULY 15, 16, & 29, AND OCTOBER 9, 1997							
1st pipe elbow SE 6-800 Separator	SSCEP-PIPE-9	37-152 [54-60]	ND	ND	ND	ND	Ba 0.920 Ag 0.021
1st pipe elbow SE 6-800 Separator	SSCEP-PIPE-109 (Duplicate of 9)	37-152 [54-60]	ND	ND	ND	ND	Ba 0.907

Notes:

^a **TPH 8015M:** Total Petroleum Hydrocarbons Method 8015 Modified.

^b **VOCs:** Volatile Organic Compounds.

^c **TCLP:** Toxicity Characteristic Leaching Procedure.

Ba Barium

Ag Silver

SCEP: Steam Cleaning Effluent Pond

ND: Not Detected

NA: Not Analyzed

cm: centimeter

mg/kg: milligrams per kilogram

mg/l: milligrams per liter

uncovered and removed at the same time as the Building 6-800 Separator. The three samples were collected from the Old Abandoned Steam Cleaning Grate system, the outfall drainage ditch soil. Within the discharge pipe, and from the settling chamber (Figure 7). All samples were analyzed for VOCs, TPH, and TCLP metals. The analytical results are summarized in Table 5.

The surface soil sample (SSCEP-6800-1) collected from the discharge pipe drainage ditch detected acetone at a concentration of 0.071 mg/kg. Detailed QA/QC analysis could not disqualify the detection of the low concentration of acetone. However, given that acetone is extremely volatile and is a common laboratory contaminant, it is unlikely that acetone is present in the surface soil within the drainage ditch. If acetone was a COC in the system, it would have been detected within both the discharge pipe (OUTFALL-1) or settling chamber (OUTFALL-2) samples which are less likely to allow the acetone to volatilize into the atmosphere.

Based on this argument and the analytical results, the old abandoned steam cleaning grate system is not hazardous. The soils associated with the system are impacted with petroleum hydrocarbons. The soil sample collected from the discharge pipe outfall SSCEP-6800-1 did not have petroleum hydrocarbon concentrations above the NAC Action Level. Therefore, the drainage ditch did not require additional soil excavation and collection of additional verification samples. After discussing the analytical results with the NDEP Point of Contact during a October 7, 1997 conference call, a decision was made to close the discharge pipe in place.

4.10 SOUTH STEAM CLEANING EFFLUENT POND (CAS 06-47-01) CLOSURE VERIFICATION

The South SCEP closure consisted of two phases of soil removal. The first phase removed the RCRA-regulated impacted soil (Zone 2) from the South SCEP. Each sample was analyzed for TPH, VOC, and TCLP metals. The South SCEP Zone 2 soil clean closure criteria are no concentrations of VOC's (above method detection limit) and no concentrations of TCLP metals above the Title 40 CFR 261.24 Table 1 guidelines (DOE, 1997).

The South SCEP Zone 2 excavation was divided into 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grids. The grid system created 129-1.8 m² (25 ft²) cells, each labeled using a grid coordinate system that was created in the field. A random number generator was used to select 13 of the cells. In addition, two biased samples were selected in the vicinity of the outfall pipe. A surface soil sample was collected from the center of each of the 15 cells. The sample locations for the 15 verification samples are found in Figure 8.

A examination of the 15 verification samples analytical results (Table 6) indicates that three of the South SCEP cells (No. 36, No. 76, and No. 129) did not meet the VOC closure criteria of no

TABLE 5: SUMMARY OF OLD ABANDONED STEAM CLEANING GRATE VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCS ^b (mg/kg)	TCLP ^c METALS (mg/l)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED JULY 28-29 AND AUGUST 20, 1997							
Below Outfall Pipe Along 6-05 Road	SSCEP-6800-001	0-15.2 [0-6]	ND	ND	53	Acetone 0.071	Ba 0.870
Inside Outfall Pipe Along 6-05 Road	OUTFALL-1	NA	ND	430	2,100	ND	Ba 0.969 Cd 0.067
Collected Within Grate Box	OUTFALL-2	NA	ND	640	2,400	ND	Ba 0.577 Cd 0.017

Notes:

^a **TPH 8015M:** Total Petroleum Hydrocarbons Method 8015 Modified.

^b **VOCs:** Volatile Organic Compounds.

^c **TCLP:** Toxicity Characteristic Leaching Procedure.

Ba Barium

SCEP: Steam Cleaning Effluent Pond

ND: Not Detected

NA: Not Analyzed/Not Applicable

cm: centimeter

mg/kg: milligrams per kilogram

mg/l: milligrams per liter

***** : Misidentified as a "6800" sample instead of a sample from the former steam cleaning grate.

TABLE 6: SUMMARY OF SOUTH SCEP ZONE 2 VERIFICATION RESULTS.

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^d			VOCS ^b (mg/kg)	TCLP ^c METALS (mg/l)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED JULY 1, 1997							
Cell No. 1	SSCEP-V1-1	0-15.2 [0-6]	ND	ND	3,200	ND	Ba 0.882 Ag 0.029
Cell No. 34	SSCEP-V1-34	0-15.2 [0-6]	ND	ND	1,200	ND	Ba 0.628
Cell No. 36	SSCEP-V1-36	0-15.2 [0-6]	7,300	ND	1,600	Acetone 0.038	Ba 0.833
	SSCEP-V2-36	0-15.2 [0-6]	NA	NA	NA	ND	NA
Cell No. 48	SSCEP-V1-48	0-15.2 [0-6]	ND	ND	1,200	ND	Ba 0.755 Cd 0.012 Ag 0.027
Cell No. 60	SSCEP-V1-60	0-15.2 [0-6]	ND	ND	7,100	ND	Ba 0.528 Cd 0.021 Ag 0.028
Cell No. 67	SSCEP-V1-67	0-15.2 [0-6]	ND	ND	72	ND	Ba 1.120
Cell No. 70	SSCEP-V1-70	0-15.2 [0-6]	ND	ND	1,300	ND	Ba 1.050
Cell No. 76	SSCEP-V1-76	0-15.2 [0-6]	ND	ND	2,000	Carbon Disulfide 0.008	Ba 0.621
	SSCEP-V2-76	0-15.2 [0-6]	NA	NA	NA	Acetone 0.046	NA
Cell No. 79	SSCEP-V1-79	0-15.2 [0-6]	ND	ND	410	ND	Ba 0.883
	SSCEP-V1-790 (Duplicate of 79)	0-15.2 [0-6]	ND	ND	420	Acetone 0.074	Ba 0.743
Cell No. 87	SSCEP-V1-87	0-15.2 [0-6]	ND	ND	260	ND	Ba 0.761
Cell No. 90	SSCEP-V1-90	0-15.2 [0-6]	ND	ND	ND	ND	Ba 0.909
	SSCEP-V2-90	0-15.2 [0-6]	NA	NA	NA	ND	NA

TABLE 6: SUMMARY OF SOUTH SCEP ZONE 2 VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCs ^b (mg/kg)	TCLP ^c METALS (mg/l)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED JULY 1, 1997							
Cell No. 101	SSCEP-V1-101	0-15.2 [0-6]	ND	ND	ND	ND	Ba 0.954
Cell No. 108	SSCEP-V1-108	0-15.2 [0-6]	ND	ND	52	ND	Ba 0.701 Ag 0.032
Cell No. 111	SSCEP-V1-111	0-15.2 [0-6]	ND	ND	2,600	ND	Ba 0.634
Cell No. 129	SSCEP-V1-129	0-15.2 [0-6]	ND	ND	310	Carbon Disulfide 0.009 Tetrachloroethene 0.006	Ba 0.861
	SSCEP-V2-129	0-15.2 [0-6]	NA	NA	NA	ND	NA

Notes:

^a **TPH 8015M:** Total Petroleum Hydrocarbons Method 8015 Modified.

^b **VOCs:** Volatile Organic Compounds.

^c **TCLP:** Toxicity Characteristic Leaching Procedure.

Ag Silver, **Ba** Barium, **Cd** Cadmium.

SCEP: Steam Cleaning Effluent Pond

ND: Not Detected

cm: centimeter

mg/kg: milligrams per kilogram

mg/l: milligrams per liter

VOC concentrations above the method detection limit. Preliminary analytical data indicated that cell number 90 was also impacted by acetone. The cell was over-excavated and resampled and the results are presented in Table 6. The following VOCs were detected:

- Acetone - Cell No. 36 (0.038 mg/kg).
- Carbon Disulfide - Cell No. 76 (0.008 mg/kg) and Cell No. 129 (0.009 mg/kg).
- Tetrachloroethene - Cell No. 129 (0.006 mg/kg).

A front-end loader was used to over-excavate soil from these four cells. Approximately 7.6 m³ (10 yd³) of soil was excavated from the four cells. Additional verification samples were collected from each of the four cells and analyzed for VOCs. The analytical data generated from the second round of verification sampling is found in Table 6. The second round of verification samples are differentiated from the first round by the designation V2 instead of V1 within the sample identification number. The analytical results from the second verification sampling indicated that only one of the four cells had a reportable concentration of a VOC. The verification sample from Cell No. 76 detected acetone at a concentration of 0.046 mg/kg. Review of the sample package quality assurance (QA) data failed to disqualify the acetone detection. However, acetone is a common laboratory contaminant and it was not detected in the first verification sample for Cell No. 76. Given the information that acetone had not been previously detected at Cell No. 76, professional judgment indicates that the acetone hit was a laboratory artifact and not a South SCEP Zone 2 contaminant. Additional soil removal was unnecessary and all of the Zone 2 soil was considered to have been removed. The disposal of the Zone 2 soil was discussed in Section 3.0.

The South SCEP post Zone 3 soil removal surface area (this includes the above ground berms) was 365 m² (3,975 ft²). The post South SCEP Zone 3 surface area was divided into 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grids. The grid system created 159-2.3 m² (25 ft²) cells, each labeled using a grid coordinate system that was created in the field. A random number generator was used to select 12 of the cells. In addition, four biased samples were selected by the NDEP at the base of the South SCEP. A surface soil sample was collected from the center of each of the 16 cells. The South SCEP petroleum hydrocarbon (Zone 3) clean closure criteria requires that the petroleum hydrocarbon soil concentration is below the NAC Action Level of 100 mg/kg at all verification locations. The sample locations for the 16 verification samples are presented within Figure 9. The analytical results associated with the Zone 3 verification samples are found in Table 7.

The NDEP and the DOE/ERD collected split samples at four locations (cell numbers 59, 63, 115 and 119). These cells were selected as they were located at the four corners of the bottom of the excavation. Following the NDEP Point of Contact's request (made at the June 12, 1997 RCRA

- 62 Unsampld Cell
- 82 Sampled Cell
- *119 Sampled Cell Split with NDEP

SCALE:
1 Grid = 1.5 square meter (5 feet)

FIGURE 9
ZONE 3 SOIL VERIFICATION SAMPLING LOCATIONS
SOUTH STEAM CLEANING EFFLUENT POND

TABLE 7: SUMMARY OF SOUTH SCEP ZONE 3 VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm/inches)	TPH 8015M		OIL (mg/kg)	VOCs (mg/kg)	SVOC (mg/kg)
			GAS (mg/kg)	DIESEL (mg/kg)			
Cell No. 20	SSCEP-V3-20	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 24	SSCEP-V3-24	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 25	SSCEP-V3-25	0-15.2 [0-6]	ND	ND	ND	NA	NA
	SSCEP-V4-25	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 30	SSCEP-V3-30	0-15.2 [0-6]	ND	ND	ND	NA	NA
	SSCEP-V4-30	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 44	SSCEP-V3-44	0-15.2 [0-6]	ND	ND	ND	NA	NA
	SSCEP-V4-44	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 59	SSCEP-V3-59A	0-15.2 [0-6]	ND	ND	ND	ND	ND
Cell No. 63	SSCEP-V3-63A	0-15.2 [0-6]	NA	NA	NA	Methylene Chloride 0.0058	ND
Cell No. 68	SSCEP-V3-68	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 82	SSCEP-V3-82	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 108	SSCEP-V3-108	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 115	SSCEP-V3-115	0-15.2 [0-6]	ND	ND	ND	NA	NA
	SSCEP-V4-115	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 115	SSCEP-V3-115A	0-15.2 [0-6]	ND	ND	ND	ND	ND
Cell No. 116	SSCEP-V3-116	0-15.2 [0-6]	ND	ND	ND	NA	NA
	SSCEP-V4-116	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 119	SSCEP-V3-119A	0-15.2 [0-6]	NA	NA	NA	ND	ND
Cell No. 130	SSCEP-V3-130	0-15.2 [0-6]	ND	ND	ND	NA	NA

SAMPLES COLLECTED AUGUST 27, 1997

TABLE 7: SUMMARY OF SOUTH SCEP ZONE 3 VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCs ^b (mg/kg)	SVOC ^c (mg/kg)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED AUGUST 27, 1997							
Cell No. 131	SSCEP-V3-131	0-15.2 [0-6]	ND	ND	ND	NA	NA
	SSCEP-V4-131	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 133	SSCEP-V3-133	0-15.2 [0-6]	ND	ND	ND	NA	NA
Cell No. 154	SSCEP-V3-154	0-15.2 [0-6]	ND	ND	ND	NA	NA

Notes:

^a **TPH 8015M:** Total Petroleum Hydrocarbons Method 8015 Modified.

^b **VOCs:** Volatile Organic Compounds.

^c**SVOC:**Semi-Volatile Organic Compounds

SCEP: Steam Cleaning Effluent Pond

ND: Not Detected

ND: Not Analyzed

cm: centimeter

mg/kg: milligrams per kilogram

meeting), each sample was analyzed for VOCs and SVOCs, two of the sample locations were also analyzed for petroleum hydrocarbons (cells 59 and 115). The NDEP analytical results indicated that Cell No. 59 had petroleum hydrocarbon concentrations above the NAC Action Level of 100 mg/kg (130 mg/kg). The DOE/ERD verification sample SSCEP-V3-59A did not detect any concentrations of petroleum hydrocarbons. However, to ensure that all of the elevated petroleum hydrocarbons were removed from the South SCEP, this cell was over-excavated on September 18, 1997.

To facilitate the South SCEP closure process all 16 soil samples were screened on-site with a GC to give the SCEP project team preliminary data to evaluate closure status. The on-site GC screening indicated that six cells (25, 30, 44, 115, 116, and 131) potentially had elevated concentrations of petroleum hydrocarbons. A field decision was made to over-excavate the soil at these six locations and collect additional verification samples on September 9, 1997. The laboratory analysis (Table 7) did not confirmed the on-site GC results for any of the six locations. However, the contract laboratory analytical data indicated that Cell No. 130 had a petroleum hydrocarbon concentration of 44 mg/kg. Cell No. 130 was over-excavated on September 23, 1997. An additional verification sample was not collected at this location as the original petroleum hydrocarbon concentration was below the NAC Action Level. The second round of verification samples have been included in Table 7 and verify that the concentration of petroleum hydrocarbons within the soil have been reduced below the NAC Action Level.

One of the four confirmation samples that was split with the NDEP detected a trace concentration of methylene chloride. Cell No. 63 was selected as it was located at one of the corners of the base of the South SCEP. The NDEP requested VOC and SVOC analysis at this location to confirm that all the hazardous waste had been removed from the South SCEP prior to beginning backfilling. Methylene chloride is a common laboratory contaminant and was detected at a concentration (0.0058 mg/kg) just above the method detection limit (0.005 mg/kg). In addition, methylene chloride was not detected in the NDEP split sample at this location.

Based upon the two rounds of verification sample analytical results provided in Table 7, the South SCEP has meet the closure criteria and is considered clean closed.

5.0 PETROLEUM HYDROCARBON SPILL CLOSURE

Two petroleum hydrocarbon spills are associated with the Area 6 SCEP CAU 93. These two spills were assigned NDEM spill release numbers. Both spills were evaluated after the occurrence and a decision (DOE, 1997) was made that these spills would be closed out as part of the Closure of the Area 6 SCEP CAU 93. In order to more easily close out these two spill releases they are addressed here with all of the information required to confirm that they have been remediated.

5.1 CLOSURE OF NDEM SPILL CASE NUMBER H910911D

Spill release H910911D was the result of a breach in the North SCEP berm on August 12, 1991 during a large precipitation event. Erosion along the east section of the berm allowed water to run into the pond, causing an overflow and subsequent release of pond effluent. An area measuring approximately 1,440 m² (15,500 ft²) was impacted to the north, south, and east of the North SCEP (Figure 10). Total volume of the spill release is unknown. Black, stained soil was observed around the perimeter of the release and an oily substance was floating on the water.

On August 14, 1991, a composite soil sample from two locations outside the pond and two water samples, one inside and one outside of the North SCEP were collected by the Management & Operations (M&O) contractor. The samples were analyzed for VOCs, SVOCs, TPH, and TCLP metals (Appendix A of DOE, 1997). Based upon the analytical results received on September 11, 1991, the NDEM and NDEP were notified on that date. NDEM assigned Case Number H910911D to the release.

Analytical results indicate the presence of several TCLP metals (barium, chromium, and cadmium) at concentrations well below RCRA-regulated limits (Appendix A of DOE, 1997). Methylene chloride was detected in the water sample from inside the pond and in the soil sample at 1.2 mg/L and 0.005 mg/L, respectively. SVOCs were also detected in the water sample from outside the pond. Dimethyl phthalate, di-n-butylphthalate, and bis(ethylhexyl)phthalate were identified at concentrations of 0.009 mg/L, 0.006 mg/L, and 0.119 mg/L, respectively. TPH in the form of oil, gas, or diesel was not detected; however an unknown hydrocarbon was detected. Report of this release was based on visual observation of the release and a summation of the chromatograph peaks which indicate a TPH concentration above the NAC Action Level of 100 mg/kg (Elle, 1991).

A decision was made by Department of Energy, Nevada Operations Office (DOE/NV) in 1991, that further action with respect to the release would be conducted during the SCEP Project.

FIGURE 10
SPILL H910911D CHARACTERIZATION SAMPLE GRID

Samples would be collected prior to the start of the closure of the North SCEP to identify if any corrective action is necessary to close out this spill release.

5.1.1 Spill H910911D Characterization

Prior to the start of closure field activities, 50 surface soil samples were collected from the 1991 spill area (Figure 10). The spill area was divided into a 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grid pattern across the entire 1,440 m² (15,500 ft²) release area. The grid created 506 separate cells (Figure 10). Fifty cells were randomly selected and sampled for TPH and VOCs.

The analytical results from the 50 surface soil samples are found in Table 8. The analytical results indicate that surface soil in three cells (NSCEP-304, NSCEP-381, and NSCEP-425) had petroleum hydrocarbon concentrations above the NAC Action Level of 100 mg/kg. Seven other cells had detectable petroleum hydrocarbon concentrations below the NAC Action Level. The analytical data results indicate that the majority of the petroleum hydrocarbon impacted soil is located along the southeast edge of the spill area.

5.1.2 Spill H910911D Remediation

Based upon the characterization analytical data results, a 9.8 m (25 ft) by 29.5 m (75 ft) section of the spill area was selected to be remediated. A front-end loader was used to remove a 0.2 m (0.7 ft) thick layer of soil from the selected area. A total of 42 m³ (55 yd³) of soil was excavated and disposed of in the Area 6 Petroleum Hydrocarbon Landfill. The soil was transported to the Area 6 Petroleum Hydrocarbon Landfill along with North SCEP petroleum hydrocarbon impacted soil on August 22, 1997. A copy of the on-site Waste Manifest is provided in Appendix A.

5.1.3 Spill H910911D Verification Sampling

The remediated area was divided into a 1.5 m (5.0 ft) by 1.5 m (5.0 ft) grid pattern across the entire 174 m² (1,875 ft²) release area. The grid created 75 separate cells (Figure 11). Five cells were randomly selected and sampled for TPH. The analytical data results are provided in Table 9. Petroleum hydrocarbons were not detected in any of the five verification samples. Based upon the verification sample analytical results the petroleum hydrocarbon impacted soil associated with spill release H910911D has been remediated below the NAC Action Level of 100 mg/kg. Therefore, the DOE petitions that NDEM Spill Release Number H910911D be officially closed out.

TABLE 8: NORTH SCEP SPILL H910911D CHARACTERIZATION SAMPLES

SAMPLE ID	SAMPLE DEPTH (cm. [inches])	TPH 8015M ^a			VOCs ^b (mg/kg)
		GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)	
NSCEP-001	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-004	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-005	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-029	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-046	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-060	0-15.2 [0-6]	ND	ND	42	ND
NSCEP-072	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-075	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-077	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-084	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-084D	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-086	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-088	0-15.2 [0-6]	ND	ND	32	ND
NSCEP-098	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-135	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-140	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-154	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-178	0-15.2 [0-6]	ND	ND	ND	ND

TABLE 8: NORTH SCEP SPILL H910911D CHARACTERIZATION SAMPLES

SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCS ^b (mg/kg)
		GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)	
NSCEP-191	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-216	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-229	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-232	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-234	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-246	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-246D	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-249	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-262	0-15.2 [0-6]	ND	ND	65	ND
NSCEP-264	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-270	0-15.2 [0-6]	ND	ND	40	ND
NSCEP-273	0-15.2 [0-6]	ND	ND	25	ND
NSCEP-290	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-297	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-298	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-304	0-15.2 [0-6]	ND	ND	160	ND
NSCEP-305	0-15.2 [0-6]	ND	ND	41	ND
NSCEP-310	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-343	0-15.2 [0-6]	ND	ND	ND	ND

TABLE 8: NORTH SCEP SPILL H910911D CHARACTERIZATION SAMPLES

SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCS ^b (mg/kg)
		GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)	
NSCEP-351	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-355	0-15.2 [0-6]	ND	ND	59	ND
NSCEP-360	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-373	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-377	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-381	0-15.2 [0-6]	ND	ND	48	ND
NSCEP-381D	0-15.2 [0-6]	ND	ND	120	ND
NSCEP-395	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-397	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-417	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-425	0-15.2 [0-6]	ND	ND	120	ND
NSCEP-426	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-437	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-444	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-485	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-501	0-15.2 [0-6]	ND	ND	ND	ND
NSCEP-505	0-15.2 [0-6]	ND	ND	ND	ND

Notes:^a **TPH 8015M** - Total Petroleum Hydrocarbons Method 8015 Modified.^b **VOCS** - Volatile Organic Compounds.**SCEP** - Steam Cleaning Effluent Pond**ND** - Not Detected**mg/kg** - milligrams per kilogram

TABLE 9: NSCEP SPILL H91091ID VERIFICATION RESULTS

TPH 8015M					
LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)
Cell No. 32	NSPIL-VI-032	0-15.2 [0-6]	ND	ND	ND
Cell No. 33	NSPIL-VI-033	0-15.2 [0-6]	ND	ND	ND
Cell No. 38	NSPIL-VI-038	0-15.2 [0-6]	ND	ND	ND
Cell No. 59	NSPIL-VI-059	0-15.2 [0-6]	ND	ND	ND
Cell No. 66	NSPIL-VI-066	0-15.2 [0-6]	ND	ND	ND
SAMPLES COLLECTED AUGUST 27, 1997					

Notes:

* TPH 8015M: Total Petroleum Hydrocarbons Method 8015 Modified.

SCEP: Steam Cleaning Effluent Pond

ND: Not Detected

cm: centimeter

mg/kg: milligrams per kilogram

5.2 CLOSURE OF NDEM SPILL CASE NUMBER H920625B

On June 18, 1992, a spill was discovered in the Area 6 Fleet Operations Yard at the underground separator located next to the steam cleaning pad located north of Building 6-800 (Figure 12). The separator's effluent line was plugged, causing liquid to back up and overflow out of the manhole. Approximately 114 liters (l) (30 gallons [gal]) of material were released over the concrete pad to the surrounding soil. Approximately 19 m³ (25 yd³) of soil was impacted. An investigation of the incident was made by the M&O contractor on June 22, 1992 (Elle, 1992). The release was determined to exceed the NAC 459.9921 through 459.999 Action Level of 0.28 m³ (10 ft³) of soil impacted with greater than 100 mg/kg TPH. A Spill Notification Report was submitted to the NDEP on June 25, 1992 (Elle, 1992), and NDEM Case Number H920625B was assigned.

Impacted soil was excavated in June and July 1992. Approximately 19 m³ (25 yd³) of soil was removed and stockpiled on, as well as covered with plastic. The excavation was later backfilled because of safety concerns. A soil sample was collected at each end of a shallow ditch located along the east side of the separator pad at a depth of approximately 0.6 m (2.0 ft) below ground surface. The samples were analyzed for VOCs, SVOCs, and TPH. Analytical results indicate TPH concentrations of 861 mg/kg and 3,490 mg/kg, which exceed the NDEP Action Level of 100 mg/kg. Several VOCs were detected (2-butanone, 4-methyl-2-pentanone, 2-hexanone, toluene, xylene) at concentrations below regulatory levels. SVOC (bis[2-ethylhexyl]phthalate, 2-methyl naphthalene, and phenanthrene) were detected again at concentrations less than regulatory limits, where limits have been established (Elle, 1992). The excavated soil was determined to be nonhazardous and was disposed of in the Area 6 Hydrocarbon Landfill.

A decision was made by DOE/NV in 1992, that further action with respect to the release would be conducted during the SCEP Project. Soil would be excavated and verification samples would be collected as part of the closure of the Building 6-800 Separator, these actions are anticipated to be sufficient to close out this spill release.

5.2.1 Spill H920625B Remediation

Section 2.2.10 of the Area 6 SCEP Closure Plan (DOE, 1997) outlined the closure strategy for the Building 6-800 Separator, Spill H920625B. The closure would be based on confirmation that all of the impacted soil in the spill area has been removed to closure criteria. Data regarding Spill H920625B (Elle, 1992) indicated that the west chamber had overflowed and the soil along the northeast end of the separator had been impacted. Once the spill had been remediated, two verification samples would be collected.

FIGURE 12
SPILL H920625B SAMPLE LOCATIONS

However, during the course of excavating and removing the Building 6-800 Separator and associated soil, it was discovered that the source area for spill H920625B was between the east and west chambers of the separator. A field decision was made and the verification samples were collected as part of the Building 6-800 Separator closure.

The analytical results from the four subsurface verification soil samples are found in Table 10. Samples were analyzed for total VOC, TPH, and TCLP metals. Samples SSCEP-6800-2 and SSCEP-6800-3 were collected directly under the ends of the 6-800 Separator (Figure 12). These samples indicate that spill H920625B was probable larger than was originally estimated.

The analytical results from samples SSCEP-6800-4 and SSCEP-6800-5 which were collected at a depth of 6 m (20 ft) below ground surface. The excavation was halted at this depth because the PID headspace analysis (background [0 ppm]) indicated that the soil was not impacted by volatile organic compounds. The analytical data for verification samples SSCEP-6800-4 and SSCEP-6800-5 are provided in Table 10.

No petroleum hydrocarbon concentrations above the NAC Action Level or TCLP metals above regulatory limits were detected in verification samples SSCEP-6800-4 and SSCEP-6800-5. However, the holding time for VOCs were exceeded for these two samples. The two sample locations were resampled using a GeoProbe® soil collection system. The two samples were analyzed for VOCs and are presented within Table 10 as Samples SSCEP-6800-7 and SSCEP-6800-8. No VOCs above the method detection limit were detected within either sample.

Based upon the verification sample analytical results from SSCEP-6800-4/SSCEP-6800-7 and SSCEP-6800-5/SSCEP-6800-8, the volatile organic compound and petroleum hydrocarbon impacted soil associated with spill release H920625B has been remediated below the closure criteria of not detected for VOCs and the NAC Action Level of 100 mg/kg for petroleum hydrocarbons. Therefore, the DOE petitions that NDEM Spill Release Number H920625B be officially closed out.

A total of 176 m³ (230 yd³) of soil was excavated and disposed of in the Area 6 Hydrocarbon Landfill. The soil was transported to the Area 6 Hydrocarbon Landfill. A copy of the on-site Waste Manifest is provided in Appendix A.

TABLE 10: SUMMARY OF SPILL RELEASE H920625B VERIFICATION RESULTS

LOCATION	SAMPLE ID	SAMPLE DEPTH (cm [inches])	TPH 8015M ^a			VOCS ^b (mg/kg)	TCLP ^c METALS (mg/L)
			GAS (mg/kg)	DIESEL (mg/kg)	OIL (mg/kg)		
SAMPLES COLLECTED JULY 28, AUGUST 13 & 20, AND OCTOBER 21, 1997							
Closure Plan Verification Sample Under East Side of Separator	SSCEP-6800-002 (7/28/97)	305-313 [120-126]	NA	ND	530	NA*	Ba 0.841 Pb 0.010
Closure Plan Verification Sample Under West Side of Separator	SSCEP-6800-003 (7/28/97)	305-313 [120-126]	NA	ND	1,200	NA*	As 0.062 Ba 1.270 Cd 0.010 Cr 0.352 Pb 0.156
Final Closure Verification Sample East Side of Excavation	SSCEP-6800-004 (8/13/97)	610 [240]	ND	ND	ND	ND ^d	Ba 0.444
Final Closure Verification Sample East Side of Excavation - Resample	SSCEP-6800-007 (10/21/97)	610 [240]	NA	NA	NA	ND	NA
Final Closure Verification Sample West Side of Excavation	SSCEP-6800-005 (8/13/97)	610 [240]	ND	ND	27.6	ND ^d	Ba 0.481
Final Closure Verification Sample West Side of Excavation - Resample	SSCEP-6800-008 (10/21/97)	610 [240]	NA	NA	NA	ND	NA
6-800 Separator Soil Pile Waste Characterization Sample	SSCEP-6800-006 (8/20/97)	NA	ND	ND	1,200	ND	Ba 0.670

Notes:

SCEP: Steam Cleaning Effluent Pond

^a TPH 8015M: Total Petroleum Hydrocarbons Method 8015 Modified; ^b VOCs: Volatile Organic Compounds; ^c TCLP: Toxicity Characteristic Leaching Procedure.

ND^d: While no detectable VOCs were found within the sample, the sample had been analyzed 1-day after the CLP mandated holding time.

ND: Not Detected; NA: Not Analyzed; NA*: VOC analysis cancelled due to samples were received at 27 degrees Celsius

6.0 CONCLUSIONS

The Area 6 SCEP Closure Plan (DOE, 1997) specified the criteria for the closure of the different components of CAU 93. The information presented in this report documents that the criteria approved in the Area 6 SCEP Closure Plan has been met. Appendix C - Closure Certification contains the certifications from the Department of Energy/Nevada Operations Office and an Independent Professional Engineer that the closure has been conducted in accordance with the approved Closure Plan for CAU No. 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site (DOE, 1997).

6.1 POST-CLOSURE MONITORING

The Area 6 SCEP Closure Plan (DOE, 1997) specified that post-closure monitoring was not required, as all RCRA-regulated waste was to be removed from the site. However, the field closure activities for South SCEP pipeline, which contains RCRA-regulated waste, deviated from the approved closure plan. Approximately 8 m (26 ft) of the pipeline that was located under the most congested section of the utility corridor was left in place. The 8 m (26 ft) section of pipeline was filled with cement grout and the excess sludge and cement grout was caught at the east end of the pipe and placed in a roll-off container for off-site disposal at a TSDF.

Given the good condition of the 8 m (26 ft) South SCEP pipeline and the fact that it is buried 1.2 m (4 ft) below ground surface, it is recommended that no post-closure monitoring is necessary at this site. However, the unit should be periodically inspected to observe whether maintenance is required due to subsidence or erosion in any of the excavations in the unit.

6.2 CLOSURE PETITION

The closure was completed in accordance with the approved Closure Plan for CAU No. 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site (DOE, 1997). All RCRA-hazardous waste has been managed and disposed of in an off-site TSDF. All petroleum hydrocarbon impacted soil has been disposed of in the Area 6 Hydrocarbon Landfill. All non-hazardous debris has been disposed of in the Area 9 10C Landfill.

Therefore, the Department of Energy/Nevada Operations Office requests that the Area 6 Steam Cleaning Effluent Ponds, CAU 93 be moved from Appendix III to Appendix IV of the Federal Facility Agreement and Consent Order.

7.0 REFERENCES

DOE, see United States Department of Energy.

Elle, Donald R., November 4, 1991; Characterization Report for a Release of Waste Oil, Nevada Division of Emergency Management Case No. H910911D.

Elle, Donald R., November 12, 1992; Characterization Reports for Releases of Hydraulic Oil and/or Waste Oil, Nevada Division of Emergency Management Case Numbers H920219B, H920408F, H920424A, and H920625B.

Nevada Division of Environmental Protection, May 1995; Permit For a Hazardous Waste Facility, Permit Number NEV HW009; Section V.B4.

United States Department of Energy, March 1996; Resource Conservation and Recovery Act, Industrial Sites, Environmental Restoration Site Characterization Plan, Area 6 Steam Cleaning Effluent Ponds.

United States Department of Energy, May 1996a; Federal Facility Agreement and Consent Order.

United States Department of Energy, July 1996; Industrial Sites Quality Assurance Project Plan.

United States Department of Energy, September 1996b; Resource Conservation and Recovery Act, Industrial Sites, Environmental Restoration Site Characterization Report, Area 6 Steam Cleaning Effluent Ponds.

United States Department of Energy, April 1997; Closure Plan for CAU 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site.

APPENDIX A

WASTE MANIFESTS

CR - CAU No. 93
Section: APPENDIX A
Revision: 0
Date: 12/23/97

PETROLEUM HYDROCARBON SOIL ON-SITE SHIPPING FORMS

Carbon, and retained by the Agent.

Carrier No. _____

Date 8/8/97

Page 24 of 1

BN Construction

(Name of carrier)

(SCAC)

On Collect On Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

Consignee NW0 A6 Hydrocarbon Landfill

Street NTS Area 6

City State Zip Code

FROM:

Shipper AL Steam Cleaning Effluent Ponds

Street MTS Area 6

City **State** **Zip Code**

24 hr. Emergency Contact Tel. No. _____

Date 6-25 Road

Vehicle Number 84677

PLACARDS TENDERED: YES ☐ NO ☐

Note — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by ☐ Rail ☐ Highway ☐ Water (DELETE NON-APPLICABLE MODE OF TRANSPORT) according to applicable international and national governmental regulations.

\$ _____ per _____

Signature

REMIT
C.O.D. TO:
ADDRESS

Amt: \$

C.O.D. FEE:
PREPAID ☐
COLLECT ☐

TOTAL CHARGES: \$

FREIGHT CHARGES

FREIGHT PREPAID except when box at right is checked	☐ Check box if charges are to be collected
--	---

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of

said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER Dea Tobiasen
$$t \in R \quad BN-RP$$
CARRIER

PER

DATE _____

8/5/97

2

manent post-office address of shipper.

PRINTED ON RECYCLED PAPER
USING SOYBEAN INK

PRINTED WITH
OVERLAP

STYLE F65 LABELMASTER, An American Labelmark Co., Chicago, IL 60646 800/621-5808

Carbon, and retained by the Agent.

Shipper No. _____

Carrier No. _____

Date 8/12/97

age 1 of 1

BN Construction

(Name of carrier)

(SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1

O: onsignees NWD AG Hydrocarbon Landfill

Street NTS Area 6

City _____ State _____ Zip Code _____

FROM:

Shipper H6 Steam Cleaning Effluent Ponds

Street NTS Area 6

City _____ **State** _____ **Zip Code** _____

24 hr. Emergency Contact Tel. No. _____

Site: 6-05 Road

Vehicle Number 84677

[illegible]PLACARDS TENDERED: YES ☒ NO ☐REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

C.O.D. FEE:
PREPAID ☐
COLLECT ☐

TOTAL CHARGES: \$

FREIGHT CHARGES

FREIGHT PREPAID
except when box at
right is checked

Check box if charges
are to be
collect

☐

lots — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

I _____ per _____

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by ☐ Air ☐ Highway ☐ Water (DELETE NON-APPLICABLE MODE OF TRANSPORT) according to applicable international and national governmental regulations.

____Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of

said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER *Ken Tobin***CARRIER**

PER *RNPP*

DATE 8/12/97

2

nant post-office address of shipper.

PRINTED ON RECYCLED PAPER
USING SOYBEAN INK

PRINTED WITH
SOY INK

STYLE F85 LABELMASTER, An American Labelmark Co., Chicago, IL 60646 800/621-5808

Carbon, and retained by the Agent.

Carrier No. _____

BN Construction
(Name of carrier) (SCAC)

Date 8/14/95

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1

Street Landfill

City NTS State Area 6 Zip Code _____

FROM:

Shipper Area 6 Steam Cleaning

Street Effluent Ponds

City ATS Area 6 State _____ Zip Code _____

24 hr. Emergency Contact Tel. No.

Route: 6-25 Rd

Vehicle Number 84677

Hand in

REMIT
C.O.D. TO:
ADDRESS

\$ _____ per _____

COD

Amt: \$

COLLECT [

TOTAL CHARGES: \$

FREIGHT CHARGES
 FREIGHT PREPAID Check box if charges are to be collected
 except when box at ☐
 no'ts is checked collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of

said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns

SHIPPER *Ag. Tolson*

CARRIER

PER *DN-RP.*

PER BN-CP

DATE 8/14/97

2

must be legibly filled in, in ink, in indelible pencil, or in Carbon; and retained by the Agent.

Carrier No. _____

BN-Construction

Date 8/20/97

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

Consignee NWO AL Hydrocarbon

Street Land Fill

City NTS State Area 6 Zip Code _____

FROM:

Shipper AL Steam Cleaning Effluent

Street Ponds

City NTS Area 6

State

Zip Code

24 hr. Emergency Contact Tel. No. _____

Route

6-05 Road

Vehicle Number 84677

[illegible]

PLACARDS TENDERED: YES ☒ NO ☐

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ \$

TOTAL CHARGES: \$

FREIGHT CHARGES

FREIGHT PREPAID except when box at note is checked	Check box if charges are to be collected
☐	☐

Note — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by ☐ Rail ☐ Highway ☐ Water (DELETE NON-APPLICABLE MODE OF TRANSPORT) according to applicable international and national governmental regulations.

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Conductor)

\$ _____ per _____

Signature _____

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of

said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER Ann Tobiasson

CARRIER

FER *BN-RP*

PER *BN-R.F.*

DATE 5/20/02

Permanent post-office address of shipper.

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USING SOYBEAN INK

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Shipper No. _____

Carrier No. _____

Date 8/21/97 -

Pag. 1 of 1

BN Construction

(Name of carrier)

(SCAC)

On Collect on very shipments, the letters "COO" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1

TO: *NW 77 A6 Hydrocarbon Landfill*

Street NTS Arlin 6

City _____ State _____ Zip Code _____

FROM:

Shipper Alb Stearn Cleaning Effluent

Street: Roads (SCPS)

City NTS Area 6 State _____ Zip Code _____

24 hr. Emergency Contact Tel. No. _____

Route 6-05 Coal

Vehicle Number 84677
84678

[illegible]

PLACARDS TENDERED: YES ☐ NO ☐

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ \$

TOTAL CHARGES: \$

FREIGHT CHARGES

FREIGHT CHARGES

FREIGHT PREPAID except when box is not checked	Check box if charges are to be collected
☐	☐

Note — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

\$ _____ per _____

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by 陆路 Highway 水路 Water (DELETE NON-APPLICABLE MODE OF TRANSPORT) according to applicable international and national governmental regulations.

Signature _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

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(Signature of Consignor)

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said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns

SHIPPER Dan. Tobiasson

CARRIER

PER *RNP*

PER *RAI RP*

DATE 8/21/97

Permanent post-office address of shipper.

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STYLE F85 LABELMASTER, An American Labelmark Co., Chicago, IL 60646 800/621-5806

2.

must be legibly filled in, in ink, in indelible pencil, or in Carbon, and retained by the Agent.

Carrier No. _____

BN Construction

(Name of carrier)

(SCAC)

Date 8/26/97

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

FROM: Shipper Alb Steam Cleaning Effluent Proj

Street NTS Area C

City **State** **Zip Code**

City State Zip Code

24 hr. Emergency Contact Tel. No.

Route

6-05 Road

Vehicle Number 84678

PLACARDS TENDERED: YES ☐ NO ☐

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

C.O.D. FEE:

PREPAID ☐

COLLECT ☐ \$

TOTAL CHARGES: \$

FREIGHT CHARGES

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

Note — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

\$ _____ per _____

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Signature

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(Signature of Consignor)

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Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns

SHIPPER Delta Tobiason**CARRIER**

PER *BN-RP*

PER *BN-RP*

DATE 8/26/97

2

Permanent post-office address of shipper.

STYL E F651 LABEL MASTER An American Labelmark Co. Chicago, Ill. 32343 323434 520

CR - CAU No. 93
Section: APPENDIX A
Revision: 0
Date: 12/23/97

HAZARDOUS SOIL DISPOSAL WASTE MANIFESTS

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US-EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

NV3B70070001

97012

of 1

3. Generator's Name and Mailing Address
BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193
4. Generator's Phone (702) 295-0174

ATT. SANDY SIMPLICIO

State Manifest Document Number

96871169

5. Transporter 1 Company Name

6. US EPA ID Number

ALLWASTE SERVICES INC.

CADD63547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

CAT000646117

209/386-7711

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL) EX
9; NA 3077, PG III (F001, F002) (SOL)

001 D T 44260 P

b.

c.

d.

1. Additional Descriptions for Wastes Listed Above

(A) DD1502 ER6 171

2. Additional Descriptions for Wastes Listed Above

15. Special Handling Instructions and Additional Information

BNC-267-97

CD REQUIRED

WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT

EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 702-295-6400

PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month Day Year
06 24 97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

GILBERT SOUZA

Signature

Gilbert Souza

Month Day Year
06 24 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

11a change authorized by Sandra S. Simplicio 6-30-97 ch

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

STEVE DARRETT

Signature

Steve Darrett

Month Day Year

06 25 97

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state.)

UNIFORM HAZARDOUS
WASTE MANIFEST

Generator's USEPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

NV3890090001970113

of 1

3. Generator's Name and Mailing Address
BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 H/SNT5207
LAS VEGAS, NV 89193

ATT. SANDY SIMPLICIO

4. Generator's Phone (702) 295-0174

5. Transporter 1 Company Name

6. US EPA ID Number

ALLWASTE SERVICES INC.

CA0063547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

10. US EPA ID Number

CAT000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PG III (F001, F002) (SOIL)

0101 DIT 448610 P

b.

c.

d.

Additional Descriptions for Materials Listed Above

(A) DD1502 ERG 171

Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

BNC-268-97

CD REQUIRED

WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month Day Year
06 24 97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

THE LARSEN

Signature

THE LARSEN 702-128-4298

Month Day Year
06 24 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

1. a change authorized by SANDRA S. SIMPLICIO 6-26-97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

STEVE BARILETTI

Signature

STEVE BARILETTI

Month Day Year

06 25 97

DO NOT WRITE BELOW THIS LINE.

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

97014

of 1

3. Generator's Name and Mailing Address

BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193

ATT. SANDY SIMPLICIO

4. Generator's Phone (702) 295-0174

5. Transporter 1 Company Name

6. US EPA ID Number

ALL WASTE SERVICES INC.

CAD663547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

CAT000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

13. Total Quantity

14. Unit Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;

(CONTAMINATED SOIL)

9; NA 3077, PG III (F001, F002) (SOIL)

001D T 42620

P

b.

c.

d.

Additional Description for (Hazardous Waste Listed A)

(A) (D) 502 ERG 171

15. Special Handling Instructions and Additional Information

BN-269-97

CD REQUIRED

WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT

EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 702-295-6400

PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month Day Year

06/24/97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

LEE NECKER

Signature

Lee Necker

Month Day Year

06/24/97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

11a. Change authorized by Sandra S. Simplicio 6-30-97 PL

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

W. Gentry

Signature

W. Gentry

Month Day Year

06/25/97

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

96871790

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR
TRANSPORTER
FACILITY

See Instructions on back of page

Department of Toxic Substances
 Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas is not required by Federal law.

NV3B90090001(970115) of 1

3. Generator's Name and Mailing Address

BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193

ATT. SANDY SIMPLICIO

4. Generator's Phone (702) 295-0174

5. Transporter 1 Company Name

6. US EPA ID Number

ALL WASTE SERVICES INC.

CAD063547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

CAT000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

13. Total

14. Unit

No.

Type

Quantity

Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;

(CONTAMINATED SOIL)

9; NA 3077, PG III (F001, F002) <SOIL>

0101 DIT 475810 D

b.

c.

d.

15. Special Handling Instructions and Additional Information

BN-270-97

WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT

EMERGENCY 24-HOUR TELEPHONE: 800-424-9300-3424 702-295-6400

PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

CD REQUIRED

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Signature

Month Day Year

SANDRA S. SIMPLICIO

Sandra S. Simplicio

01/06/97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

ROBERT R. DAVIS

Robert R. Davis

01/06/97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

11a. Change authorized by Sandra S. Simplicio 6-30-97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

STEVE BARRETT

Steve Barrett

01/06/97

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDS SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

Generators who submit hazardous waste for transport out-of-state,

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

RECEIVED

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NYB990090001		Manifest Document No. 97016		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SNTS207 LAS VEGAS, NV 89193		4. Generator's Phone 702) 295-0174		5. Transporter 1 Company Name TRANSFERTATION & REDEMPTION ALL WASTE SERVICES INC.		6. US EPA ID Number CAD063547976		7. Transporter 2 Company Name			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239		10. US EPA ID Number CAT000646117		11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) 9; NA 3077, PG III (F001, F002) <SOIL>		12. Containers No. 0101 Type DT		13. Total Quantity 47540		14. Unit P	
15. Special Handling Instructions and Additional Information WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 ext 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023		16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.		17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name SANDRA S. SIMPLICIO Signature <i>Sandra S. Simplicio</i> Month 06 Day 24 Year 97		18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name DONALD JENSEN Signature <i>Donald Jensen</i> Month 06 Day 24 Year 97		19. Discrepancy Indication Space 11a. Change Authorized by SANDRA S. SIMPLICIO 6-30-97 EQ		20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name STEVE BARRETT Signature <i>Steve Barrett</i> Month 06 Day 25 Year 97	

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDS SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

UNIFORM HAZARDOUS
WASTE MANIFEST

Generator's US EPA ID No. NV3890090001
Manifest Document No. 97017

2. Page 1
of 1

Information in the shaded areas
is not required by Federal law.

3. Generator's Name and Mailing Address
BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193
4. Generator's Phone (702) 295-0174

5. Transporter 1 Company Name
TRANS PORTATION + REMEDIATION
ALLWASTE SERVICES INC. CA-D 063547996
6. US EPA ID Number

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239
10. US EPA ID Number
CA T 000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type
13. Total
Quantity
14. Unit
Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PB III (F001, F002) <5017

0910T 39820 P

b.

c.

d.

15. Special Handling Instructions and Additional Information
BUC-272-97
NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-7300 or 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023
CD REQUIRED
AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name SANDRA S. SIMPLICIO
Signature Sandra S. Simplicio
Month Day Year 06/24/97

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name MANNY MEDRINOS
Signature Manny Medrinos
Month Day Year 06/24/97

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space
11a Change authorized by Sandra S. Simplicio 6-30-97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name STEVE BARRIETI
Signature Steve Barrieti
Month Day Year 06/25/97

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

908/11/92
IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550
GENERATOR
FACILITY

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

NV 3890090001 970118

of 1

3. Generator's Name and Mailing Address

BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193

ATT. SANDY SIMPLICIO

4. Generator's Phone (702) 295-0174

5. Transporter 1 Company Name

6. US EPA ID Number

TRANSPORTATION + REMEDIATION
ALLWASTE SERVICES INC.

CAD063547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

CAT000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PG III (F001, F002) (SOIL)

001 DIT 40980 P

b.

c.

d.

15. Special Handling Instructions and Additional Information

BN-293-97

CD REQUIRED

WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 55412/17 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Signature

Month Day Year

SANDRA S. SIMPLICIO

Sandra S. Simplicio

06 24 97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

LARRY CONTRAD

Larry Conrad

06 12 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

11a. Change Authorized by Sandra S. Simplicio 6-30-97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

W. C. C. C.

W. C. C. C.

06 25 97

DO NOT WRITE BELOW THIS LINE.

Yellow:

TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

968711795

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

State of California - Environmental Protection Agency
Approved OMB No. 2550-0039 (Expires 9-30-96)
Please print or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page

Department of Toxic Substances
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NY3870070001** Manifest Document No. **97019** 2. Page 1 of 1

3. Generator's Name and Mailing Address
BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193

4. Generator's Phone **702) 295-0174**

5. Transporter 1 Company Name **Transportation + Remediation** 6. US EPA ID Number **ALLWASTE SERVICES INC. 556121197**

7. Transporter 2 Company Name **CADDOCK 3547776** 8. US EPA ID Number

9. Designated Facility Name and Site Address **CHEMICAL WASTE MANAGEMENT, INC.** 10. US EPA ID Number **35251 OLD SKYLINE ROAD**
KETTLEMAN CITY, CA 93239

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)
HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PG III (F001, F002) (Soil)

12. Containers No. **001** Type **DT** 13. Total Quantity **4720** 14. Unit **P**

15. Special Handling Instructions and Additional Information **BNC-274-97** **CD REQUIRED**
WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-7300-542117 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **SANDRA S. SIMPLICIO** Signature **Sandra S. Simplicio** Month **06** Day **12** Year **97**

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name **David G. Skeels** Signature **David G. Skeels** Month **06** Day **24** Year **97**

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space
11a Change authorized by Sandra S. Simplicio 6-30-97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name **Steve Barrett** Signature **Steve Barrett** Month **06** Day **25** Year **97**

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

NV389009000197020

of 1

3. Generator's Name and Mailing Address

BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 H/SNTS207
LAS VEGAS, NV 89193

ATT. SANDY SIMPLICIO

4. Generator's Phone

(702) 295-0174

5. Transporter 1 Company Name

6. US EPA ID Number

Transportation + Remediation
ALLWASTE SERVICES INC.

5619197

CAD063547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 95239

CAT000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No. Type

13. Total

Quantity

14. Unit

Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)

9; NA 3077, PB III (F001,F002) <SOIL>

0101

DT

45300

P

b.

c.

d.

15. Special Handling Instructions and Additional Information

BNC-275-97

CD REQUESTED

WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT

EMERGENCY 24-HOUR TELEPHONE# 800-424-9300-6447 702-295-6400

PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month

06

Day

24

Year

97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

HAL JACKSON

Signature

Hal Jackson

Month

06

Day

24

Year

97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month

Day

Year

19. Discrepancy Indication Space

n.a. Change authorized by Sandra S. Simplicio 6-30-97 ck

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

STEVE BARRETI

Signature

Steve Barreti

Month

06

Day

25

Year

97

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

Generators who submit hazardous waste for transport out-of-state,

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

3. Generator's Name and Mailing Address

BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193

4. Generator's Phone 702) 295-0174

5. Transporter 1 Company Name

6. US EPA ID Number

TRANSPORTATION + REMEDIATION
ALLWASTE SERVICES INC. SC 6/24/97

CADDB35K7P7B

7. Transporter 2 Company Name

8. US EPA ID Number

CROSS T - FORD CO. CA 95436
399 PO Box 2004

CA00000137A216

9. Designated Facility Name and Site Address

10. US EPA ID Number

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

CAT0000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PG III (F001, F002) <SOIL>

001 DT400000

P

P

15. Special Handling Instructions and Additional Information

NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-7300-554217 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY-95, MERSOP, NV 89023

CD REQUIRED

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month

Day

Year

06

24

97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Chris Carr

Signature

Chris Carr

Month

Day

Year

06

24

97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month

Day

Year

19. Discrepancy Indication Space

11a. Changes Authorized by Sandra S. Simplicio 6/30/97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

STEVE BARRETT

Signature

Steve Barrett

Month

Day

Year

06

25

97

DO NOT WRITE BELOW THIS LINE.

Yellow:

TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

(Generators who submit hazardous waste for transport out-of-state, must also submit a copy of this manifest to the receiving state.)

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

NV3890090001 97022

of 1

3. Generator's Name and Mailing Address

BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193

ATT. SANDY SIMPLICIO

4. Generator's Phone (702) 295-0174

5. Transporter 1 Company Name

TRANSPORTATION & REMEDIATION
ALL WASTE SERVICES INC.

6. US EPA ID Number

CA0063547996

7. Transporter 2 Company Name

PO Box 39072
CROSS TRUCKS FORESTVILLE

8. US EPA ID Number

CA000001133926

9. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

10. US EPA ID Number

CA0000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PG III (F001, F002) (SOIL)

12. Containers

No. Type

0101 DIT

13. Total Quantity

40840

14. Unit

Wt/Vol

P

15. Waste Number

611

EPA ID

CA0001

State

CA

EPA ID

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**UNIFORM HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID Number
2. Page 1 of 1

Information in the shaded areas
is not required by Federal law.

3. Generator's Name and Mailing Address
**BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193**

ATT. SANDY SIMPLICIO

4. Generator's Phone **702) 295-0174**

5. Transporter 1 Company Name

6. US EPA ID Number

**TRANSPORTATION + REMEDIATION
ALL WASTE SERVICES INC.**

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

**CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239**

CAT000066117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

**HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PG III (F001, F002) (Soil)**

0101 D T 34020 P

b.

c.

d.

Additional Descriptions for Materials Listed Above

(A) DD1502 ERG 71

15. Special Handling Instructions and Additional Information

BNC-248-97

CD REQUIRED

**WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 ext 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023**

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month

Day

Year

06 24 97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

JAMES BOLANNA

Signature

James Bolanna

Month

Day

Year

06 24 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month

Day

Year

19. Discrepancy Indication Space

Changes authorized by Sandra S. Simplicio 6-30-97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

W. Gentry

Signature

W. Gentry

Month

Day

Year

06 25 97

DO NOT WRITE BELOW THIS LINE.

**UNIFORM HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No. **NV-389009000197024** Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

**BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193**

ATT. SANDY SIMPLICIO

4. Generator's Phone **(702) 295-0174**

5. Transporter 1 Company Name

**TRANSPORTATION & REMEDIATION
ALLWASTE SERVICES INC. SC 6124192**

6. US EPA ID Number

CA D063547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

**CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239**

10. US EPA ID Number

CA T000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

**a. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL)
9; NA 3077, PG III (F001, F002) <SOIL>**

12. Containers

No. Type

0101 DIT 425180

13. Total Quantity

Unit

Wt/Vol

14. Unit

Wt/Vol

P

15. Additional Descriptions for Materials Listed Above

(A) ID1502 ERG 121

16. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

**BNC-279-97
WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 SWITZ 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023**

CD REQUIRED

AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month

01

Day

24

Year

97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

FRED CHRISTIAN

Signature

Fred Christian

Month

01

Day

24

Year

97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month

Day

Year

19. Discrepancy Indication Space

11a. Change authorized by Sandra S. Simplicio 6-30-97

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

STEVE BARRETT

Signature

Steve Barrett

Month

06

Day

25

Year

97

DO NOT WRITE BELOW THIS LINE.

Yellow:

TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

96871801
IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802, WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NY3890090001		Manifest Document No. 97025		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/ENT6207 LAS VEGAS, NV 89193		ATT. SANDY SIMPLICIO		4. Generator's Phone 702) 295-0174					
5. Transporter 1 Company Name TRANSPORTATION & REMEDIATION ALLWASTE SERVICES INC. S.S. 12/17		6. US EPA ID Number CADD63547996		7. Transporter 2 Company Name					
8. US EPA ID Number		9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239		10. US EPA ID Number CAT000646117		11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) 9; NA 3077, PG III (F001, F002) <SOIL>			
12. Container No.		13. Total Quantity		14. Unit Wt/Vol		15. Additional Description (see Material Listed Above) (A) DD1502 ERG 1/1			
16. Special Handling Instructions and Additional Information BNC-280-97 NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 SSU/22 H 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023		17. Generator's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.		18. Discrepancy Indication Space 11a. Changes authorized by Sandra S. Simplicio 6-30-95		19. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.			
Printed/Typed Name SANDRA S. SIMPLICIO		Signature <i>Sandra S. Simplicio</i>		Month 6		Day 24		Year 97	
Printed/Typed Name LARRY PHILLIPS		Signature <i>Larry Phillips</i>		Month 6		Day 24		Year 97	
Printed/Typed Name		Signature		Month		Day		Year	
Printed/Typed Name STEVE BARNETT		Signature <i>Steve Barnett</i>		Month 6		Day 25		Year 97	

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-952-7550

90071002

Yellow: TSDS SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(See: errors who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DSC within 30 days.)

DO NOT WRITE BELOW THIS LINE

1. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SN15207 LAS VEGAS, NV 89193 Generator's Phone (702) 295-0174		2. Page 1 of 1	
3. Generator's Name and Mailing Address ATT. SANDY SIMPLICIO		4. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SN15207 LAS VEGAS, NV 89193 Generator's Phone (702) 295-0174	
5. Transporter 1 Company Name TRANSPORTATION REMEDIATION US EPA ID Number C A T 0 0 0 0 6 4 6 1 1 7		6. Transporter 2 Company Name ALWASTE SERVICES INC. S/S 44/92 US EPA ID Number C A T 0 0 0 0 6 4 6 1 1 7	
7. Transporter 2 Company Name ALWASTE SERVICES INC. S/S 44/92 US EPA ID Number C A T 0 0 0 0 6 4 6 1 1 7		8. US EPA ID Number C A T 0 0 0 0 6 4 6 1 1 7	
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 33251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239		10. US EPA ID Number C A T 0 0 0 0 6 4 6 1 1 7	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) 9; NA 3077, PG III (F001, F002) (Soil) 010113 T 396810 P		12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol	
15. Special Handling Instructions and Additional Information NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-9300-55 (24/7) PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023 AETS-MA CD REQUIRED		16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.	
17. Transporter 1 Acknowledgement of Receipt of Materials SANDRA S. SIMPLICIO Signature 06/24/97		18. Transporter 2 Acknowledgement of Receipt of Materials David L. HARRIS Signature 06/24/97	
19. Discrepancy Indication Space No Discrepancy Signature 06/25/97		20. Facility Owner/Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Signature 06/25/97	

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SNTS207 LAS VEGAS, NV 89193		ATT. SANDY SIMPLICIO		4. Generator's Phone (702) 295-0174	
5. Transporter 1 Company Name TRANSPORTEATION & REMEDIATION ALLWASTE SERVICES INC.		6. US EPA ID Number CA D 0 6 3 5 4 7 9 9 6		7. Transporter 1 Phone (702) 295-0174	
7. Transporter 2 Company Name		8. US EPA ID Number		9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239	
9. Designated Facility Name and Site Address		10. US EPA ID Number CA T 0 0 0 6 4 6 1 1 7		11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	
a. HAZARDOUS WASTE SOLID, N.O.S.; -(CONTAMINATED SOIL)- SS 6/30/97 9; NA 3077, PG III (F001, F002) (SOIL)		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
		0101	CIM	31280	P
b.				4077810	
c.				SS 7/8/97	
d.					
15. Special Handling Instructions and Additional Information BNC-283-97 WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 SS 6/30/97 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023		16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.			
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature Sandra S. Simplicio		Month Day Year 01/6/21/51917	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature Doreen Branham		Month Day Year 01/6/21/51917	
19. Discrepancy Indication Space Removed "(Contaminated Soil)" from proper shipping description. SS 6/30/97 manifest weight included weight of soil and roll-off box. Kettleman Hills weighed soil only as 3,280#		20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.			
Printed/Typed Name		Signature		Month Day Year	

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV 3890090001		Manifest Document No. 97028		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SNTS207 LAS VEGAS, NV 89193				ATT. SANDY SIMPLICIO		9687180			
4. Generator's Phone (702) 295-0174				6. US EPA ID Number		408 683-0447			
5. Transporter 1 Company Name TRANSPORTATION & REMEDIATION ALLWASTE SERVICES INC. 11/2/92				8. US EPA ID Number CAD063547996		209/384-7111			
7. Transporter 2 Company Name				10. US EPA ID Number CAT000646117		209/384-7111			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239				11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type		13. Total Quantity	
				14. Unit Wt/Vol		15. Waste Number			
a. HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) 6/21/95 9; NA 3077, PG III (F001, F002)				0101 CIM		407810		P	
b.									
c.									
d.									
16. Additional Descriptions for Materials Listed Above (H) DD1502 ERG 171				17. Handling Codes for Wastes Listed Above 03					
15. Special Handling Instructions and Additional Information BNC-283-97 WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE 800-424-9300 55612247 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023 CB REQUIRED AETS-MA									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name SANDRA S. SIMPLICIO				Signature Sandra S. Simplicio		Month 01		Day 25	
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature Darrel Bramhall		Month 01		Day 25	
Printed/Typed Name DARREL BRAMHALL				Signature		Month		Day	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month		Day	
Printed/Typed Name				Signature		Month		Day	
19. Discrepancy Indication Space 13) Rec'd 31,280 pounds 1/5 Approved with or had a Carreno/AETS 1/6									
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name W. Centry				Signature W. Centry		Month 06		Day 25	
						Year 97			

DO NOT WRITE BELOW THIS LINE.

Yellow.

TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
 (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

CONTRACTS

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		2. Page 1	
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SN15207 LAS VEGAS, NV 89193		4. Generator's Phone (702) 295-0174		24 HR EMERGENCY 702-295-6400	
5. Transporter 1 Company Name TRANSPORTATION + REMEDIATION		6. US EPA ID Number C A D 0 6 5 5 4 7 9 9 5		7. Transporter 2 Company Name ALWASTE SERVICES INC. c/h/ha	
8. US EPA ID Number		9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35201 OLD SKYLINE ROAD KETTERMAN CITY, CA 93239		10. US EPA ID Number C A T 0 0 0 6 4 6 1 1 7	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total	
HAZARDOUS WASTE SOLID, N.O.S. (CONTAMINATED SOIL) 561 (F001, F002) 9; NA 3077, PG III (F001, F002)		No. Type		Quantity	
1		1		1	
14. UN		15. Vol		16. Wt/Vol	
F001		2,828.0 P		2,828.0 P	
17. Special Handling Instructions and Additional Information		18. US DOT Hazard Class and ID Number		19. US DOT Hazard Class and ID Number	
NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-7300 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023		20. US DOT Hazard Class and ID Number		21. US DOT Hazard Class and ID Number	
15. Special Handling Instructions and Additional Information		16. US DOT Hazard Class and ID Number		17. US DOT Hazard Class and ID Number	
18. US DOT Hazard Class and ID Number		19. US DOT Hazard Class and ID Number		20. US DOT Hazard Class and ID Number	
19. US DOT Hazard Class and ID Number		20. US DOT Hazard Class and ID Number		21. US DOT Hazard Class and ID Number	
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31. US DOT Hazard Class and ID Number		32. US DOT Hazard Class and ID Number		33. US DOT Hazard Class and ID Number	
32. US DOT Hazard Class and ID Number		33. US DOT Hazard Class and ID Number		34. US DOT Hazard Class and ID Number	
33. US DOT Hazard Class and ID Number		34. US DOT Hazard Class and ID Number		35. US DOT Hazard Class and ID Number	
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35. US DOT Hazard Class and ID Number		36. US DOT Hazard Class and ID Number		37. US DOT Hazard Class and ID Number	
36. US DOT Hazard Class and ID Number		37. US DOT Hazard Class and ID Number		38. US DOT Hazard Class and ID Number	
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42. US DOT Hazard Class and ID Number		43. US DOT Hazard Class and ID Number		44. US DOT Hazard Class and ID Number	
43. US DOT Hazard Class and ID Number		44. US DOT Hazard Class and ID Number		45. US DOT Hazard Class and ID Number	
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47. US DOT Hazard Class and ID Number		48. US DOT Hazard Class and ID Number		49. US DOT Hazard Class and ID Number	
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57. US DOT Hazard Class and ID Number		58. US DOT Hazard Class and ID Number		59. US DOT Hazard Class and ID Number	
58. US DOT Hazard Class and ID Number		59. US DOT Hazard Class and ID Number		60. US DOT Hazard Class and ID Number	
59. US DOT Hazard Class and ID Number		60. US DOT Hazard Class and ID Number		61. US DOT Hazard Class and ID Number	
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61. US DOT Hazard Class and ID Number		62. US DOT Hazard Class and ID Number		63. US DOT Hazard Class and ID Number	
62. US DOT Hazard Class and ID Number		63. US DOT Hazard Class and ID Number		64. US DOT Hazard Class and ID Number	
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65. US DOT Hazard Class and ID Number		66. US DOT Hazard Class and ID Number		67. US DOT Hazard Class and ID Number	
66. US DOT Hazard Class and ID Number		6			

Environmental Protection Agency
Form No. 2050-0039 (EPA 9-30-96)
Form designed for use on 8 1/2" x 11" paper.

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

NV389009000197030

of 1

3. Generator's Name and Mailing Address

BECHTEL NEVADA FOR U.S. DOE
P.O. BOX 98521 M/SNTS207
LAS VEGAS, NV 89193

ATT. SANDY SIMPLICIO

4. Generator's Phone

(702) 295-0174

24 HR EMERGENCY 702-295-6400

5. Transporter 1 Company Name

TRANSPORTATION AND REMEDIATION

6. US EPA ID Number

ALLWASTE SERVICES INC. SS6126197

CADO63547996

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239

10. US EPA ID Number

CAT000646117

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type13. Total
Quantity14. Unit
Wt/Vola. HAZARDOUS WASTE SOLID, N.O.S.;
(CONTAMINATED SOIL) SS613497
9; NA 3077, PG III (F001, F002)

001 CM 39780 P

b.

d.

(A) DD1502 ERG 171

15. Special Handling Instructions and Additional Information

BNC-285-97

CD REQUIRED

NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT

EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 SS6126197 702-295-6400

PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023

AETS-MA

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If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

SANDRA S. SIMPLICIO

Signature

Sandra S. Simplicio

Month

Day

Year

01621697

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

DARREL BRAMHALL

Signature

Darrel Bramhall

Month

Day

Year

01621697

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month

Day

Year

19. Discrepancy Indication Space

13) Rec'd 32740 pounds of Resolved with Orlando Carrasco/AETS

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

C. Gentry

Signature

C. Gentry

Month

Day

Year

062797

DO NOT WRITE BELOW THIS LINE.

Yellow:

TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.

(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7350

GENERATOR

RECEIVED

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NVB8700900001		Manifest Document No. 970311		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO P.O. BOX 98521 M/SNTS207 LAS VEGAS, NV 89193						<div style="background-color: black; color: white; padding: 5px;"> 9687-280 205/38-71 </div>					
4. Generator's Phone (702) 295-0174 24HR Emergency 702-295-6400											
5. Transporter 1 Company Name TRANSPORTATION & REMEDIATION ALLWASTE SERVICES INC. 6/2/97						6. US EPA ID Number CADD83547996					
7. Transporter 2 Company Name						8. US EPA ID Number					
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239						10. US EPA ID Number CAT000646117					
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol	
a. HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) SS 1/2/97 9; NA 3077, PB III (F001,F002)						001 D T		458.00		P	
b.											
c.											
d.											
15. Special Handling Instructions and Additional Information BNC-286-97 NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE 800-424-8800 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023 CD REQUIRED AETS-MA											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name SANDRA S. SIMPLICIO						Signature Sandra S. Simplicio				Month Day Year 06/26/97	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name LEE NECKER						Signature Lee Necker				Month Day Year 06/26/97	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name						Signature				Month Day Year	
19. Discrepancy Indication Space											
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name C. Centry											
Signature C. Centry						Month Day Year 06/27/97					

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR
TRANSPORTER
FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV 389009000197032	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO P.O. BOX 98521 M/SNTS207 LAS VEGAS, NV 89193		4. Generator's Phone 702 295-0174 24 HR EMERGENCY 702-295-6400			
5. Transporter 1 Company Name TRANSPORTATION + REMEDIATION ALL WASTE SERVICES INC.		6. US EPA ID Number CA 0063547996			
7. Transporter 2 Company Name		8. US EPA ID Number			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239		10. US EPA ID Number CA 000646117			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) SS 6/20/97 9; NA 3077, PG III (F001, F002)		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	
		0101 D T	45400	P	
b.					
c.					
d.					
15. Special Handling Instructions and Additional Information BNC-287-97 WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE 800-424-9300 SS 6/20/97 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023		CD REQUIRED			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.		AETS-MA			
Printed/Typed Name SANDRA S. SIMPLICIO		Signature Sandra S. Simplicio		Month Day Year 06 21 97	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name DONALD JENSEN		Signature Donald Jensen		Month Day Year 06 21 97	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name W. Gentry					
Signature W. Gentry		Month Day Year 06 27 97			

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

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GENERATOR FACILITY TRANSPORTER

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV3B7007000		Manifest Document No. 97033		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address: BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO P.O. BOX 98521 H/SNTS207 LAS VEGAS, NV 89193													
4. Generator's Phone 702) 295-0174 Emergency 24 HRS 702-295-6400													
5. Transporter 1 Company Name TRANSPORTATION & REMEDIATION ALL WASTE SERVICES INC.					6. US EPA ID Number CAD065547996								
7. Transporter 2 Company Name CROSS IN CONSTRUCTION					8. US EPA ID Number CAD06100137926								
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239					10. US EPA ID Number CAT000646117								
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity		14. Unit			
a. HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) S 670197 9; NA 3077, PG III (F001, F002)						No. 001 Type DT		39020		P			
b.													
c.													
d. 1006.051720510 PSP52A2													
15. Special Handling Instructions and Additional Information BNC-288-97 WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 SS 6/22/97 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023 CD REQUIRED AETS-MA													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name SANDRA S. SIMPLICIO				Signature <i>Sandra S. Simplicio</i>				Month 06		Day 26		Year 97	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Chris Carr				Signature <i>Chris Carr</i>				Month 06		Day 26		Year 97	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name STEVE BARRETT													
Signature <i>Steve Barrett</i>								Month 06		Day 27		Year 97	

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-952-7550

Environmental Protection Agency
Form designed for use on file (12-pitch) typewriter.
OMB No. 2050-0039 (Expires 9-30-96)

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV 3890090101197034		2. Page 1 of 1	
Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SNTS207 LAS VEGAS, NV 89193 Generator's Phone (702) 295-0174 24 HZ EMERGENCY-702-295-6400		5. Transporter 1 Company Name TRANS-STATE REMEDIATION		6. US EPA ID Number CA D 0 6 3 5 4 7 9 9 1 6	
7. Transporter 2 Company Name		8. US EPA ID Number		9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTERMAN CITY, CA 93239	
10. US EPA ID Number		11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) HAZARDOUS WASTE SOLID, N.O.S.; (UNIDENTIFIED SOLID) 52 4249 9; NA 3077, PG III (F001, F002)		12. Containers No. Type Quantity 01011 D T 387010 P	
13. Total 14. Unit 15. Wt/Vol		16. Handling Codes for Waste Listed Below		17. Special Handling Instructions and Additional Information 600-289-97 WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-9200 5642217-702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023 AETS-NA	
18. Generator's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.		19. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.		20. Facility Owner or Operator Signature Signature Printed/Typed Name Month Day Year	

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV 3890090101197034		2. Page 1 of 1	
Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE P.O. BOX 98521 M/SNTS207 LAS VEGAS, NV 89193 Generator's Phone (702) 295-0174 24 HZ EMERGENCY-702-295-6400		5. Transporter 1 Company Name TRANS-STATE REMEDIATION		6. US EPA ID Number CA D 0 6 3 5 4 7 9 9 1 6	
7. Transporter 2 Company Name		8. US EPA ID Number		9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTERMAN CITY, CA 93239	
10. US EPA ID Number		11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) HAZARDOUS WASTE SOLID, N.O.S.; (UNIDENTIFIED SOLID) 52 4249 9; NA 3077, PG III (F001, F002)		12. Containers No. Type Quantity 01011 D T 387010 P	
13. Total 14. Unit 15. Wt/Vol		16. Handling Codes for Waste Listed Below		17. Special Handling Instructions and Additional Information 600-289-97 WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE: 800-424-9200 5642217-702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023 AETS-NA	
18. Generator's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.		19. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.		20. Facility Owner or Operator Signature Signature Printed/Typed Name Month Day Year	

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

RECEIVED

ACTIVITY

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NY5B7DD7DD01** Manifest Document No. **97035** 2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO
P.O. BOX 98521 N/SNTS207
LAS VEGAS, NV 89193
 4. Generator's Phone **702) 295-0174 24 EMERGENCY 702-295-6400**

5. Transporter 1 Company Name **TRANSPORTATION AND REMEDIATION** 6. US EPA ID Number
ALLWASTE SERVICES INC. 612797 **CAD063547996**

7. Transporter 2 Company Name 8. US EPA ID Number

9. Designated Facility Name and Site Address 10. US EPA ID Number
CHEMICAL WASTE MANAGEMENT, INC.
35251 OLD SKYLINE ROAD
KETTLEMAN CITY, CA 93239 **CAT000646117**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste Name
	No.	Type			
a. HAZARDOUS WASTE SOLID, N.O.S.; (CONTAMINATED SOIL) 55 430/97 9; NA 3077, PG III (F001, F002)	001	CM	00019	Y	55 430/97
b.					
c.					
d.					

15. Special Handling Instructions and Additional Information **BN-290-97**
WEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT
EMERGENCY 24-HOUR TELEPHONE: 800-424-9300 SS 6/21/97 702-295-6400
PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023
CD REQUIRED
AETS-MA

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name **SANDRA S. SIMPLICIO** Signature **Sandra S. Simplicio** Month **07** Day **01** Year **97**

17. Transporter 1 Acknowledgement of Receipt of Materials
 Printed/Typed Name **Bruce Gilbert** Signature **Bruce Gilbert** Month **07** Day **01** Year **97**

18. Transporter 2 Acknowledgement of Receipt of Materials
 Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
 Printed/Typed Name **STEVE BARRITT** Signature **[Signature]** Month **07** Day **02** Year **97**

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
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IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's US EPA ID No. NV3B900900001		Manifest Document No. 970316		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.													
3. Generator's Name and Mailing Address BECHTEL NEVADA FOR U.S. DOE ATT. SANDY SIMPLICIO P.O. BOX 98521 M/SNT8207 LAS VEGAS, NV 89193						968718															
4. Generator's Phone (702) 295-0174 14 HP EMERGENCY 702-295-6400																					
5. Transporter 1 Company Name TRANSPORTATION - REMEDIATION ALLWASTE SERVICES INC. SS6717						6. US EPA ID Number CA0063547996															
7. Transporter 2 Company Name						8. US EPA ID Number															
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 35251 OLD SKYLINE ROAD KETTLEMAN CITY, CA 93239						10. US EPA ID Number CAT000646117															
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. HAZARDOUS WASTE SOLID, N.O.S., (CONTAMINATED SOIL) SS6717 9; NA 3077, PG III (F001, F002)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		15. Waste Number State EPA/Other									
						001 CM		00019		Y		611 F001									
												State EPA/Other									
												State EPA/Other									
												State EPA/Other									
Additional Descriptions for Materials Listed Above (A) DD1502 ERB 171						Handling Codes for Wastes Listed Above 43															
15. Special Handling Instructions and Additional Information BNC-291-97 NEAR PROPER SAFETY EQUIPMENT WHEN HANDLING PROJECT EMERGENCY 24-HOUR TELEPHONE 800-424-9300 SS6717 702-295-6400 PICK UP LOCATION: NEVADA TEST SITE, US HWY 95, MERCURY, NV 89023 CD REQUIRED AETS-MA																					
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Printed/Typed Name SANDRA S. SIMPLICIO						Signature Sandia S. Simplicio				Month Day Year 07 01 97											
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name DARRELL BRANSHALL						Signature Darrell Branshall				Month Day Year 07 01 97											
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name						Signature				Month Day Year											
19. Discrepancy Indication Space																					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name STEVE BARRETT														Signature				Month Day Year 07 02 97			

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

**UNIFORM HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas
is not required by Federal law.

NIV1316191010191011917101318

of 1

3. Generator's Name and Mailing Address
Bechtel Nevada for U.S. DOE
P. O. Box 98521 M/S NTS207
Las Vegas, NV 89193

ATTN: Sandy Simplicio
24 Hr. Emergency Phone
(702) 29506400

4. Generator's Phone (702) 295-4838

A. State Manifest Document Number

95540663

B. State Generator's ID

5. Transporter 1 Company Name
Allwaste Transportation
and Remediation

6. US EPA ID Number

C1A101061315147191916

C. State Transporter's ID

D. Transporter's Phone

800-521-0530

E. State Transporter's ID

F. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
Chemical Waste Management, Inc.
35251 Old Skyline Road
Kettleman City, CA 93239

10. US EPA ID Number

C1A1T101010614611117

G. State Facility's ID

H. Facility's Phone

(209) 386-9711

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total
Quantity

14. Unit
Wt/Vol

15. Waste Number

a. Hazardous Waste Solid, n.o.s., 9, NA3077,
PG III F001, F002

0101

C14

424.97

00019

Y

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

11. Additional Descriptions for Materials Listed Above

11A. DD1502, Emergency Response Guide Number 171
BNC-293-97

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Wear proper safety equipment when handling project.
Emergency 24 Hr. Phone number (702) 295-6400.

CD REQUIRED

Pick-up Location: Nevada Test Site, US HWY 95, Mercury, NV 89023

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

CRAIG A. STOWELL

Signature

Craig A. Stowell

Month

01

Day

12

Year

1917

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Bruce Gilbert

Signature

Bruce Gilbert

Month

01

Day

12

Year

1917

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month

Day

Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month

Day

Year

Year

DO NOT WRITE BELOW THIS LINE.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV 319191019101011-91710319	Manifest Document No. 319	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Bechtel Nevada for U.S. DOE P. O. Box 98521 M/S NTS207 Las Vegas, NV 89193 4. Generator's Phone (702) 295-4838		ATTN: Sandy Simplicio 24 Hr. Emergency Phone (702) 295-6400		A. State Manifest Document Number 95540666	
5. Transporter 1 Company Name Allwaste Transportation and Remediation		6. US EPA ID Number CIAID016131514171916		B. State Generator's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID	
9. Designated Facility Name and Site Address Chemical Waste Management, Inc. 35251 Old Skyline Road Kettleman City, CA 93239		10. US EPA ID Number CIAIT0101016141611117		D. Transporter's Phone	
				E. State Transporter's ID	
				F. Transporter's Phone	
				G. State Facility's ID	
				H. Facility's Phone (209) 386-9711	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
a. RQ Hazardous Waste Solid, n.o.s., 9, NA3077, PG III (Methylene Chloride) F001, F002		0101 C M	9-2472	Y	95540666-001
b.					EPA/Other
c.					State
d.					EPA/Other
16. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above			
11a. CD5987, Emergency Guide Number 171 BNC-294-97					
15. Special Handling Instructions and Additional Information Wear proper safety equipment when handling project. Emergency 24 Hr. phone number (702) 295-6400 Pick-up location: Nevada Test Site, US HWY 95, Mercury, NV 89023		CD REQUIRED			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.					
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name CRAIG A. STOWELL		Signature <i>Craig A. Stowell</i>		Month Day Year 09 24 91	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>Darrel Bramhall</i>		Month Day Year 09 24 91	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Month Day Year	

DO NOT WRITE BELOW THIS LINE.

APPENDIX B

DATA SUMMARY SHEETS

Appendix B provides all of the laboratory summary data sheets, this information is not provided within Volume I of the report. The laboratory data summary sheets have not been included in Volume I. This information is provided in Volume II of the Closure Report for CAU 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site and is available upon request.

Appendix B is composed of all of the laboratory data summary sheets for the Area 6 SECPs closure activities. Appendix B has been organized so that all of the analytical data for the closure of each component of CAU 93 are grouped together. At the start of each section a summary table has been provided. If specific QA/QC information is required, the complete analytical data packages are available upon request through the DOE/NV Environmental Restoration Division.

APPENDIX C

CLOSURE CERTIFICATION

CERTIFICATION OF CLOSURE BY THE DEPARTMENT OF ENERGY/NEVADA OPERATIONS OFFICE

I certify under penalty of law that the Steam Cleaning Effluent Ponds, Corrective Action Unit 93 located in Area 6 at the Nevada Test Site have been closed in accordance with the approved Closure Plan for CAU No. 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site, dated April 1997 and the Permit for a Hazardous Waste Management Facility Number NEV HW009, United States Department of Energy, Nevada Operations Office, Nevada Test Site, I.D. Number NV3890090001, dated March 27, 1995. All measures required in the Closure Plan and the applicable Resource Conservation and Recovery Act 42 U.S.C. 6901-6991i and Title 40 CFR§ 260-268 have been fully implemented and that, to the best of my knowledge, no violations exist.

f. Kenneth W. Power

Gerald W. Johnson, Manager

Department of Energy/Nevada Operations Office

11/19/97

Date

Department of Energy/Nevada Operations Office
Post Office Box 98518
Las Vegas, Nevada 89193-8518

CERTIFICATION OF CLOSURE BY THE INDEPENDENT PROFESSIONAL ENGINEER

I, Dean D. Nelson, a registered Professional Engineer, hereby state that I have reviewed the Closure Plan for the closure of the Steam Cleaning Effluent Ponds, Corrective Action Unit 93 located in Area 6 of the Nevada Test Site and am familiar with the rules and regulations of Title 40 CRF §265.228 pertaining to the closure of such a facility. The closure of this facility has been performed in compliance, with the approved Closure Plan for CAU no. 93: Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site, dated April 1997 accept as noted in section 2.2 of this report, and the Permit for a Hazardous Waste Management Facility Number NEV HW009, United States Department of Energy, Nevada Operations Office, Nevada Test Site, I.D. Number NV3890090001, dated March 27, 1995.

PEER Consultants, P.C.
2439 Losee Road, Suite 1C
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