Nevada
Environmental
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Project

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Streamlined Approach for
Environmental Restoration
Closure Report for
Corrective Action Unit 454:
Historical Underground Storage
Tank Release Sites,
Nevada Test Site, Nevada

Controlled Copy No.:

Revision: 0

MASTER

April 1998

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Nevada Operations Office

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**STREAMLINED APPROACH FOR ENVIRONMENTAL
RESTORATION CLOSURE REPORT FOR
CORRECTIVE ACTION UNIT 454
HISTORICAL UNDERGROUND STORAGE
TANK RELEASE SITES
NEVADA TEST SITE, NEVADA**

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

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**Prepared by
Bechtel Nevada
Environmental Restoration**

April 1998

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HISTORICAL UNDERGROUND STORAGE
TANK RELEASE SITES,
NEVADA TEST SITE, NEVADA**

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
CAS	Corrective Action Site
CAU	Corrective Action Unit
cm	centimeter
COC	Constituent(s) of concern
CR	Closure Report
DOE/NV	U.S. Department of Energy, Nevada Operations Office
EPA	U.S. Environmental Protection Agency
FFACO	Federal Facility Agreement and Consent Order
ft	feet
gal	gallons
in	inches
km	kilometer
L	liters
m	meters
m ³	cubic meters
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mi	mile
NAC	Nevada Administrative Code

ACRONYMS AND ABBREVIATIONS (continued)

NDEM	Nevada Division of Environmental Management
NDEP	Nevada Division of Environmental Protection
NEL	Nevada Environmental Laboratories
NTS	Nevada Test Site
OVM	Organic Vapor Monitor
PCB	Polychlorinated Biphenyl
ppm	parts per million
SAFER	Streamlined Approach for Environmental Restoration
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbon
UST	Underground Storage Tank
VOC	Volatile Organic Compound
yd ³	cubic yards

EXECUTIVE SUMMARY

This report addresses the characterization of three historical underground storage tank (UST) petroleum hydrocarbon release sites identified as 12-B-1, 12-B-3, and 12-COMM-1. The sites are located within the Nevada Test Site in Area 12 at "B" Tunnel and a former Communications/Power Maintenance Shop. The sites are listed in the Federal Facility Agreement and Consent Order (FFACO) in Appendix III and are identified as Corrective Action Unit (CAU) 454. Work was completed following the Nevada Division of Environmental Protection (NDEP) approved Streamlined Approach for Environmental Restoration (SAFER) Work Plan for CAUs 452, 454, 456, and 464, Closure of Historical UST Release Sites.

Release Site 12-B-1 was not able to be clean-closed as proposed in the SAFER Plan. However, hydrocarbon impacted soils were excavated down to bedrock. Petroleum hydrocarbon results of samples from the base of the excavation were below 500 milligrams per kilogram. Due to the remoteness of the site, the low hydrocarbon concentrations, the depth to groundwater, and the removal of the soil with the highest hydrocarbon impact, an "A through K" evaluation was prepared to support an Administrative Closure of the site.

Release Site 12-B-3 was evaluated to verify that the identified release was not associated with the UST removed from the site. Analytical results support the assumption that wood or possibly a roof sealant used as part of the bunker construction could have been the source of hydrocarbons detected. An "A through K" evaluation was prepared to support a request for Administrative Closure. An additional consideration to support closure of the site without further action is the presence of underground radiological contamination in the vicinity of the former tank location.

Release Site 12-COMM-1 was not clean closed as proposed in the SAFER Plan. The vertical extent of impacted soils was determined not to extend below a depth of 2.7 m (9 ft) below ground surface (bgs). The lateral extent could not be defined due to the presence of a discontinuous lens of hydrocarbon-impacted soil at a depth of approximately 0.9 m (3 ft) bgs. Hydrocarbon concentrations did not exceed 2,000 mg/kg in soil samples collected. Due to the limited amount of hydrocarbons present, an "A through K" evaluation was completed to support a request for closure of the site.

Based upon site observations and the soil sample analytical results, it is requested that a Notice of Completion, through Administrative Closure, be provided by the NDEP for CAU 454. Upon closure approval, CAU 454 will be promoted from Appendix III to Appendix IV of the FFACO "Closed Corrective Action Units."

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1.0 INTRODUCTION

This report addresses the characterization of three historical underground storage tank (UST) petroleum hydrocarbon release sites identified as 12-B-1, 12-B-3, and 12-COMM-1 (Table 1). The sites are located within the Nevada Test Site (NTS) in Area 12 at "B" Tunnel (12-B-1 and 12-B-3) and at the former Communications/Power Maintenance Shop (12-COMM-1) (Figure 1). The sites are listed in the Federal Facility Agreement and Consent Order (FFACO) in Appendix III and are identified as Corrective Action Unit (CAU) 454 (FFACO, 1996). Each tank and associated hydrocarbon release has been assigned a Corrective Action Site (CAS) number. The USTs identified in this report were closed by removal in 1995 and 1996 by the U.S. Department of Energy, Nevada Operations Office (DOE/NV). Subsequent to tank closure, the Nevada Division of Environmental Protection (NDEP) was provided an amended U.S. Environmental Protection Agency (EPA) Form 7530-1 (Notification for USTs), in addition to tank closure information and analytical data. Based on the closure information provided, the NDEP concurred with the tank closures for these sites. Tank closure information is provided in Appendix A.

TABLE 1 - CAU 454 HYDROCARBON RELEASE SITES

UST ID ¹	UST CAS NUMBER ²	RELEASE CAS NUMBER ³	NDEM NUMBER ⁴	LOCATION	DATE REMOVED/ CLOSED ⁵
12-B-1	12-02-07	12-25-08	H950524F	Area 12 "B" Tunnel	March 1, 1995
12-B-3	12-02-06	12-25-09	960722-02	Area 12 "B" Tunnel	May 6, 1996
12-COMM-1	12-02-09	12-25-10	H950919A	Area 12 Communications/ Power Maintenance Building	August 7, 1995

Notes:

¹ Underground Storage Tank Identification Number.

² Corrective Action Site Number assigned to the UST within the FFACO.

³ Corrective Action Site Number assigned to the hydrocarbon release within the FFACO.

⁴ Nevada Division of Environmental Management Number assigned at time of release identification.

⁵ Date which tank was closed by removal.

1.1 PURPOSE

The field work was conducted in an effort to complete clean closures at sites 12-B-1 and 12-COMM-1 and to collect samples to support a request for an Administrative Closure at site 12-B-3. Hydrocarbon releases were identified at each of the three sites based on laboratory analytical data collected at the time of tank closure. Hydrocarbon concentrations at these sites exceeded the Nevada Administrative Code (NAC) Action Level of 100 milligrams per kilogram (mg/kg) (NAC 459.9973, 1996). NDEP requires assessment and corrective actions for soil with a petroleum hydrocarbon concentration exceeding the NAC Action Level. Each release was assigned a Nevada Division of Emergency Management (NDEM) number at the time of spill notification.

The purpose of this Closure Report (CR) is to provide documentation of the activities completed at three historical hydrocarbon release sites. The work was completed as outlined in the Streamlined Approach for Environmental Restoration (SAFER) Work Plan for CAUs 452, 454, 456, and 464, Closure of Historical UST Release Sites (US DOE, 1997). The documentation provided in this report supports a request to NDEP for closure of CAU 454.

1.2 SCOPE

The scope of work was to excavate the petroleum hydrocarbon-impacted soil at Sites 12-B-1 and 12-B-3. Excavation at these sites was completed using backhoe equipment. The scope of work at release site 12-B-3 was to evaluate the site conditions by collecting additional shallow subsurface soil samples without excavation or drilling. The presence of hydrocarbons at this site was suspected to be from a source other than the UST.

1.3 CLOSURE REPORT CONTENTS

This CR has been developed to support the closure of CASs 12-25-08, 12-25-09, and 12-25-10. The format of the report is as follows:

- Section 1.0 - Introduction, Purpose, and Scope.
- Section 2.0 - Closure Activities.
- Section 3.0 - Waste Disposition.
- Section 4.0 - Closure Results (including the "A through K" Evaluation).
- Section 5.0 - Conclusions.

- Section 6.0 - References.
- Appendix A - UST Closure Information
- Appendix B - Disposal Documentation
- Appendix C - Laboratory Analytical Data.

The SAFER Plan was implemented using information and guidance provided from the following documents:

- SAFER Work Plan for CAUs 452, 454, 456, and 464 Closure of Historical UST Release Sites, Nevada Test Site (US DOE, 1997).
- Site-Specific Health and Safety Plan for SAFER Closure of Historical UST Release Sites - Areas 2, 9, 12, 23, and 25 (BN, 1997a).
- Field Management Plan: CAU 452, 454, 456, and 464 Closure of Historical UST Release Sites, Nevada Test Site (BN, 1997b).
- Nevada Environmental Restoration Project, Project Management Plan (US DOE, 1994).
- Nevada Environmental Restoration Project, Health and Safety Plan (US DOE, 1996a).
- Nevada Environmental Restoration Project, Industrial Sites, Quality Assurance Project Plan, Nevada Test Site (US DOE, 1996b).

2.0 CLOSURE ACTIVITIES

2.1 DESCRIPTION OF CORRECTIVE ACTION ACTIVITIES

2.1.1 Sampling Protocol

Sample equipment (stainless steel scoops) were decontaminated using Alconox cleaning solution and rinsed with distilled water. Soil samples were placed into clean 250-milliliter (ml) glass laboratory sample jars. All samples were labeled with the sample identification, date and time sampled, sampler's initials, and analysis to be performed. Samples were placed in an ice chest and cooled to approximately four degrees Centigrade (39.2 degrees Fahrenheit). Samples were kept in the custody of the project geologist or in a secured location until delivered to Nevada Environmental Laboratories (NEL) located in Las Vegas, Nevada.

Select samples were screened in the field using a Dexsil PetroFLAG™ hydrocarbon analyzer kit. PetroFLAG™ analyzes for the presence of hydrocarbons to a concentration of greater than (>) 2,000 parts per million (ppm). Samples were also screened using an Organic Vapor Monitoring (OVM), model 580B, calibrated to 100 ppm Isobutylene at the beginning of each field day.

2.1.2 Description and Background: Release Site 12-B-1

UST 12-B-1 was located northeast of the main portal entrance to "B" Tunnel. The tank had an approximate capacity of 1,900 liters (L) (500 gallons [gal]) and contained approximately 1,500 L (400 gal) of diesel fuel at the time of identification. The tank was positioned on a hillside slope and was partially exposed at the surface. The tank was removed on March 1, 1995. Soil samples collected 0.3 meters (m) (1 foot [ft]) below the east and west tank bottom had total petroleum hydrocarbon (TPH) as diesel concentrations of 120 mg/kg and 570 mg/kg, respectively. Investigation of the hydrocarbon release (NDEM No. H950524F, CAS No. 12-25-08) is addressed in this report.

2.1.2.1 Excavation Activities: Release Site 12-B-1

The former tank area was excavated using a backhoe on November 18, 1997 as outlined in the SAFER Work Plan (US DOE, 1997). Excavated soils were placed into 208-L (55-gal) metal drums. Since the release site is located on a hillside, the depth of excavation varied from 0.3 to 0.9 m (1 to 3 ft) below surface grade. Soils were removed until a tuffaceous sedimentary bedrock was exposed. Since the backhoe equipment could not excavate additional material from the release area and the hydrocarbons would not be expected to have penetrated significantly into the bedrock, samples were collected from the east and west end of the excavation bottom.

Samples were collected using a geologic pick hammer and a stainless steel scoop and analyzed for TPH as diesel using EPA Method 8015, Modified. A site map is provided as Figure 2. Field observation and analytical results are discussed and summarized in Section 4.0, Closure Results.

2.1.3 Description and Background: Release Site 12-B-3

UST 12-B-3 was located approximately 0.8 kilometers (km) (½ mile [mi]) west of the main portal entrance to "B" Tunnel. The tank was located on top of an abandoned bunker facility constructed into the mountainside. The tank had an approximate capacity of 1,900 L (500 gal) and was empty at the time of identification and was removed on May 6, 1996. One sample collected 0.3 m (1 ft) below the tank bottom had a TPH concentration of 310 mg/kg as waste oil.

Upon exposing the tank, it was discovered that it was constructed of galvanized steel and was most likely used for water storage. In addition, subsequent to segmentation for cleaning, the tank interior was observed to be clean and had no evidence of being used for storage of fuel or oil. Based on these observations, additional sampling was warranted at this site to evaluate the source of the hydrocarbons detected below the tank bottom. Investigation of the hydrocarbon release (NDEM No. 960722-02, CAS No. 12-25-09) is addressed in this report.

2.1.3.1 Sample Activities: Release Site 12-B-3

Samples were collected from the site on November 12, 1997, to investigate the potential that the petroleum hydrocarbons identified were a result of other site activities and not a tank release (US DOE, 1997). Five soil samples were collected from within and adjacent to the tank excavation. One wood sample was also collected from the bottom of the excavation which was part of the bunker structure underlying the tank site. Samples were collected using hand auger equipment and stainless steel scoops and analyzed for TPH as oil. A site map is provided as Figure 3. Field observation and analytical results are discussed and summarized in Section 4.0, Closure Results.

2.1.4 Description and Background: Release Site 12-COMM-1

UST 12-COMM-1 was located north of a former Communications/Power Maintenance building. The tank was approximately 50 percent exposed at the time of identification. It had an approximate capacity of 1,900 L (500 gal) and was used to store waste oil. The tank contents were determined to be hazardous due to the presence of lead (19 milligrams per liter [mg/L]), barium (4,400 mg/L) and silver (8.9 mg/L) at concentrations above the Toxicity Characteristic Leaching Procedure (TCLP) Action Levels. Soil samples collected 0.3 m (1 ft) below the north and south tank bottom contained petroleum hydrocarbons at concentrations of 1,300 mg/kg and 1,600 mg/kg, respectively.

FIGURE 2
RELEASE SITE 12-B-1

TCLP metals were not detected above regulatory limits in soil samples collected below the tank. The remedial excavation of the hydrocarbon release (NDEM No. H950919A, CAS No. 12-25-10) is addressed in this report.

2.1.4.1 Excavation Activities: Release Site 12-COMM-1

The former tank area was excavated using a backhoe on November 18, 19, and December 9, 1997 as outlined in the SAFER Work Plan (US DOE, 1997). Additional excavation was required due to identification of a lenticular layer of hydrocarbon impacted soil at a depth of approximately 0.9 m (3 ft) below the adjacent road grade. The impacted soil within the lens had different characteristics than the surficial impacted soils (lighter gray color, no odor, root bound, brittle, highly weathered). Aerial photographs taken in 1973 were reviewed and, although inconclusive due to the photographs high altitude, it appears that another larger tank once existed at the site. The lens of impacted soil is suspected to be a release from the tank formally located at the site where the 12-COMM-1 tank was subsequently located.

The lens was discontinuous and first appeared to have been a buried layer of organic material but was found to contain elevated concentrations of oil hydrocarbons. Samples were collected from each sidewall and the north and south bottom to delineate the extent of soil impact. Samples were analyzed for TPH as diesel and/or oil, TCLP metals, and polychlorinated biphenyls (PCBs). The additional analysis was completed since an older spill may have had metal or PCBs associated with the oil. Samples were collected using the backhoe bucket and stainless steel scoops. A site map is provided as Figure 4. Field observations and analytical results are discussed and summarized in Section 4.0, Closure Results.

2.2 DEVIATIONS FROM THE SAFER WORK PLAN

2.2.1 12-B-1 Work Plan Deviations

The only deviation from the work plan completed at the 12-B-1 site was that soils were placed into 208-L (55-gal) drums instead of a soil pile. By placing the soil into drums, the soil was able to be moved using a flat bed truck instead of a large end dump which would have had difficulty reaching the site due to limited accessibility. Samples collected from the site were not delivered to the Bechtel Nevada Analytical Services Section as stated in the SAFER Work Plan. The samples were retained by the project geologist and delivered to NEL in order to expedite analysis.

FIGURE 4
RELEASE SITE 12-COMM-1

2.2.2 12-B-3 Work Plan Deviations

Sample locations for this site varied from those stated in the SAFER Work Plan. The same number of samples were collected from in the excavation and site vicinity, however, locations varied to a limited extent due to interference from rocks or vegetation. Samples collected from this site were also submitted to NEL for analysis.

2.2.3 12-COMM-1 Work Plan Deviations

Additional excavation was completed to delineate the extent of impacted soils. Additional excavation work resulted in the collection of more samples. In addition, parameters other than TPH were analyzed since it was suspected that the impacted area identified was from a different source than the 12-COMM-1 tank. Samples collected for TPH analysis were submitted to NEL. Other parameters were analyzed by Quanterra Environmental Services.

2.3 CORRECTIVE ACTION SCHEDULE AS COMPLETED

Excavation and sample collections were completed without significant delays due to inclement weather, equipment breakdown, or delays in laboratory analysis. Excavation, sample collection and waste disposal was completed for the three sites between November 12, 1997 and December 9, 1997. Figure 5 provides the project schedule for the completed field activities.

2.4 SITE PLAN

Site plans have been prepared depicting the site locations (Figures 2 through 4). Since no modifications to subsurface utilities or facilities were made, engineering "as-builts" were not required. However, a copy of each site plan will be submitted to the files at the Archives and Records Center located in Mercury, Nevada.

Activity ID	Activity Description	Actual Start	Actual Finish	FY98																														
				NOV															DEC															
				10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10
1	Collect soil samples from 12-B-3 site	12NOV97	12NOV97			■																												
2	Excavate & sample soils at 12-COMM-1 site	17NOV97	17NOV97									■																						
3	Excavate & sample soils at 12-B-1 site	18NOV97	18NOV97										■																					
4	Submit soil samples to NEL	18NOV97	18NOV97										■																					
5	Excavate additional soils at 12-COMM-1 site	09DEC97	09DEC97																														■	
6	Backfill at 12-COMM-1 site	09DEC97	09DEC97																														■	
7	Dispose of soil at U10c for CAU 454 sites	09DEC97	09DEC97																														■	

Project Start 03NOV97
Project Finish 09DEC97
Data Date 10DEC97
Run Date 26MAR98

■ Early Bar
■ Progress Bar
■ Critical Activity

F454

Sheet 1 of 1

Figure 5
CAU 454 Site Characterization
Activity Schedule

3.0 WASTE DISPOSITION

Waste generated from the excavation activities consisted of petroleum hydrocarbon-impacted soils and a small volume of solid waste from sample equipment decontamination. Soils from the 12-B-1 site were managed by placing the excavated soils into 208-L (55-gal) metal drums. Soils from the 12-COMM-1 site were placed on and covered with plastic. Each of the excavation sites was assigned a Waste Tracking Number. The tracking number was applied to the outside of each drum generated at the 12-B-1 site and on the plastic soil pile cover at the 12-COMM-1 site.

Soil was disposed at the U10c Landfill on December 9, 1997. Disposal was based on analytical data collected during the tank closure and laboratory analysis from soil samples taken during this investigation. A radiological "green tag," bill of lading, and weight ticket accompanied each load to the landfill. Waste disposal documentation is provided in Appendix B.

Decontamination rinseate consisted of a small quantity of water generated from cleaning the stainless steel sample scoops. The water either evaporated in the stainless steel bowl or was absorbed using Kimwipe tissues.

4.0 CLOSURE RESULTS

4.1 RELEASE SITE 12-B-1 (CAS 12-25-08)

Soils excavated for the site consisted of silty sand with gravel and cobble. The bedrock exposed at the base of the excavation consisted of tuffaceous bedrock. Slight diesel odors were noted during the excavation activities and PetroFLAG™ results indicated the presence of hydrocarbons in the soil. A background sample was screened using PetroFLAG™ and had a reported concentration of 577 ppm. The maximum OVM reading from random grab samples collected at the site was 4.9 ppm. OVM reading of the soil samples collected for analysis were each 0.0 ppm. Excavation was discontinued since bedrock was encountered. In addition, soils were not removed down slope to the north due to the gradient of the mountainside and soils were not removed up slope due to the presence of a pine tree and shallow bedrock.

Samples collected from the bedrock surface of the excavation exceeded the NAC Action Level of 100 mg/kg and the result of the west bottom was slightly below the Action Level. Soil sample and PetroFLAG™ results are summarized on Table 2. Analytical data packages are provided in Appendix C.

TABLE 2 - 12-B-1 SUMMARY OF SOIL ANALYTICAL RESULTS

SAMPLE ID	DATE COLLECTED	TPH - DIESEL (mg/kg)	PETROFLAG™ (ppm)
12-B-1/East	November 18, 1997	490	>2000
12-B-1/West	November 18, 1997	92	262

Notes:

TPH - Analyzed using EPA Method 8015M as diesel.

mg/kg - milligrams per kilogram

ppm - parts per million

Based on the excavation exposing bedrock, the low hydrocarbon concentrations detected, and the remoteness of the site, an "A through K" evaluation supporting an Administrative Closure of the site has been completed.

4.1.1 A Through K Evaluation: UST Release Site 12-B-1

The following is the NAC "A through K" evaluation which supports the request for an Administrative Closure of CAS 12-25-08 (NAC, 1996).

State regulatory requirements - The state regulatory requirement affecting the closure of CAS 12-25-08 is the requirement of the NAC 459.9973, Action by Division When Excessive Petroleum Is Present in Soil, referred to as "A through K."

Depth of groundwater (A) - Depth to groundwater at the site is estimated to be at 518 m (1,700 ft) bgs. The estimated depth is based on the regional general potentiometric surface map provided in the DOE Environmental Impact Statement (US DOE, 1996c).

Distance to irrigation or drinking water wells (B) - The nearest drinking water supply is from Well 8 located approximately 8.5 km (5.3 mi) from the site. The well obtains water from the volcanic tuff aquifer. The static water level in Water Well 8 in 1993 was measured at 327 m (1,073 ft) bgs (US DOE, 1996c).

Type of soil (C) - The site is on Rainier Mesa at an approximate elevation of 1,890 m (6,200 ft) above mean sea level. Soil cover at the site is limited to a maximum of approximately 0.9 m (3 ft). Soils encountered during the remedial excavation consisted of silty sands with clasts of tuffaceous sedimentary rock.

Annual precipitation (D) - Annual rainfall in the site vicinity over a three-year period (March, 1960 to August, 1964) is tabulated in the report, Daily, Seasonal, and Annual Precipitation At The Nevada Test Site, Nevada. The data was collected from station "Area 12 Mesa S" and had a recorded average rainfall of 17.5 cm (6.89 in) for the time period measured (DRI, 1986).

Type of regulated substance released (E) - The tank formally located at the site was used to store diesel fuel. TPH as diesel is the identified constituent of concern (COC). Diesel was detected in samples collected below the east and west bottom of the tank subsequent to removal at concentrations of 120 and 570 mg/kg, respectively. The concentrations detected during the remedial closure activities from the east and west bottom were 490 and 92 mg/kg, respectively. Although the hydrocarbon concentrations in excess of the NAC Action Level were identified at the site, further excavation was not completed since bedrock was encountered.

Extent of contamination (F) - The vertical extent of contamination was not confirmed since the excavation removed soils down to bedrock. However, due to the site lithology and location, the extent appears to be limited. An approximate 1.2-m (4-ft) wide excavation was completed in the release area and removed 2.3 cubic meters (m³) (3 cubic yards [yd³]) of impacted soils. Additional soils were not removed down slope to the north due to the gradient of the mountainside and additional soils were not removed up slope due to the presence of a pine tree and shallow bedrock.

Present and potential land use (G) - Currently "B" Tunnel is not in use and entrance to the area is restricted by a locked security gate. The tunnel potentially has use for military or for training exercises. However, due to the age of the tunnel and availability of existing facilities, it is unlikely that any long-term use of the area will occur.

Preferred routes of migration/exposure pathways of concern (H) - Due to the shallow depth of bedrock, the preferred route of migration would have been vertically to bedrock then down gradient following the bedrock/soil contact. However, based on the concentrations detected and site observations, it does not appear that large volumes were released to the extent that significant migration occurred. In addition, due to the depth of groundwater, low amount of annual precipitation, and the low TPH concentrations, it is unlikely that hydrocarbons would reach groundwater.

The exposure pathway at the site is minimal. The site is within an abandoned tunnel area down slope off of the main access road. Volatile Organic Compounds (VOCs) were not identified as an exposure concern during the previous excavation activities; therefore, inhalation of VOCs is not an expected pathway. Skin exposure is not considered a pathway of concern since hydrocarbon impacted soils were removed from the site down to sedimentary tuffaceous bedrock.

Location of structures or impediments (I) - Structures no longer exist in close vicinity to the site. However, metal and wood debris from a former structure exists at the site. The only impediment is gaining access to the site. A locked security barricade restricts access to the site and in the winter months snow restricts travel to the site. In addition, the road leading to the security gate is blocked off due to safety concerns.

Potential for hazard related to fire, vapor, or explosion (J) - The potential for fire, vapor ignition, or explosion at the site as a result of this release is extremely low. This is supported by the low concentrations of hydrocarbons detected at the time of tank closure and this subsequent investigation. In addition, headspace measurements of samples collected during excavation activities indicate that the volatility of the weathered diesel is very low.

Other factors specific to the site (K) - The following are additional factors specific to the site which should be considered in the evaluation for closure:

- The fuel tank was closed by removal in 1995 eliminating the original source of the subsurface release. The tank contained approximately 1,500 L (400 gal) of diesel at the time of identification, indicating that the tank integrity was good and the product release was likely due to past overfilling.
- Approximately 2.2 m³ (3 yd³) of impacted soil was removed from the site reducing the volume of impacted soils and those soils with the highest hydrocarbon concentrations. Impacted soils were removed down to bedrock, significantly limiting any further migration potential.
- The site is located within the secured boundaries of the NTS and access is limited due to a locked security gate and, in the winter months, snow pack. The likelihood that the site would be used for future private use is very low due to its hillside location and lack of structures to accommodate personnel.

- No other COCs were identified at this release site and the concentrations of the petroleum hydrocarbons (diesel) detected were low.

4.2 RELEASE SITE 12-B-3 (CAS 12-25-09)

Soils sampled for the site investigation consisted of silty sand with rock and gravel. Wood and asphalt debris was also noted in the excavation sidewalls. Samples were collected from various locations in the vicinity of the excavation. The sample locations and the analytical results are summarized in Table 3. Analytical data packages are provided in Appendix C.

TABLE 3 - 12-B-3 SUMMARY OF SOIL ANALYTICAL RESULTS

SAMPLE ID	DATE COLLECTED	SAMPLE LOCATION	TPH - OIL (mg/kg)
12-B-3/10N	November 12, 1997	3 m (10 ft) north of the excavation center	<50
12-B-3/15N	November 12, 1997	4.6 m (15 ft) north of the excavation center	<50
12-B-3/10S	November 12, 1997	3 m (10 ft) south of the excavation center	<50
12-B-3/5W	November 12, 1997	1.5 m (5 ft) west of the excavation center	<50
12-B-3/C	November 12, 1997	Excavation bottom - soil	120
12-B-3-Wood	November 12, 1997	Excavation bottom - wood	160

Notes:

TPH - Total petroleum hydrocarbons as oil analyzed using EPA Method 8015, Modified.

Soil samples north, south and west of the excavation were collected approximately 0.3 m (1 ft) bgs. Hydrocarbon odors or soil staining were not noted during the sampling activities. OVM headspace readings were 0.0 ppm with the exception of Sample 12-B-3/5W which had a reading of 16.3 ppm. Samples were not screened using PetroFLAG™ since the scope of the site investigation was to determine the possible presence of hydrocarbons through sample analysis and not to delineate or verify the extent of hydrocarbons in the field.

The sample results did not substantiate that the release identified could be attributed to past dust suppression activities. However, since the tank was located on top of a bunker complex, the

source of the oil hydrocarbons may be from an oil sealant of the structure exterior or from wooden supports identified in the excavation bottom. If the tank had contained or released oil hydrocarbons, additional evidence would have been identified during tank closure (staining, etc). Also, at the time of the tank segmentation, the interior of the tank was clean and appeared unused or possibly used to contain water. Further review of the interior piping of the bunker indicates that the tank was likely associated with a "cold water storage" system used for instrumentation within the bunker. Based on the site observations, detection of hydrocarbon concentrations, and location of the tank site on top of a bunker complex, an "A through K" evaluation to support an Administrative Closure of the site has been completed.

4.2.1 A Through K Evaluation: UST Release Site 12-B-3

The following is the NAC "A through K" evaluation which supports the request for an Administrative Closure of CAS 12-25-09 (NAC, 1996).

State regulatory requirements - The state regulatory requirement affecting the closure of CAS 12-25-09 is the requirement of the NAC 459.9973, Action by Division When Excessive Petroleum Is Present in Soil, referred to as "A through K."

Depth of groundwater (A) - Depth to groundwater at the site is estimated to be at 518 m (1,700 ft) bgs. The estimated depth is based on the regional general potentiometric surface map provided in the DOE Environmental Impact Statement (US DOE, 1996c).

Distance to irrigation or drinking water wells (B) - The nearest drinking water supply is from Well 8 located approximately 8.5 kilometers (km) (5.3 miles [mi]) from the site. The well obtains water from the volcanic tuff aquifer. The static water level in Water Well 8 in 1993 was measured at 327 m (1,073 ft) bgs (US DOE, 1996c).

Type of soil (C) - The site is on Rainier Mesa at an approximate elevation of 1,890 m (6,200 ft) above mean sea level. The soil encountered at the site is fill material placed over a bunker complex consisting of silty sand with rock and gravel.

Annual precipitation (D) - Annual rainfall in the site vicinity over a three-year period (March, 1960 to August, 1964) is tabulated in the report, Daily, Seasonal, and Annual Precipitation At The Nevada Test Site, Nevada. The data was collected from station "Area 12 Mesa S" and had a recorded average rainfall of 17.5 cm (6.89 in) for the time period measured (DRI, 1986).

Type of regulated substance released (E) - The tank formally located at the site is suspected to have stored water or was never used. This is based on the tank construction material (galvanized steel) and the clean exterior and interior appearance. However, soil samples collected below the tank bottom at the time of tank closure (310 mg/kg) and during the SAFER investigation (160 mg/kg) contained oil hydrocarbons in excess of the NAC Action Level of 100 mg/kg.

Extent of contamination (F) - The vertical extent of contamination is restricted to the top of the bunker complex located approximately 0.3 m (1 ft) below the former tank bottom. The lateral extent was not defined since additional excavation was not completed. Excavation equipment cannot be used at the site due to its location on top of the bunker. All previous excavation was completed by hand. In addition, the hydrocarbon source is likely attributed to a sealant associated with the construction of the bunker or a source other than the tank.

Present and potential land use (G) - Currently "B" Tunnel is not in use and entrance to the area is restricted by a locked security gate. The tunnel potentially has use for military or for training exercises. However, due to the age of the tunnel and availability of existing facilities, it is unlikely that any long-term use of the area will occur.

Preferred routes of migration/exposure pathways of concern (H) - The preferred route of migration would be at the contact between the soil cover and the top of the bunker complex. Due to the depth of groundwater, the low amount of annual precipitation, and the low TPH concentrations, it is unlikely that hydrocarbons would migrate much beyond their present location and would not be a potential threat to groundwater. Exposure pathways would be inhalation and absorption of the hydrocarbons into the skin. Due to the remoteness and secured location of the site, the potential that either pathway would be considered a concern is unlikely. Odors were not noted during the past site activities and VOCs were detected in only one headspace sample at 16 ppm; therefore, inhalation of VOCs is not an expected pathway. The low concentrations of TPH detected would also not pose a skin absorption concern.

Location of structures or impediments (I) - The nearest structure is a bunker located directly below the former tank. The structure exterior is primarily constructed of concrete, however, wood and plastic were also identified to be part of the construction material of the bunker. The tank site is only accessible by climbing up a sloped pathway from the location where the "B" Tunnel road ends. Equipment cannot get access to the top of the bunker complex where the tank was located. In addition, access to "B" Tunnel is restricted by a locked security barricade. In addition, the road leading to the security gate is blocked off due to safety concerns. In the winter months snow restricts travel to the site.

Potential for hazard related to fire, vapor, or explosion (J) - The potential for fire, vapor ignition, or explosion at the site is extremely low. This is supported by the low concentrations of hydrocarbons detected in samples at the time of tank closure and the subsequent investigation. In addition, headspace measurements of samples collected during excavation activities indicate that the volatility of hydrocarbons in the soil is very low.

Other factors specific to the site (K) - The following are additional factors specific to the site which should be considered in the evaluation for closure:

- The "B" Tunnel Complex, where the tank site is located, was historically used for nuclear-related tests. Subsurface radiological contamination signs are posted north of the tank site and postings are located at the tunnel portal and other nearby portal access points. The subsurface radiological contamination poses a much greater threat to human health and the environment than the low hydrocarbon concentrations detected at the site.
- The site is located within the secured boundaries of the NTS and access to "B" Tunnel is limited due to a locked security gate and, in the winter months, snow pack. The likelihood that the site would be used for future private use is remote.
- No other COCs were identified at this release site and the concentrations of the petroleum hydrocarbons (oil) detected were low.

4.3 RELEASE SITE 12-COMM-1 (CAS 12-25-10)

Samples were collected from the excavation sidewalls and bottom ends to verify the presence and extent of hydrocarbons. The sidewall samples were collected from within a discontinuous hydrocarbon-impacted lens of soil (Section 2.1.4.1). The lens within the excavation varied in thickness from approximately 15 cm (6 in) to 0.3 m (1 ft). Random grab samples from the discolored soil lens were screened in the field using PetroFLAG™ and were reported to have hydrocarbon concentrations >2,000 ppm. Laboratory analytical results of the sidewall samples collected ranged from 740 to 1,800 mg/kg. Samples collected from a depth of 1.8 m (6 ft) from the north and south excavation bottom had concentrations of 120 and 600 mg/kg, respectively. TCLP metals were not detected and PCBs were near or below detection limits. Sample analytical results are summarized in Table 4. Analytical data packages are provided in Appendix C.

Additional excavation was completed on December 19, 1997, to define the vertical and lateral extent of impacted soils. The excavation depth was extended to 2.7 m (9 ft). The excavation was extended north and south to approximately 7.9 m (26 ft) long and east and west approximately 4.8 m (16 ft) wide. Narrow trenches (0.6 m [2 ft] wide) were then extended approximately 5.5 m (18 ft) to the east and 3 m (10 ft) to the west to define the extent of the lens (Figure 4). The lens thickness thinned with distance (varied from 2.5 cm [1 in] to 10 cm [4 in] thick) and became discontinuous with stringers. It also appeared to follow a hardened gravel zone and was more predominant in the east trench than in the west trench.

Additional excavation was not completed to the north due to the proximity of the "N" Tunnel Road (1.5 m [5 ft]), and the excavation did not continue south due to the elevated pad of the Communications/Power Maintenance Shop. Soil concentrations of samples collected from the north and south bottom were <50 mg/kg. Additional sampling was not completed on the sidewalls or in the trenches since the discolored soil lens was still evident.

TABLE 4 - 12-COMM-1 SUMMARY OF SOIL ANALYTICAL RESULTS

SAMPLE ID	DATE COLLECTED	SAMPLE DEPTH¹ (meters [feet])	TPH² - OIL (mg/kg)	TCLP METALS³ (mg/L)	PCBs⁴ (mg/kg)
12-COMM-1/N. Wall	November 17, 1997	0.9 [3]	1,600	ND	0.03
12-COMM-1/N. Btm	November 17, 1997	1.8 [6]	120	ND	<0.02
12-COMM-1/N9	November 19, 1997	2.7 [9]	<50	NA	NA
12-COMM-1/E. Wall	November 17, 1997	0.9 [3]	740	ND	<0.02
12-COMM-1/W. Wall	November 17, 1997	0.9 [3]	1,200	ND	<0.02
12-COMM-1/S. Wall	November 17, 1997	0.9 [3]	1,800	ND	0.02
12-COMM-1/S. Btm	November 17, 1997	1.8 [6]	600	ND	<0.02
12-COMM-1/S9	November 19, 1997	2.7 [9]	<50	NA	NA

Notes:

¹ Sample Depth - Measured depth below road grade adjacent to excavation.

² TPH - Analyzed using EPA Method 8015M for oil range organics (C12 to 36).

³ TCLP Metals - Toxicity Characteristic Leaching Procedure for metals analyzed using EPA Method 1311.

⁴ PCBs - Polychlorinated biphenyls analyzed using EPA Method 8081.

mg/kg - milligrams per kilogram.

mg/L - milligrams per liter.

ppm - parts per million.

ND - Not detected or detected at a value greater than the instrument detection limit but less than the contract required detection limit.

NA - Not analyzed.

Since the excavation was adjacent to a road located in a water runoff area and being that it a safety hazard for personnel approaching the excavation, it was backfilled using clean soil on December 9, 1997. The vertical extent of hydrocarbons were determined not to extend below a depth of 2.7 m (9 ft). The lateral extent was not defined due to the discontinuous lens identified. Although a clean closure was not accomplished, sufficient data was collected to warrant a risk evaluation using the NAC "A through K" evaluation.

4.3.1 A Through K Evaluation: UST Release Site 12-COMM-1

The following is the NAC "A through K" evaluation which supports the request for an Administrative Closure of CAS 12-25-10 (NAC, 1996).

State regulatory requirements - The state regulatory requirement affecting the closure of CAS 12-25-10 is the requirement of the NAC 459.9973, Action by Division When Excessive Petroleum Is Present in Soil, referred to as "A through K."

Depth of groundwater (A) - Depth to groundwater at the site is estimated to be at 475 m (1,560 ft) bgs. The estimated depth is based on the regional general potentiometric surface map provided in the DOE Environmental Impact Statement (US DOE, 1996c).

Distance to irrigation or drinking water wells (B) - The nearest active drinking water supply is from Well 8 located approximately 8.5 km (5.3 mi) from the site. The well obtains water from the volcanic tuff aquifer. The static water level in Water Well 8 in 1993 was measured at 327 m (1,073 ft) bgs (US DOE, 1996c).

Type of soil (C) - Soils encountered consisted of silty sand with interbedded rock and gravels. Weathered asphalt was also noted on the north sidewall.

Annual precipitation (D) - Annual rainfall in the site vicinity over a three- year period (March 1960 to August 1964) is tabulated in the report, Daily, Seasonal, and Annual Precipitation At The Nevada Test Site, Nevada. The data was collected from station "Area 12 Mesa S" and had a recorded average rainfall of 17.5 cm (6.89 in) for the time period measured (DRI, 1986). The elevation of the monitoring station is reported at 2.3 km (7,640 ft) above mean sea level and the release site elevation is approximately 1.7 km (5,600 ft) above mean sea level; therefore, annual rainfall is expected to be less at the site location.

Type of regulated substance released (E) - The regulated substance at the site is waste oil. No other COCs were identified in samples collected at the time of tank closure or during the SAFER remediation.

Extent of contamination (F) - The vertical extent of contamination does not extend greater than 2.7 m (9 ft) below the road surface grade. The lateral extent was not defined based on the analysis of sidewall samples collected and the presence of a discontinuous hydrocarbon lens observed in the expanded excavation and trenches. The lens varied in thickness from 2.5-cm (1-in) stringers to a 0.3-m (1-ft) thick lens. The lateral extent is assumed to extend below the "N" Tunnel Road and below the elevated building pad of the Communications/Power Maintenance structure.

Present and potential land use (G) - The small area comprising the release site or the former Communications/Power Maintenance Building are not in use. However, the building was used in the recent past to store equipment. The "N" Tunnel Road is frequently used supporting traffic to the active "U" Tunnel Complex. The release area, being bound by the "N" Tunnel Road on the north and a sloped embankment on the south, does not have future land-use value.

Preferred routes of migration/exposure pathways of concern (H) - Migration has appeared to follow a lateral path from the release area. The surficial impacted soils in the immediate location of the former tank have been removed. The only exposure concern remaining at the site is the hydrocarbon lens identified at an approximate depth of 0.9 m (3 ft) below the road elevation grade. Since the impacted soils are below ground and are highly weathered, inhalation or skin contact is not a concern.

Due to the depth of groundwater, low amount of annual precipitation, degradation of the soil lens observed, and the low TPH concentrations, it is unlikely that hydrocarbons would migrate much beyond their present location and would not be a potential threat to groundwater.

Location of structures or impediments (I) - The nearest structure is the former Communications/Power Maintenance Shop located approximately 9 m (30 ft) south of the release site on an elevated building pad. Approximately 1.5 m (5 ft) to the north is the road leading to "N" and "U" Tunnels.

Potential for hazard related to fire, vapor, or explosion (J) - The potential for fire, vapor ignition, or explosion at the site is extremely low. This is supported by the limited zone of soil impact, the low volatility of weathered waste oil, and the low concentrations detected during tank closure and remedial activities.

Other factors specific to the site (K) - The following are additional factors specific to the site which should be considered in the evaluation for closure:

- During the remedial excavation, approximately 23 m³ (30 yd³) of soil was removed. This significantly reduces the amount of impacted soil at the site. The impacted surface soils were removed reducing potential exposure concerns and limiting the down-gradient surface migration of hydrocarbons. In addition, the soil excavated contained the highest hydrocarbon concentrations. The impacted soils remaining in the shallow subsurface are

highly weathered and primarily limited to a discontinuous lenticular soil zone identified at an approximate depth of 0.9 m (3 ft) bgs. To complete clean closure of the site would require excavating into the "N" Tunnel Road and the 1.5-m (5-ft) high sloped embankment which is part of the Communications/Power Maintenance structural pad.

- The site is located within the secured boundaries of the NTS and comprises a small area between the "N" Tunnel Road and the building soil embankment. The likelihood that the site will be used for future private use is remote.
- No other COCs were identified at this release site and the concentrations of the petroleum hydrocarbons (oil) detected were low.

5.0 CONCLUSIONS

Site investigations were completed at three historical UST release sites identified as CAU 454. Investigations were completed through excavation and/or sampling of the sites.

Release Site 12-B-1 (CAS 12-25-08) was not clean-closed since impacted soils could only be excavated to bedrock. The site is on a hillside limiting the equipment ability to remove additional soil up slope or down slope. TPH analytical results of soil samples from the excavation bottom were below 500 mg/kg. The "A through K" evaluation supports the assumption that, due to the remoteness of the site, low hydrocarbon concentrations, depth to groundwater, and removal of the soil with the highest hydrocarbon impact, the site should be closed through an Administrative Closure.

Release Site 12-B-3 (CAS 12-25-09) was evaluated to verify that the release was not associated with the UST removed from the site. Although results did not fully support that the hydrocarbons identified were from past dust suppression activities, the data did support that the wood or possibly a roof sealant used as part of the bunker construction could have been the source of hydrocarbons detected. In addition, after segmenting the tank for cleaning, signs of oil residual were not observed and it appeared that the tank was never used or used only for water storage. Petroleum hydrocarbon concentrations detected during the SAFER investigation were 120 mg/kg in the bottom soil sample and 160 mg/kg in the bottom wood sample. This site poses no threat to the environment or human health due to its location atop a bunker facility in a remote secured location of the NTS ("B" Tunnel). An "A through K" evaluation was completed to support a request for administrative closure. An additional consideration to support closure of the site without further action is the presence of underground radiological contamination in the vicinity of the former tank location.

Release Site 12-COMM-1 (CAS 12-25-10) was not clean-closed. The vertical extent of impacted soils was determined not to extend below a depth of 2.7 m (9 ft) bgs. The lateral extent could not be defined due to the presence of a discontinuous lens of hydrocarbon impacted soil at a depth of approximately 0.9 m (3 ft) bgs. Additional research indicated that the release may be a result of a tank formally located at the site. Additional sample analysis did not indicate the presence of contaminants other than oil hydrocarbons. Completion of additional excavation was limited due to the location of the "N" Tunnel Road and the sloped embankment bordering the site to the north and south, respectively. Trenches were excavated to the east and west of the former tank location. In the trench, the narrow lens became increasingly discontinuous but was still observed at the maximum distance that the trench was excavated (approximately 7.6 m [25 ft] from the former tank location).

An "A through K" evaluation was completed for the 12-COMM-1 Site. The factors strongly supporting Administrative Closure of the site are: soils with the highest hydrocarbon concentrations were removed (approximately 23 m³ [30 yd³]); the remaining impacted soil is

predominantly within a thin lens at 0.9 m (3 ft) bgs; site features restrict additional excavation to the north and south; the hydrocarbon concentrations detected were below 2,000 mg/kg; and the weathered hydrocarbons observed would not migrate to groundwater.

Based upon site observations and the soil sample analytical results, it is requested that a Notice of Completion, by means of an Administrative Closure, be provided by the NDEP for each of the release CASSs. Upon approval of the closure of the release CASSs, CAU 454 will be promoted from Appendix III to Appendix IV of the FFACO "Closed Corrective Action Units."

6.0 REFERENCES

BN, 1997a, Site Specific Health and Safety Plan for SAFER Closure of Historical UST Release Sites - Areas 2, 9, 12, 23, and 25, prepared by Bechtel Nevada Environmental Remediation Projects.

BN, 1997b, Field Management Plan: CAU 452, 454, 456, and 464 Closure of Historical UST Release Sites, Nevada Test Site, prepared by Bechtel Nevada Environmental Remediation Projects.

DRI, 1986, Daily, Seasonal, and Annual precipitation at the Nevada Test Site, Nevada, Desert Research Institute Water Resources Center, Las Vegas, Nevada, September 1986.

FFACO, 1996, Federal Facility Agreement and Consent Order agreed to by the State of Nevada, The US Department of Energy, and the US Department of Defense.

NAC 459.9973, 1996, Nevada Administrative Code, Chapter 459, Presence of Excessive Petroleum in Soil: Evaluation; Assessment of Risk; Corrective Action. Carson City, Nevada: Nevada Division of Environmental Protection.

US DOE, 1994, Nevada Environmental Restoration Project, Project Management Plan, Rev.0, Las Vegas, Nevada.

US DOE, 1996a, Nevada Environmental Restoration Project, Health and Safety Plan, Rev.2, Las Vegas, Nevada.

US DOE, 1996b, Nevada Environmental Restoration Project, Industrial Sites, Quality Assurance Project Plan, Nevada Test Site, Nevada, Rev.1, DOE/NV-372, Las Vegas, Nevada.

US DOE, 1996c, Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada, Volume 1, Chapters 1-9, United States Department of Energy, Nevada Operations Office, Las Vegas Nevada, August 1996.

US DOE, 1997, SAFER Work Plan for CAUs 452, 454, 456, and 464 Closure of Historical UST Release Sites, Nevada Test Site August 1997, DOE/NV-11718-133, UC-702. Las Vegas, Nevada, Environmental Restoration Division.

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APPENDIX A

UST CLOSURE INFORMATION

UST 12-B-1

Department of Energy

Nevada Operations Office
P.O. Box 98518
Las Vegas, NV 89193-8518

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CENTRAL FILE

Paul J. Liebendorfer, P.E., Chief
Bureau of Federal Facilities
Division of Environmental Protection
State of Nevada
333 W. Nye Lane
Carson City, NV 89710

NOTIFICATION OF CLOSURE OF FIVE ENVIRONMENTAL RESTORATION PROGRAM ABANDONED UNDERGROUND STORAGE TANKS BY THE DOE/NV ENVIRONMENTAL RESTORATION DIVISION

Please find enclosed the U.S. Environmental Protection Agency Form 7530-1, Notification for Underground Storage Tanks (USTs), which identifies five abandoned USTs that were permanently closed by removal. The USTs were closed under the Environmental Restoration Abandoned Underground Storage Tank Closure Program (FY 1995). An Intent to Close Notification form was submitted by DOE/NV for four of the five tanks on January 18, 1995, and one of the five tanks on April 15, 1995. The permanently closed tanks are as follows:

12-B-1 23-W7-1 23-600-1 25-3110-2 25-3900-1

A copy of the laboratory analytical results of soil samples collected below the bottom ends of the tanks are enclosed and summarized in Table 1.

The Nevada Division of Environmental Protection has been notified that 12-B-1 tank site has total petroleum hydrocarbon concentrations in soil which exceed the 100 mg/kg Action Level (Nevada Division of Emergency Management Case Number H950524F). Additional soil sampling at the site is required to further evaluate site conditions.

If you have any questions, please contact Janet L. Appenzeller-Wing at (702) 295-0461.

Donald R. Elle, Ph.D., Director
Environmental Protection Division

ERD:STC

Enclosures:
As stated

cc w/encls:
V. D. Mireau, NDEP, Las Vegas, NV
G. J. Sieren, NDEP, Las Vegas, NV

95-001682
ENS 10
X MHS 20
measure

Paul J. Liebendorfer

-2-

cc w/o encls:

D. D. Madsen, REECo, Mercury, NV

S. J. Nacht, REECo, Mercury, NV

ENVIRONMENTAL RESTORATION PROGRAM
ABANDONED UNDERGROUND STORAGE TANKS (FY95)
NOTIFICATION OF CLOSURE

Notification for Underground Storage Tanks		STATE USE ONLY
State Agency Name and Address Capitol Complex - 201 S. Fall Street Carson City, Nevada 89710		ID NUMBER
TYPE OF NOTIFICATION		DATE RECEIVED
☐ A. NEW FACILITY ☐ B. AMENDED ☒ C. CLOSURE		A. Date Entered Into Computer
136 No. of tanks at facility 0 No. of continuation sheets attached		B. Data Entry Clerk Initials
INSTRUCTIONS		C. Owner Was Contacted to Clarify Responses. Comments
Please type or print in ink all items except "signature" in section V. This form must be completed for each location containing underground storage tanks. If more than five (5) tanks are owned at this location, photocopy the following sheets, and staple continuation sheets to the form.		

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

b) in the case of any underground storage tank in use before November 8, 1984, but no longer is use on that date, any person who owned such tank immediately before the discontinuation of its use.

c) if the State agency so requires, any facility that has undergone any changes to facility information or tank system status (only amended tank information needs to be included).

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. Gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

2. tanks used for storing heating oil for consumptive use on the premises where stored;

3. septic tanks;

4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;

5. surface impoundments, pits, ponds, or lagoons;

6. storm water or waste water collection systems;

7. flow-through process tanks;

8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;

9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Send completed forms to:

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use. 3. If the State requires notification of any amendments to facility send information to State agency immediately.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

DOE Field Office, Nevada

Street Address

Post Office Box 98518

City State ZIP Code

Las Vegas, NV 89193-8518

County

Clark

Phone Number (Include Area Code)

(702) 295-1860

II. LOCATION OF TANK(S)

If required by State, give the geographic location of tanks by degrees, minutes, and seconds. Examples Lat. 42, 36, 12 N Long. 85, 24, 17W

Latitude Not Applicable Longitude Not Applicable

(If same as Section I, mark box here ☐)

Facility Name or Company Site Identifier, as applicable

Nevada Test Site

Street Address (P.O. Box not acceptable)

Highway 95

City State Zip code

Mercury, NV 89093

County Municipality

Nye

III. TYPE OF OWNER		IV. INDIAN LANDS	
☒ Federal Government ☐ State Government ☐ Local Government	☐ Commercial ☐ Private	Tanks are located on land within an Indian Reservation or on other trust lands. ☐ Tanks are owned by native American nation, tribe, or individual. ☐	Tribe or Nation: _____ _____
V. TYPE OF FACILITY			
Select the Appropriate Facility Description			
☐ Gas Station ☐ Petroleum Distributor ☐ Air Taxi (Airline) ☐ Aircraft Owner ☐ Auto Dealership	☐ Railroad ☒ Federal - Non-Military ☐ Federal - Military ☐ Industrial ☐ Contractor	☐ Trucking/Transport ☐ Utilities ☐ Residential ☐ Farm ☐ Other (Explain) _____	
VI. CONTACT PERSON IN CHARGE OF TANKS			
Name	Job Title	Address	Phone Number (Include Area Code)
D. R. Elle	Director	Environmental Protection Division Post Office Box 98518 Las Vegas, NV 89193-8518	(702) 295-1433
VII. FINANCIAL RESPONSIBILITY			
I have met the financial responsibility requirements in accordance with 40 CFR Subpart H			EXEMPT
Check All That Apply			
☐ Self Insurance ☐ Commercial Insurance ☐ Risk Retention Group	☐ Guarantee ☐ Surety Bond ☐ Letter of Credit	☐ State Funds ☐ Trust Fund ☐ Other Method Allowed Specify _____	
VIII. CERTIFICATION (Read and sign after completing all sections)			
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.			
Name and official title of owner or owner's authorized representative (Print)	Signature	Date Signed	
Donald R. Elle, Director		7/14/95	
EPA estimates public reporting burden for this form to average 30 minutes per response including time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding this burden estimate to Chief, Information Policy Branch PM-223, U. S. Environmental Protection Agency, 401 M Street, Washington D. C. 20460, marked "Attention Desk Officer for EPA." This form amends the previous notification form as printed in 40 CFR Part 280, Appendix I. Previous editions of this notification form may be used while supplies last.			

IX. DESCRIPTION OF UN		GROUND STORAGE TANKS (Complete for each tank at this location.)				
Tank Identification Number		12-B-1	23-W7-1	23-600-1	25-3110-2	25-3900-1
1. Status of Tank (mark only one)						
Currently in Use		☐	☐	☐	☐	☐
Temporarily Out of Use (Remember to fill out section X)		☐	☐	☐	☐	☐
Permanently Out of Use (Remember to fill out section X)		☐	☐	☐	☐	☐
Amendment of Information (Identified as Abandoned)		☐	☐	☐	☐	☐
2. Date of Installation (mo./year)		Not Deter.	Not Deter.	Not Deter.	Not Deter.	1962
3. Estimated Total Capacity (gallons)		500	1000	125	850	20,000
4. Material of Construction (Mark all that apply)						
Asphalt Coated or Bare Steel		☒	☒	☒	☒	☒
Cathodically Protected Steel		☐	☐	☐	☐	☐
Epoxy Coated Steel		☐	☐	☐	☐	☐
Composite (Steel with fiberglass)		☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic		☐	☐	☐	☐	☐
Lined Interior		☐	☐	☐	☐	☐
Double Walled		☐	☐	☐	☐	☐
Polyethylene Tank Jacket		☐	☐	☐	☐	☐
Concrete		☐	☐	☐	☐	☐
Excavation Liner		☐	☐	☐	☐	☐
Unknown		☐	☐	☐	☐	☐
Other, Please Specify						
Has Tank Been Repaired ?		☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.
5. Piping (Material) (Mark all that apply)						
Bare Steel		☐	☐	☐	☐	☐
Galvanized Steel		☐	☐	☐	☐	☒
Epoxy Coated Steel		☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic		☐	☐	☐	☐	☐
Copper		☒	☒	☒	☒	☒
Cathodically Protected		☐	☐	☐	☐	☐
Double Walled		☐	☐	☐	☐	☐
Secondary Containment		☐	☐	☐	☐	☐
Unknown		☐	☐	☐	☐	☐
Other, Please Specify						
6. Piping (Type) (Mark all that apply)		☐ Not Deter.				
Suction: no valve at tank		☐	☒	☒	☒	☐
Suction: valve at tank		☐	☐	☐	☐	☒
Pressure		☐	☐	☐	☐	☐
Gravity Feed		☐	☐	☐	☐	☐
Has Piping Been Repaired ?		☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.

Tank Identification Number	12-B-1	23-W7-1	25-300-1	25-3110-2	25-3900-1
7. Substance Currently Used or Last Stored In Greatest Quantity by volume					
Gasoline					
Diesel	XX	XX	XX	XX	XX
Gasohol					
Kerosene					
Heating Oil					
Used Oil					
Other, Please Specify					
Hazardous Substance					
CERCLA Name and/or, CAS number					
Mixture of Substances					
Please Specify					
X. TANKS OUT OF USE, OR CHANGE IN SERVICE					
1. Closing of Tank					
A. Estimated Date Last Used (mo./day/year)	Not Deter.	Not Deter.	Not Deter.	Not Deter.	Not Deter.
B. Estimated Date Tank Closed (mo./day/year)	2/29/95 Removed	4/11/95 Removed	4/11/95 Removed	6/12/95 Removed	6/12/95 Removed
C. Tank Was Removed From Ground	XX	XX	XX	XX	XX
D. Tank Was Closed In Ground					
E. Tank Filled With Inert Material Describe					
F. Change In Service					
2. Site Assessment Completed	Yes	Yes	Yes	Yes	Yes
Evidence Of A Leak Detected	Yes H950524F	No	No	No	No

XI. CERTIFICATION OF COMPLIANCE (COMPLETE FOR ALL NEW AND UPGRADED TANKS AT THIS LOCATION)

Tank Identification Number	12-B-1		23-W7-1		23-600-1		25-3110-2		25-3900-1	
1. Installation	Not Applicable		Not Applicable		Not Applicable		Not Applicable		Not Applicable	
A. Installer certified by tank and piping manufactures	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
B. Installer certified or licensed by the implementing agency	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
C. Installer inspected by a registered engineer	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
D. Installer inspected and approved by implementing agency	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
E. Manufacture's installation checklist have been completed	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
F. Another method allowed by State agency. Please specify.	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
2. Release Detection (Mark all that apply)	TANK	PIPING	TANK	PIPING	TANK	PIPING	TANK	PIPING	TANK	PIPING
A. Manual tank guaging	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
B. Tank tightness testing	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
C. Inventory controls	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
D. Automic tank guaging	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
E. Vapor monitoring	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
F. Groundwater monitoring	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
G. Interstitial monitoring double walled tank/piping	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
H. Interstitial monitoring/secondary containment	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
I. Automic line leak detectors	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
J. Line tightness testing		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>
K. Other method allowed by Implementing Agency, Please specify.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
3. Spill and Overfill Protection	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
A. Overfill device installed	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
B. Spill device installed	<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	

OATH: I certify the information concerning installation that is provided in section XI is true to the best of my belief and knowledge.

Installer:	Not Applicable		
	Name	Signature	Date
	Position	Company	

UST 12-B-3

Department of Energy

Nevada Operations Office

P.O. Box 98518

Las Vegas, NV 89193-8518

5.6.5
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JUL 29 1996

BECHTEL CORP RECD

AUG 7 12 45 PM '96

Paul J. Liebendorfer, P.E., Chief
Bureau of Federal Facilities
Division of Environmental Protection
State of Nevada
333 W. Nye Lane
Carson City, NV 89710

NOTIFICATION OF CLOSURE FOR NINE ENVIRONMENTAL RESTORATION (ER) PROGRAM ABANDONED UNDERGROUND STORAGE TANKS (USTS) CAU-418

Please find enclosed the U.S. Environmental Protection Agency (EPA) Form 7530-1, Notification for Underground Storage Tanks, which identifies nine abandoned USTs that were permanently closed by removal. The USTs were closed under the DOE Nevada Operations Office (DOE/NV) Environmental Restoration Abandoned UST Closure Program (FY 1996). The Intent to Close Notification form for the tanks was submitted by DOE/NV to the NDEP for eight of the nine tanks on November 21, 1995, and the ninth tank on February 12, 1996. The permanently closed tanks are as follows:

2-300-1 (Area 2, Bunker 300)	12-B-2 (Area 12, B Tunnel)	25-3124-1 (Area 25, TTF)
5-617-1 (Area 5, Bunker 617)	12-B-3 (Area 12, B Tunnel)	25-3127-1 (Area 25, CP Cafeteria)
9-300-1 (Area 9, Bunker 300)	23-155-1 (Area 23, Bldg. 155)	26-2201-2 (Area 26, Disassembly Bldg.)

Copies of the laboratory analytical results of soil samples collected below the bottom ends of the tanks are enclosed and summarized in Table 1. Laboratory analyses requested for the soil samples were based on the composition of product inside each tank or process knowledge of the tanks prior use.

The NDEP has been notified that the 2-300-1, 9-300-1, and 12-B-3 tank sites have total petroleum hydrocarbon concentrations in soil which exceed the 100 milligram per kilogram Action Level. The Nevada Division of Emergency Management Case Numbers assigned to the 2-300-1, 9-300-1, and 12-B-3 sites are 960603-771, 960701-849, and 960722-02, respectively. Additional soil sampling at each of the sites is required to further evaluate site conditions.

96 JUL 29 1996

ENS 10
x MHS 20
Closure

011361

Paul J. Liebendorfer

-2-

JUL 29 1996

If you have any questions, please contact Sabine T. Curtis at 295-0542.

Original Signed By

David S. Shafer, Acting Director
Environmental Restoration Division

ERD:STC

Enclosure:

As stated *filed in ENSID*

cc w/encl:

V. D. Mireau, NDEP, Las Vegas, NV
G. J. Sieren, NDEP, Las Vegas, NV

bcc w/encl:

D. D. Madsen, BN, Mercury, NV
S. J. Nacht, BN, Mercury, NV
S. T. Curtis, ERD, DOE/NV,
Las Vegas, NV

bcc w/o encl:

D. S. Shafer, ERD,
DOE/NV, Las Vegas, NV
P. L. Hall, ERD,
DOE/NV, Las Vegas, NV

011361

**ENVIRONMENTAL RESTORATION PROGRAM
ABANDONED UNDERGROUND STORAGE TANKS (FY96)
NOTIFICATION OF CLOSURE**

011361

CMB NO 2050-0068 Approval Expires 1/31/95
EPA form 7530-1 (Revised 8/89)

Notification for Underground Storage Tanks

STATE USE ONLY

State Agency Name and Address

Capital Complex - 201 S. Fall Street, Carson City, Nevada 89710

TYPE OF NOTIFICATION

☐ A. NEW FACILITY ☐ B. AMENDED ☒ C. CLOSURE

146 No. of tanks at facility No. of continuation sheets attached

INSTRUCTIONS

Please type or print in ink all items except "signature" in section V. This form must be completed for each location containing underground storage tanks. If more than five (5) tanks are owned at this location, photocopy the following sheets, and staple continuation sheets to the form.

ID NUMBER

DATE RECEIVED

A. Date Entered into Computer

B. Data Entry Clerk Initials

C. Owner Was Contacted to

Clarify Responses, Comments

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means-

a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

b) in the case of any underground storage tank in use before November 8, 1984, but no longer is in use on that date, any person who owned such tank immediately before the discontinuation of its use.

c) if the State agency so requires, any facility that has undergone any changes to facility information or tank system status (only amended tank information needs to be included).

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. Gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;

3. septic tanks

4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1975 which is an intrastate pipeline facility regulated under State laws;

5. surface impoundments, pits, ponds, or lagoons;

6. storm water or waste water collection systems;

7. flow through process tanks;

8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;

9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where to Notify? Send completed forms to:

When to Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use. 3. If the State requires notification of any amendments to facility send information to State agency immediately.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

I. OWNERSHIP OF TANK(S)

II. LOCATION OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

DOE Field Office, Nevada

Street Address

Post Office Box 98518

City

State

ZIP Code

Las Vegas,

Nevada

89193-8518

County

Clark

Phone Number (Include Area Code)

(702) 295-1860

If required by State, give the geographic location of tanks by degrees, minutes, and seconds
Examples Lat. 42.36, 12 N Long. 85.24, 17W

Latitude Not Applicable

Longitude Not Applicable

(If same as Section I, mark box here ☐)

Facility Name or Company Site Identifier, as applicable

Nevada Test Site

Street Address (P.O. Box not acceptable)

Highway 95

City

State

ZIP Code

Mercury,

Nevada

89093

County

Municipality

NYE

III. TYPE OF OWNER		IV. INDIAN LANDS	
☒ Federal Government ☐ State Government ☐ Local Government	☐ Commercial ☐ Private	Tanks are located on land within an Indian Reservation or on other trust lands. ☐ Tanks are owned by native American nation, tribe, or individual. ☐	Tribe or Nation: _____
V. TYPE OF FACILITY			
Select the Appropriate Facility Description			
☐ Gas Station ☐ Petroleum Distributor ☐ Air Taxi (Airline) ☐ Aircraft Owner ☐ Auto Dealership	☐ Railroad ☒ Federal - Non-Military ☐ Federal - Military ☐ Industrial ☐ Contractor	☐ Trucking/Transport ☐ Utilities ☐ Residential ☐ Farm ☐ Other (Explain) _____	
VI. CONTACT PERSON IN CHARGE OF TANKS			
Name	Job Title	Address	Phone Number (Include Area Code)
Kenneth A. Hoar	Director	Environmental Protection Division Post Office Box 98518 Las Vegas, NV 89193-8518	(702) 295-1428
VII. FINANCIAL RESPONSIBILITY			
I have met the financial responsibility requirements in accordance with 40 CFR Subpart H			EXEMPT
Check All That Apply			
☐ Self Insurance ☐ Commercial Insurance ☐ Risk Retention Group	☐ Guarantee ☐ Surety Bond ☐ Letter of Credit	☐ State Funds ☐ Trust Fund ☐ Other Method Allowed Specify _____	
VIII. CERTIFICATION (Read and sign after completing all sections)			
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.			
Name and official title of owner or owner's authorized representative (Print)	Signature	Date Signed	
Kenneth A. Hoar, Director		7/31/96	
EPA estimates public reporting burden for this form to average 30 minutes per response including time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding this burden estimate to Chief, Information Policy Branch PM-223, U. S. Environmental Protection Agency, 401 M Street, Washington D. C. 20460, marked "Attention Desk Officer for EPA." This form amends the previous notification form as printed in 40 CFR Part 280, Appendix I. Previous editions of this notification form may be used while supplies last.			

IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)					
Tank Identification Number	2-300-1	5-617-1	9-300-1	12-B-2	12-B-3
1. Status of Tank (mark only one)					
Currently in Use					
Temporarily Out of Use (Remember to fill out section X)					
Permanently Out of Use (Remember to fill out section X)	XX	XX	XX	XX	XX
Amendment of Information (Identified as Abandoned)					
2. Date of Installation (mo./year)	1957 Est.	1962 Est.	1957 Est.	1957 Est.	1957 Est.
3. Estimated Total Capacity (gallons)	800	300	800	300	650
4. Material of Construction (Mark all that apply)					
Asphalt Coated or Bare Steel	XX	XX	XX	XX	XX
Cathodically Protected Steel					
Epoxy Coated Steel					
Composite (Steel with fiberglass)					
Fiberglass Reinforced Plastic					
Lined Interior					
Double Walled					
Polyethylene Tank Jacket					
Concrete					
Excavation Liner					
Unknown					
Other, Please Specify					
Has Tank Been Repaired ?	Not Deter.	Not Deter.	Not Deter.	Not Deter.	Not Deter.
5. Piping (Material) (Mark all that apply)					
Bare Steel				XX	
Galvanized Steel	XX	XX	XX		XX
Epoxy Coated Steel					
Fiberglass Reinforced Plastic					
Copper	XX		XX	XX	
Cathodically Protected					
Double Walled					
Secondary Containment					
Unknown					
Other, Please Specify					
6. Piping (Type) (Mark all that apply)					
Suction: no valve at tank	XX		XX		
Suction: valve at tank					
Pressure					
Gravity Feed		XX		XX	XX
Has Piping Been Repaired ?	Not Deter.	Not Deter.	Not Deter.	Not Deter.	Not Deter.

Tank Identification Number	2-300-1	5-617-1	9-300-1	12-B-2	12-B-3
7. Substance Currently Used or Last Stored In Greatest Quantity by volume					
Gasoline					
Diesel	XX	XX	XX		
Gasohol					
Kerosene					
Heating Oil					
Used Oil					
Other, Please Specify					
Hazardous Substance					
CERCLA Name and/or, CAS number					
Mixture of Substances					
Please Specify				Unknown	Unknown
X. TANKS OUT OF USE, OR CHANGE IN SERVICE					
1. Closing of Tank					
A. Estimated Date Last Used (mo./day/year)	Not Deter.	Not Deter.	Not Deter.	Not Deter.	Not Deter.
B. Estimated Date Tank Closed (mo./day/year)	4/30/96 REMOVED	5/8/96 REMOVED	5/2/96 REMOVED	5/6/96 REMOVED	5/6/96 REMOVED
C. Tank Was Removed From Ground	XX	XX	XX	XX	XX
D. Tank Was Closed In Ground					
E. Tank Filled With Inert Material Describe					
F. Change In Service					
2. Site Assessment Completed	Yes	Yes	Yes	Yes	Yes
Evidence Of A Leak Detected	Yes 960603-771	No	Yes 960701-849	No	Yes 960722-02

XI. CERTIFICATION OF COMPLIANCE (COMPLETE FOR ALL NEW AND UPGRADED TANKS AT THIS LOCATION)

Tank Identification Number	2-300-1		5-617-1		9-300-1		12-B-2		12-B-3	
1. Installation	Not Applicable		Not Applicable		Not Applicable		Not Applicable		Not Applicable	
A. Installer certified by tank and piping manufactures	☐		☐		☐		☐		☐	
B. Installer certified or licensed by the implementing agency	☐		☐		☐		☐		☐	
C. Installer inspected by a registered engineer	☐		☐		☐		☐		☐	
D. Installer inspected and approved by implementing agency	☐		☐		☐		☐		☐	
E. Manufacture's installation checklist have been completed	☐		☐		☐		☐		☐	
F. Another method allowed by State agency. Please specify.	☐		☐		☐		☐		☐	
2. Release Detection (Mark all that apply)	TANK	PIPING	TANK	PIPING	TANK	PIPING	TANK	PIPING	TANK	PIPING
A. Manual tank guaging	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
B. Tank tightness testing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
C. Inventory controls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
D. Automic tank guaging	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
E. Vapor monitoring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
F. Groundwater monitoring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
G. Interstitial monitoring double walled tank/piping	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
H. Interstitial monitoring/secondary containment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I. Automic line leak detectors	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
J. Line tightness testing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
K. Other method allowed by Implementing Agency, Please specify.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Spill and Overfill Protection	☐		☐		☐		☐		☐	
A. Overfill device installed	☐		☐		☐		☐		☐	
B. Spill device installed	☐		☐		☐		☐		☐	

OATH: I certify the information concerning installation that is provided in section XI is true to the best of my belief and knowledge.

Installer:	Not Applicable		
	Name	Signature	Date
	Position	Company	

IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)					
Tank Identification Number	23-155-1	25-3124-1	25-3127-1	26-2201-2	
1. Status of Tank (mark only one)					
Currently in Use	☐	☐	☐	☐	☐
Temporarily Out of Use (Remember to fill out section X)	☐	☐	☐	☐	☐
Permanently Out of Use (Remember to fill out section X)	☒	☒	☒	☒	☐
Amendment of Information (Identified as Abandoned)	☐	☐	☐	☐	☐
2. Date of Installation (mo./year)	1958 Est.	Not Deter.	11/61	Not Deter.	
3. Estimated Total Capacity (gallons)	1,000	1,600	3,000	1,500	
4. Material of Construction (Mark all that apply)					
Asphalt Coated or Bare Steel	☒	☒	☒	☒	☐
Cathodically Protected Steel	☐	☐	☐	☐	☐
Epoxy Coated Steel	☐	☐	☐	☐	☐
Composite (Steel with fiberglass)	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Lined Interior	☐	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐	☐
Polyethylene Tank Jacket	☐	☐	☐	☐	☐
Concrete	☐	☐	☐	☐	☐
Excavation Liner	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify					
Has Tank Been Repaired ?	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐
5. Piping (Material) (Mark all that apply)					
Bare Steel	☐	☐	☐	☐	☐
Galvanized Steel	☐	☐	☐	☒	☐
Epoxy Coated Steel	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Copper	☒	☐	☒	☐	☐
Cathodically Protected	☐	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐	☐
Secondary Containment	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify		PVC			
6. Piping (Type) (Mark all that apply)					
Suction: no valve at tank	☒	☐	☒	☐	☐
Suction: valve at tank	☐	☐	☐	☐	☐
Pressure	☐	☐	☐	☐	☐
Gravity Feed	☐	☒	☐	☐	☐
Has Piping Been Repaired ?	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐ Not Deter.	☐

Tank Identification Number	23-155-1	25-3124-1	25-3127-1	26-2201-2	
7. Substance Currently Used or Last Stored In Greatest Quantity by volume					
Gasoline					
Diesel			XX		
Gasohol					
Kerosene					
Heating Oil					
Used Oil					
Other, Please Specify	Fuel Oil	Waste Water		Waste Water	
Hazardous Substance					
CERCLA Name and/or, CAS number					
Mixture of Substances					
Please Specify					
X. TANKS OUT OF USE, OR CHANGE IN SERVICE					
1. Closing of Tank					
A. Estimated Date Last Used (mo./day/year)	Not Deter.	Not Deter.	Not Deter.	Not Deter.	
B. Estimated Date Tank Closed (mo./day/year)	5/30/96 REMOVED	5/16/96 REMOVED	5/16/96 REMOVED	5/9/96 REMOVED	
C. Tank Was Removed From Ground	XX	XX	XX	XX	
D. Tank Was Closed In Ground					
E. Tank Filled With Inert Material Describe					
F. Change In Service					
2. Site Assessment Completed	Yes	Yes	Yes	Yes	
Evidence Of A Leak Detected	No	No	No	No	

XI. CERTIFICATION OF COMPLIANCE (COMPLETE FOR ALL NEW AND UPGRADED TANKS AT THIS LOCATION)

Tank Identification Number	23-155-1		25-3124-1		25-3127-1		26-2201-2			
1. Installation	Not Applicable		Not Applicable		Not Applicable		Not Applicable			
A. Installer certified by tank and piping manufactures	☐		☐		☐		☐		☐	
B. Installer certified or licensed by the implementing agency	☐		☐		☐		☐		☐	
C. Installer inspected by a registered engineer	☐		☐		☐		☐		☐	
D. Installer inspected and approved by implementing agency	☐		☐		☐		☐		☐	
E. Manufacture's installation checklist have been completed	☐		☐		☐		☐		☐	
F. Another method allowed by State agency. Please specify.	☐		☐		☐		☐		☐	
2. Release Detection (Mark all that apply)	TANK	PIPING	TANK	PIPING	TANK	PIPING	TANK	PIPING	TANK	PIPING
A. Manual tank guaging	☐		☐		☐		☐		☐	
B. Tank tightness testing	☐		☐		☐		☐		☐	
C. Inventory controls	☐		☐		☐		☐		☐	
D. Automic tank guaging	☐		☐		☐		☐		☐	
E. Vapor monitoring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
F. Groundwater monitoring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
G. Interstitial monitoring double walled tank/piping	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
H. Interstitial monitoring/secondary containment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I. Automic line leak detectors	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
J. Line tightness testing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
K. Other method allowed by Implementing Agency, Please specify.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	☐		☐		☐		☐		☐	
3. Spill and Overfill Protection	☐		☐		☐		☐		☐	
A. Overfill device installed	☐		☐		☐		☐		☐	
B. Spill device installed	☐		☐		☐		☐		☐	

OATH: I certify the information concerning installation that is provided in section XI is true to the best of my belief and knowledge

Installer: Not Applicable

Name

Signature

Date

Position

Company

UST 12-COMM-1

PETER G. MORROS
Director

STATE OF NEVADA
BOB MILLER
Governor

5.6.4
Dove
L. H. DODGION
Administrator

Nov 16 3 51 PM '95

(702) 486-2850

FAX (702) 486-2863

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

(Las Vegas Office)

555 E. Washington, Suite 4300

Las Vegas, Nevada 89101

November 6, 1995

Dr. Donald R. Elle
Environmental Protection Division
U.S. Department of Energy
Nevada Operations Office
P. O. Box 98518
Las Vegas, NV 89193-8518

RECEIVED

RECCO
CENTRAL FILE

Nov 9 12 13 PM '95

RE: Permanent Closure and Removal of three (3) Abandoned
Underground Storage Tanks (USTs) on the Nevada Test Site (NTS)

Dear Dr. Elle:

The Nevada Division of Environmental Protection (NDEP) has received notification relating to the closure of three (3) abandoned underground storage tanks located at the Nevada Test Site (NTS), as listed below:

2-VPTF-1 (Area 2 Vertical Pull Test Facility)

12-COMM-1 (Area 12 Communication Building)

26-2201-1 (Area 26 MAD Building)

In accordance with 40 CFR 280.72, the required site assessments have been evaluated and determined to have been conducted satisfactorily.

Accordingly, based on the information provided by the Department of Energy, Environmental Protection Division, the Division of Environmental Protection, State of Nevada accepts as final closure, the documentation for the closure of the above mentioned tanks as presented.

96-000702
ENS 10
X mts 20
closure

Don Elle
November 6, 1995
Page 2

Continuation of remediation of those closures associated with soil contamination will proceed through the spill/release corrective action program, and 40 CFR 280 Subpart F, as previously agreed to.

If any questions should require input from our staff please contact me at (702) 486- 2856.

Sincerely,

Dean Mierau, EMSIII
Project Manager
Bureau of Federal Facilities
Las Vegas Office

DM:dm

cc: Paul Liebendorfer
Richard Serdoz
Howard Dickson
Janet L. Appenzeller-Wing
Jerry Sieren

APPENDIX B

DISPOSAL DOCUMENTATION

U10C DISPOSAL SITE
LOAD VERIFICATION DOCUMENT

GREEN TAG
#5669

Waste Generator BECHTEL NEVADA ENVIRONMENTAL RESTORATION
Source AREA 12 (12-B-1 SITE & 12-Comm-1 SITE)
Contents 20 cy HYDROCARBON IMPACTED SOIL FROM 12-Comm-1
EXCAVATION & 12-55 GAL DRUMS OF SOIL FROM 12-B-1
SITE. *APPROVAL TO DISPOSE OF 50 cy of ^{HYDROCARBON} SOIL PER WEEK
INTO U10C APPROVED THROUGH BAN WMD (MARSHALL LAB)

Method of Characterization: Process Knowledge ✓
Sampling and Analysis ✓
Minimization/Segregation —

BRADY NASH
BN0395-12-B-1
BN0394-12-Comm-1

Prohibited Wastes - The following wastes are prohibited from disposal at this site

Radioactive Waste	Medical Waste (needles, sharps, bloody clothing)	Animal carcasses	Garbage (food waste)
Sewage sludge	Friable asbestos	PCBs (other than light ballasts)	"Free liquids"

Allowable Wastes - Construction debris containing non-putrescible and highly, inert waste consistent with the following examples

Asphalt	Insulation	Metal	Wood
Rubber	Plastic	Cloth	Paper
Pipe	Rocks	Non-hydrocarbon burdened soil	Concrete
Cable and wire	Empty containers	Decommed underground and above ground tanks	Non-friable asbestos
Automobiles and Military Vehicles			

To the best of my knowledge, the waste described above contains only those materials which are allowed to be disposed of at this disposal site. I have verified this through the waste characterization method identified above and a review of those prohibited and allowable waste items.

Print Name JERRY BORN 295-7341

Signature Jerry Born

Date 12-8-97

LOAD 1 OF 2

*LOAD 1 HAS NO 55G DRUMS

UNIFORM STRAIGHT BILL OF LADING Original—Not Negotiable—Domestic

Shipper's #

Carrier

Agent's No.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

at DECEMBER 9 1997 from ARBA 12

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown) marked, consigned and destined as shown below, which said company (the word company 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 own railroad, water line, highway route or routes, or within the territory of its highway operations, 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 of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

(Mail or street address of consignee—For purposes of notification only.)

Consigned to UIC Landfill

Destination NTS State of NV Zip Code _____ County of NTB

Routing _____ Delivering Carrier _____ Vehicle or Car Initial _____ No. _____

Collect On Delivery

\$ _____ and remit to: Rec'd 12/9/97

C. O. D. charge to be paid by

Shipper ☐
Consignee ☐

Street _____ City _____ State _____

No. Packages	Description of Articles, Special Marks, and Exceptions	Weight (Sub. to Cor.)	Class or Rate	Check Column
1	HYDROCARBON, IMPURE SOIL			
	From Sites 12-Camp-1-E, 12-B-1			
	(SOIL & SOIL IN DRUMS)			
	~ 30 cy Green Tag #5669			

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

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

(Signature of Consignor.)

If charges are to be prepaid, write or stamp here, "TO BE PREPAID."

Received \$ _____ to apply to prepayment of the charges on the property described hereon.

Agent or Cashier

Per _____
(the signature here acknowledges only the amount Prepaid.)

Charges Advanced:

\$ _____

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight." 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

Shipper, Per _____ Agent, Per _____

Permanent post-office address of shipper,

(This Bill of Lading is to be signed by the shipper and agent of the carrier issuing same.)

Bill of Lading

1

DATE: 12-9-97 NO. A 5669

Reynolds Electrical & Engineering Co., Inc.
Radiological Control Department-Ramatrol

Material Clearance

MONITOR: McCloskey
ORGANIZATION: BN ER
SURVEY LOCATION: A-12
FROM: A-12
TO: U 10C

☒ UNRESTRICTED

- ☐ OFF-SITE
☒ ON-SITE
☐ SALVAGE
☐ EXCESS

THIS MATERIAL HAS BEEN SURVEYED FOR
RADIOACTIVITY AND MEETS DOE
STANDARDS FOR RELEASE TO PUBLIC
USE

INITIAL

gmr

☐ CONTROLLED

DESCRIPTION:

SOIL AND 55 GAL
DRUMS OF SOIL
FROM A-12 ENVIRON-
MENTAL RESTORATION
SITE.

REMARKS:

Exp - 12-16-97

WEIGH TICKET

DATE 100 INSPECTION STATION

COMMODITY Hydrocarbon

CUSTOMER NO.

DELIVER TO PC Chandler

VEHICLE LICENSE NO.

DRIVER'S SIGNATURE (IN)

G+091460 1b GR LIVE
T+035940 1b GR KPTA
N+055520 1b
CH 2

CROSS-VERIFIED

ARE-VERIFIED

() WEIGHMASTER'S SIGNATURE

() WEIGHMASTER'S SIGNATURE

SUPERVISOR'S SIGNATURE

SUPERVISOR'S SIGNATURE

LBS. GROSS — DRIVER OFF

LBS. TARE — DRIVER OFF

LBS. NET

gmr
gmr

Postel 12/11/97
cel

REYNOLDS ELECTRICAL & ENGINEERING CO., INC.
POST OFFICE BOX 9821 • LAS VEGAS, NV 89193-8521

004707

NO.

PROPERTY REMOVAL NO.

DATE 12/9/97

SHIPPER

Bochtel

PIO

()

AREA

()

TRUCK NO.

84841

BLDG. NO.

()

TRAILER(S) LICENSE NO.

DRIVER'S SIGNATURE (OUT)

Reynolds

U10C DISPOSAL SITE
LOAD VERIFICATION DOCUMENT

GREEN TAG
NO. 5669

LOAD 2 OF 2

Waste Generator BN Environmental Restoration
Source Remanufact 12-Conn-1, Drums from 12-B-1, & Soil Plus from 9-300-1
Contents HYDROCARBON IMPACTED SOILS. DISPOSAL APPROVED THROUGH
MARSHALL LAB OF WMP.

Method of Characterization: Process Knowledge ☐
Sampling and Analysis ☒
Minimization/Segregation ☐

Prohibited Wastes - The following wastes are prohibited from disposal at this site

Radioactive Waste	Medical Waste (needles, sharps, bloody clothing)	Animal carcasses	Garbage (food waste)
Sewage sludge	Friable asbestos	PCBs (other than light ballasts)	"Free liquids"

Allowable Wastes - Construction debris containing non-putrescible and highly, inert waste consistent with the following examples

Asphalt	Insulation	Metal	Wood
Rubber	Plastic	Cloth	Paper
Pipe	Rocks	Non-hydrocarbon burdened soil	Concrete
Cable and wire	Empty containers	Decommed underground and above ground tanks	Non-friable asbestos
Automobiles and Military Vehicles			

BRADY NOS.
BN-0394(12C)
BN-0395(12C)
BN-0396(9300-1)

To the best of my knowledge, the waste described above contains only those materials which are allowed to be disposed of at this disposal site. I have verified this through the waste characterization method identified above and a review of those prohibited and allowable waste items.

Print Name JERRY BONN
Signature Jerry Bonn
Date 12-9-97

UNIFORM STRAIGHT BILL OF LADING Original—Not Negotiable—Domestic

Shipper's #

Carrier

Agent's No.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

at Dec 9 19 87 from A12 E ARSA 9

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown) marked, consigned and destined as shown below, which said company (the word company 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 own railroad, water line, highway route or routes, or within the territory of its highway operations, 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 of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

(Mail or street address of consignee—For purposes of notification only.)

Consigned to VIO C LAND FILLDestination NTS State of NV Zip Code _____ County of NYE

Routing _____ Delivering Carrier _____ Vehicle or Car Initial _____ No. _____

Collect On Delivery

\$ _____ and remit to: Rec'd 12/9/87 ChicagoC. O. D. charge to be paid by { Shipper ☐ Consignee ☐

Street _____

City _____

State _____

No. Packages	Description of Articles, Special Marks, and Exceptions	Weight (Sub. to Cor.)	Class or Rate	Check Column
1	BRONX VAL BN - 0394, 0395			
	EJ - 0396 - HYDROCKSON			
	CONTAMINATED SOILS			
	- 20 cy - LAND 2nd 2			
	GREEN TAG NO. 5669			
	<i>[Signature]</i>			

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

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

(Signature of Consignor.)

If charges are to be prepaid, write or stamp here, "TO BE PREPAID."

Received \$ _____ to apply to prepayment of the charges on the property described hereon.

Agent or Cashier

Per _____
(the signature here acknowledges only the amount Prepaid.)

Charges Advanced:

\$ _____

"If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is 'carrier's or shipper's weight.' 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

Shipper, Per _____ Agent, Per _____

Permanent post-office address of shipper, _____

(This Bill of Lading is to be signed by the shipper and agent of the carrier issuing same.)

Bill of Lading

1

WEIGH TICKET

GATE 100 INSPECTION STATION

REYNOLDS ELECTRICAL & ENGINEERING CO., INC.
POST OFFICE BOX 98521 • LAS VEGAS, NV 89193-9521NO. 004708

PROPERTY REMOVAL NO. _____

COMMODITY Refrigerator FROM A-12 DATE 12/8/97CUSTOMER NO. _____ () P/O _____ () SHIPPER BechtelDELIVER TO 10 Chandler () AREA 9 () BLDG. NO. _____VEHICLE LICENSE NO. _____ TRUCK NO. 84841 TRAILER(S) LICENSE NO. _____DRIVER'S SIGNATURE (IN) Frank El DRIVER'S SIGNATURE (OUT) Frank El56860 GR LBS
35940 TARE LBS
20920 NET LBS

LBS. GROSS — DRIVER OFF ()

LBS. TARE — DRIVER OFF ()

LBS. NET

GROSS-VERIFIED () WEIGHMASTER'S SIGNATURE [Signature]TARE-VERIFIED () WEIGHMASTER'S SIGNATURE [Signature]SUPERVISOR'S SIGNATURE Posted 12/11/97
ccg

SUPERVISOR'S SIGNATURE _____

APPENDIX C

LABORATORY ANALYTICAL DATA

Bechtel Nevada

Interoffice Memorandum

Feb 23 1 11 PM '98

To: S. J. Nacht

Date: February 19, 1998

From: T. P. Van Sittert
Analytical Services Laboratory, 295-7472

No.: 2150-AL-98-0135

Subject: DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V321
Project No. 04001

Nevada Environmental Laboratory's (NEL) results have been reported to J. F. Bonn for the total petroleum hydrocarbons - oil analysis of six samples submitted to NEL on November 13, 1997.

Preliminary data was faxed to the client on November 25, 1997.

SPECIFIC:

Total Petroleum Hydrocarbons - Oil:

Method associated quality assurance and control criteria were met.

The laboratory inadvertently qualified the result for 12-B-3/C with a "J". The reported data was corrected.

The surrogate recoveries in samples 12-B-3/10S, -3/Wood, and -3/10N were outside the acceptable lower limits. The oil concentration for 12-B-3/Wood and the reporting limits for -3/10S and -3/10N may be considered as estimates.

The laboratory was contacted to clarify the "J" qualifier definition. NEL replied that the "duplicate analyses" referred to in the case narrative were actually reanalyses of the sample extracts, not duplicate processing on a unique aliquot of the same sample. The reanalyses resulted in similar surrogate recoveries, therefore no additional results were reported.

Please direct any questions you may have to your Client Service Representative, Ted Redding, at 295-7220.

T. P. Van Sittert

TPV:mm

Subject Code: ENV3

cc: Correspondence Control, NLV008
K. A. Quintana, NLV022
J. F. Bonn (results enc.), NTS306
ASL SDG V321 (results enc.), NTS273

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Burbank

Las Vegas Division
4208 Arcata Way, Suite A • Las Vegas, NV 89030
(702) 657-1010 • Fax: (702) 657-1577
1-888-368-3282

CLIENT: Bechtel Nevada Corp.
P.O. Box 98521, M/S NTS273
Las Vegas, NV 89193-8521
ATTN: Ted Redding

PROJECT NAME: NA
PROJECT NUMBER: PO16874

NEL ORDER ID: L9711104

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 11/13/97.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (702) 657-1010.

Some results have been flagged as follows:

J - Estimated concentration due to probable matrix effects. Sample QC outside acceptance criteria in duplicate analyses.

Stan Van Wageningen
Laboratory Manager

11/24/97
Date

CERTIFICATIONS:

	Reno	Las Vegas	Burbank
Arizona	AZ0520	AZ0518	AZ0325
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	Reno	Las Vegas	Burbank
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.

PROJECT NAME: NA

PROJECT NUMBER: PO16874

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992

METHOD: EPA 8015M

MATRIX: Soil

ANALYST: Scott

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/kg	Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
12-B-3/15N	11/12/97	L9711104-01	ND	10. mg/kg	74 %	11/17/97	11/17/97
12-B-3/C	11/12/97	L9711104-02	120 ¹ *** <i>rk 2/2/98</i>	10. mg/kg	74 %	11/17/97	11/17/97
12-B-3/10S	11/12/97	L9711104-03	ND J	10. mg/kg	67 %	11/17/97	11/17/97
12-B-3/Wood	11/12/97	L9711104-04	160 J***	20. mg/kg	47 %	11/17/97	11/17/97
12-B-3/5W	11/12/97	L9711104-05	ND	10. mg/kg	80 %	11/17/97	11/17/97
12-B-3/10N	11/12/97	L9711104-06	ND J	10. mg/kg	67 %	11/17/97	11/17/97

*** Oil Range Organics (C12 to C36).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 971117tphs -BLK	ND	< 10. mg/kg	82 %	NA
LCS, 971117tphs - LCS	77 %	55 - 102 %	73 %	NA
971117tphs - LCS	77 %	55 - 102 %	73 %	NA
MS, 971117tphs - MS	85 %	55 - 102 %	91 %	L9711125-01
MSD, 971117tphs - MSD	96 %	55 - 102 %	88 %	L9711125-01

ND - Not Detected

* Surrogate used was Octacosane, acceptance limits 70-130%.

This report shall not be reproduced except in full, without the written approval of the laboratory.

SAMPLE DELIVERY GROUP: V321CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 1/22/98DATE REVIEWED: 2/3/98REVIEWED BY:

TPH - OIL:

MATRIX: SOILARE TPH DIESEL/OIL DATA ACCEPTABLE: YESARE CRITERIA MET

1. QC SAMPLES ACCEPTABLE
2. MATRIX SPIKE ACCEPTABLE
3. METHOD BLANK ACCEPTABLE
4. HOLDING TIMES ACCEPTABLE

YESN/AYESYES

a. Date Sampled:

11/12/97# DAYS0ACCEPTABLE0

b. Date ASL Received:

N/AN/A1

c. Date Contract Lab Received:

11/13/9715

d. Date Extracted:

11/17/97514

e. Date Analyzed:

11/17/97040

5. CALCULATIONS ACCEPTABLE:

YES

6. CORRECT CONC. UNITS USED:

YES

7. FORMS ACCEPTABLE:

YES

8. CHAIN-OF-CUSTODY AGREES:

YES

COMMENTS: Method associated quality assurance and control criteria were met. The surrogate recoveries in samples 12-B-3/10S, -3/Wood, and -3/10N were outside the acceptable lower limits. The oil concentration for 12-B-3/Wood and the reporting limits for -3/10S and -3/10N may be considered as estimates. The laboratory inadvertently qualified -3/C with a "J". The correction to the reported data has been made. The laboratory was contacted to clarify the "J" qualifier definition. NEL replied that the "duplicate analyses" referred to in the case narrative were actually reanalyses of the sample extracts. The reanalyses resulted in similar surrogate recoveries, therefore, no additional results were reported.

11/20 L9711104

BECHTEL NEVADA CORPORATION

Page 1 of 1

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST AND CHAIN OF CUSTODY

PROJECT INFORMATION

ORG#: 2150 Charge #: C4N-3A0DE

Project #: PO 16874 Funded by: ☒ EM ☐ DP

Project Manager: Steve Nacht/ Jerry Bonn

Phone: J. Bonn 295-7341 M/S: NTS306

REPORT INFORMATION

*DATE DUE: 12-1-97 Preliminary ☒ YES
Report ☐ NO

*There may be additional charges for reports due in less than the standard turnaround time. See back:

Send Report to: Ted Redding M/S: NTS273

Phone: 295-7220 Fax: 295-4773

LAB USE ONLY

SDG#: V321

PACKET #: W1342

SDG#:

PACKET #:

Is the radioactivity level in any of these samples above typical environmental or bioassay levels?

REQUESTER'S SIGNATURE

DATE: 11/13/97

RAD MATRIX CODES (RAD MC)

SEE BACK

SAMPLE COLLECTION LOCATION

Area 12 B Tunnel - Site Location 12-B-3

NON-RAD ANALYSIS CODES

RCRA TF = TPH - Full PH = pH
V = VOA TG = TPH - Gas IND HYGIENE
TV = TCLP VOA TD = TPH - Diesel APC = Asb/PCM
B = BNA TO = TPH - Oil APL = Asb/PLM
TB = TCLP BNA M = Metals AT = Asb/TEM
PS = Pesticide TM = TCLP Metals PBF = Pb/filter
P = PCB C = Clor-d-rect G = Gravimetric
PSP = Pest & PCB F = Flashpoint OTHERS - SEE BACK

RAD ANALYSIS CODES

01 = TRITIUM 11 = PU OTHERS -
02 = GROSS ALPHA 13 = TH SEE
03 = GROSS BETA 22 = SR-89 BACK
04 = GAMMA (20 min) 23 = SR-90
05 = GFP 31 = GAMMA (1000 min)
07 = ISO U 33 = GAMMA (300 min)
08 = AM 93 = U NAT (KPA)

ITEM	ID/DESCRIPTION	RAD MC	ANALYSIS CODES	SAMPLING		MATRIX	COMMENTS
				DATE	TIME		
0	12-B-3/15N (01)		TO	11/12/97	1400	soil	TPH as oil 8015M
1	12-B-3/C (02)		TO	11/12/97	1405	soil	
2	12-B-3/10S (03)		TO	11/12/97	1410	soil	
3	12-B-3/wood (04)		TO	11/12/97	1415	wood	
4	12-B-3/5W (05)		TO	11/12/97	1425	soil	
5	12-B-3/10N (06)		TO	11/12/97	1430	soil	
6							
7							
8							
9							

NON-RAD SAMPLES

SAMPLED/RELINQUISHED (SIG)

DATE / TIME

RECEIVED BY (SIG.)

RAD SAMPLES

SAMPLED/RELINQUISHED (SIG)

DATE / TIME

RECEIVED BY (SIG.)

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Burbank

Las Vegas Division
4208 Arcata Way, Suite A • Las Vegas, NV 89030
(702) 657-1010 • Fax: (702) 657-1577
1-888-368-3282

CLIENT: Bechtel Nevada Corp.
P.O. Box 98521, M/S NTS273
Las Vegas, NV 89193-8521
ATTN: Ted Redding

PROJECT NAME: NA
PROJECT NUMBER: PO 16874

NEL ORDER ID: L9711185

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 11/20/97.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

- Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
- Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
- Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (702) 657-1010.

Some results have been flagged as follows:

JI - The batch MS and/or MSD were outside acceptance limits. The batch LCS was acceptable.

Stan Van Wagenen
Laboratory Manager

12/1/97
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>Burbank</u>
Arizona	AZ0520	AZ0518	AZ0325
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>Burbank</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: PO 16874

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992
METHOD: EPA 8015M
MATRIX: Soil

ANALYST: John

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/kg	Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
12-B-1/East	11/18/97	L9711185-01	490 JI**	10. mg/kg	89 %	11/26/97	11/29/97
12-B-/West	11/18/97	L9711185-02	92 JI**	10. mg/kg	92 %	11/26/97	11/28/97
9-300-1/S	11/19/97	L9711185-03	ND JI	10. mg/kg	90 %	11/26/97	11/28/97
12-Comm-1/S9	11/19/97	L9711185-04	ND JI	10. mg/kg	93 %	11/26/97	11/29/97
12-Comm-1/N9	11/19/97	L9711185-05	ND JI	10. mg/kg	88 %	11/26/97	11/29/97

** Diesel Range Organics (C12 to C32).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 971126stph -BLK	ND	< 10. mg/kg	92 %	NA
LCS, 971126stph - LCS	89 %	55 - 102 %	99 %	NA
MS, 971126stph - MS	154 %	55 - 102 %	102 %	L9711185-01
MSD, 971126stph - MSD	211 %	55 - 102 %	118 %	L9711185-01

ND - Not Detected

* Surrogate used was Octacosane, acceptance limits 70-130%.

This report shall not be reproduced except in full, without the written approval of the laboratory.

**SUPPORTING
DATA**

SAMPLE DELIVERY GROUP: V323CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 12/12/97DATE REVIEWED: 12/23/97REVIEWED BY:

TPH - DIESEL / OIL:

MATRIX: SOILARE TPH DIESEL/OIL DATA ACCEPTABLE: YESARE CRITERIA MET

1. QC SAMPLES ACCEPTABLE

YES

2. MATRIX SPIKE ACCEPTABLE

SEE COMMENTS

3. METHOD BLANK ACCEPTABLE

YES

4. HOLDING TIMES ACCEPTABLE

YES

a. Date Sampled:

11/19/97# DAYS0ACCEPTABLE0

b. Date ASL Received:

N/AN/A1

c. Date Contract Lab Received:

11/20/9715

d. Date Extracted:

11/26/97714

e. Date Analyzed:

11/29/97340

5. CALCULATIONS ACCEPTABLE:

YES

6. CORRECT CONC. UNITS USED:

YES

7. FORMS ACCEPTABLE:

YES

8. CHAIN-OF-CUSTODY AGREES:

YES

COMMENTS: Method associated quality assurance and control criteria were met. Sample 12-B-1/West is identified as 12-B-/West in the report. The multippeak chromatograms produced from analyses of samples 12-B-1/East and 12-B-1/West did not identically match the lab's diesel or oil standards, but eluted between them, overlapping much of the diesel elution range. The responses were quantitated using the diesel calibration and should be considered estimates of the hydrocarbon concentration. Sample 12-B-1/East was used for the matrix spike and matrix spike duplicate. Recoveries were outside the upper control limit, attributed to matrix effects.

L9711185

BECHTEL NEVADA CORPORATION

12/1

Page 1 of 1

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST AND CHAIN OF CUSTODY

PROJECT INFORMATION

ORG#: 2150 Charge #: C4N-3A0DE

Project #: PO 16874 Funded by: X EM

O DP

Project Manager: Steve Nach/Jerry Bonn

Phone: J. Bonn 295-7341 M/S: NTS306

REPORT INFORMATION

*DATE DUE: 12-1-97 Preliminary ☐ YES
Report ☐ NO

*There may be additional charges for reports due in less than the standard turnaround time. See back.

Send Report to: Ted Redding M/S: NTS273

Phone: 295-7220 Fax: 295-4773

LAB USE ONLY

SDG#: V323 12/15/97 PACKET #: W1344
SDG#: PACKET #: 12/15/97

Is the radioactivity level in any of these samples above typical environmental or bioassay levels?

REQUESTER'S SIGNATURE

DATE: 11/20/97

NON-RAD ANALYSIS CODES

RCRA TF = TPH - Full PH = pH
V = VOA TG = TPH - Gas IND HYGIENE
TCLP VOA TD = TPH - Diesel APC = Asb/PCM
B = BNA TO = TPH - Oil APL = Asb/PLM
TB = TCLP BNA M = Metals AT = Asb/TEM
PS = Pesticide TM = TCLP Metals PBF = Pb/filter
P = PCB C = Clor-d-lect G = Gravimetric
PSP = Pest & PCB F = Flashpoint OTHERS - SEE BACK

RAD ANALYSIS CODES

01 = TRITIUM 11 = PU OTHERS -
02 = GROSS ALPHA 13 = TH SEE
03 = GROSS BETA 22 = SR-89 BACK
04 = GAMMA (20 min) 23 = SR-90
05 = GFP 31 = GAMMA (1000 min)
07 = ISO U 33 = GAMMA (300 min)
08 = AM 93 = U NAT (KPA)

RAD MATRIX CODES (RAD MC)

SAMPLE COLLECTION LOCATION

Area 12 B Tunnel - Site Location 12-B-1

Area 9 - Site Location 9-300-1

Area 12 Site Location 12-Comm-1

ITEM	ID/DESCRIPTION	RAD MC	ANALYSIS CODES								SAMPLING		MATRIX	COMMENTS Preservative, size/volume, special analysis, count time
											DATE	TIME		
0	12-B-1/East (01)		TD								11/18/97	1400	soil	TPH using 8015M
1	12-B-1/West (02)		TD								11/18/97	1405	soil	TPH using 8015M
2	9-300-1/S (03)		TD								11/19/97	1140	soil	TPH using 8015M
3	12-Comm-1/S9 (04)		TO	TD							11/19/97	1450	soil	TPH using 8015M
	12-Comm-1/N9 (05)		TO	TD							11/19/97	1455	soil	TPH using 8015M
5	23-111/E.Well (06)										11/20/97	0830	air	C10-C20 analysis
6	23-111/W.Well (07)										11/20/97	0840	air	C10-C20 analysis
7														
8														
9														

NON-RAD SAMPLES

SAMPLED/RELINQUISHED (SIG)

DATE / TIME

RECEIVED BY (SIG.)

RAD SAMPLES

SAMPLED/RELINQUISHED (SIG)

DATE / TIME

RECEIVED BY (SIG.)

Bechtel Nevada

Interoffice Memorandum

To: S. J. Nacht

Date: February 19, 1998

From: T. P. Van Sittert
Analytical Services Laboratory, 295-7472

No.: 2150-AL-98-0136

Subject: DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V322
Project No. 04001

Nevada Environmental Laboratory's (NEL) results have been reported to J. F. Bonn for the polychlorinated biphenyls (PCBs) and total petroleum hydrocarbons (TPH) - diesel and oil analyses of six samples submitted to NEL on November 18, 1997. Also reported were Quanterra Environmental Services (QES) results for the Toxicity Characteristic Leaching Procedure (TCLP) metals analysis of the six samples, received at QES on November 22, 1997.

The samples were initially submitted only for the TPH determination. Subsequently, the client requested that PCB and TCLP metals analyses be performed. The NEL Las Vegas facility was not able to provide the TCLP metals analysis support. Consequently, portions of the samples were shipped to QES for that determination.

Preliminary data was faxed to the client.

SPECIFIC:

Polychlorinated Biphenyls:

Method associated quality assurance and quality control (QA/QC) criteria were met.

Small amounts of Aroclors 1254 and 1260 near the associated method detection limits were found in samples 12-Comm-1/S. Wall and 12-Comm-1/N. Wall, respectively.

The laboratory did not include the Laboratory Control Sample (LCS) report page with the package. Review of the raw data indicates the LCS was analyzed and recovered Aroclors 1016 and 1260 at 97% and 91% respectively.

Total Petroleum Hydrocarbons - Diesel and Oil:

Method associated QA/QC criteria were met.

All results were flagged as being comprised of oil range contamination.

The surrogate recovery in sample 12-Comm-1/W. Wall was outside the lower acceptable limit. The extract was reanalyzed and produced similar results. Only the initial analytical result was reported.

2150-AL-98-0136
S. J. Nacht
Page 2 of 2
February 19, 1998

The laboratory was contacted to clarify the "J" qualifier definition. NEL replied that the "duplicate analyses" referred to in the case narrative were actually reanalyses of the sample extracts, not duplicate processing on a unique aliquot of the same sample.

TCLP Metals:

Method associated QA/QC criteria were met.

Sample PBT159506 was an extraction blank carried through the extraction and analysis process.

Data qualified with a "B" indicate the concentration is between the practical quantitation limit and the instrument detection limit.

Please direct any questions you may have to your Client Service Representative, Ted Redding, at 295-7220.

T. P. Van Sittert

TPV:mm
Subject Code: ENV3

cc: Correspondence Control, NLV008
K. A. Quintana, NLV022
J. F. Bonn (results enc.), NTS306
ASL SDG V322 (results enc.), NTS273

NEL
CASE
NARRATIVE
&
POLYCHLORINATED BIPHENYLS
RESULTS

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Burbank

Las Vegas Division
4208 Arcata Way, Suite A • Las Vegas, NV 89030
(702) 657-1010 • Fax: (702) 657-1577
1-888-368-3282

CLIENT: Bechtel Nevada Corp.
P.O. Box 98521, M/S NTS273
Las Vegas, NV 89193-8521
ATTN: Ted Redding

PROJECT NAME: NA
PROJECT NUMBER: NA

NEL ORDER ID: L9711139

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 11/18/97.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

- Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
- Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
- Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (702) 657-1010.

Some results have been flagged as follows:

- J - Estimated concentration due to probable matrix effects. Sample QC outside acceptance criteria in duplicate analyses.

Stan Van Wagenen
Laboratory Manager

11/25/97
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>Burbank</u>
Arizona	AZ0520	AZ0518	AZ0325
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>Burbank</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: NA

CLIENT ID: 12-Comm-1/S. Wall
DATE SAMPLED: 11/17/97
NEL SAMPLE ID: L9711139-01

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8081, Sept. 1994

MATRIX: Soil

EXTRACTED: 11/25/97

DILUTION: 1

ANALYZED: 11/25/97

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	20 µg/kg	20. µg/kg
Arochlor-1260	ND	20. µg/kg

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	92	70 - 130
Tetrachloro-m-xylene	84	70 - 130

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: NA

CLIENT ID: 12-Comm-1/W. Wall
DATE SAMPLED: 11/17/97
NEL SAMPLE ID: L9711139-02

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8081, Sept. 1994

MATRIX: Soil

EXTRACTED: 11/25/97

DILUTION: 1

ANALYZED: 11/25/97

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	79	70 - 130
Tetrachloro-m-xylene	70	70 - 130

ND - Not Detected

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NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: NA

CLIENT ID: 12-Comm-1/N. Wall
DATE SAMPLED: 11/17/97
NEL SAMPLE ID: L9711139-03

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8081, Sept. 1994

MATRIX: Soil

EXTRACTED: 11/25/97

DILUTION: 1

ANALYZED: 11/25/97

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	30 µg/kg	20. µg/kg

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	89	70 - 130
Tetrachloro-m-xylene	75	70 - 130

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: NA

CLIENT ID: 12-Comm-1/E. Wall
DATE SAMPLED: 11/17/97
NEL SAMPLE ID: L9711139-04

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8081, Sept. 1994

MATRIX: Soil

EXTRACTED: 11/25/97

DILUTION: 1

ANALYZED: 11/25/97

ANALYST: John

PARAMETER	Result	Reporting Limit
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	83	70 - 130
Tetrachloro-m-xylene	76	70 - 130

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: NA

CLIENT ID: 12-Comm-1/N. Btm
DATE SAMPLED: 11/17/97
NEL SAMPLE ID: L9711139-05

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8081, Sept. 1994

MATRIX: Soil

EXTRACTED: 11/25/97

DILUTION: 1

ANALYZED: 11/25/97

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	82	70 - 130
Tetrachloro-m-xylene	74	70 - 130

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: NA

CLIENT ID: 12-Comm-1/S. Btm
DATE SAMPLED: 11/17/97
NEL SAMPLE ID: L9711139-06

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8081, Sept. 1994

MATRIX: Soil

EXTRACTED: 11/25/97

DILUTION: 1

ANALYZED: 11/25/97

ANALYST: John

PARAMETER	Result	Reporting Limit
Arochlor-1016	ND	20. µg/kg
Arochlor-1221	ND	20. µg/kg
Arochlor-1232	ND	20. µg/kg
Arochlor-1242	ND	20. µg/kg
Arochlor-1248	ND	20. µg/kg
Arochlor-1254	ND	20. µg/kg
Arochlor-1260	ND	20. µg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	81	70 - 130
Tetrachloro-m-xylene	75	70 - 130

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.
PROJECT NAME: NA
PROJECT NUMBER: NA

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 971121pcbs-BK

TEST: Polychlorinated Biphenyl's (PCB's) by EPA 8081, Sept. 1994

MATRIX: Soil

EXTRACTED: 11/25/97

ANALYZED: 11/25/97

ANALYST: John

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Arochlor-1016	ND	20 µg/kg
Arochlor-1221	ND	20 µg/kg
Arochlor-1232	ND	20 µg/kg
Arochlor-1242	ND	20 µg/kg
Arochlor-1248	ND	20 µg/kg
Arochlor-1254	ND	20 µg/kg
Arochlor-1260	ND	20 µg/kg

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
Decachlorobiphenyl	100	70 - 130
Tetrachloro-m-xylene	100	70 - 130

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL
CASE
NARRATIVE
&
TPH - DIESEL/OIL
RESULTS

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Burbank

Las Vegas Division
4208 Arcata Way, Suite A • Las Vegas, NV 89030
(702) 657-1010 • Fax: (702) 657-1577
1-888-368-3282

CLIENT: Bechtel Nevada Corp.
P.O. Box 98521, M/S NTS273
Las Vegas, NV 89193-8521
ATTN: Ted Redding

PROJECT NAME: NA
PROJECT NUMBER: NA

NEL ORDER ID: L9711139

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 11/18/97.

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Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (702) 657-1010.

Some results have been flagged as follows:

J - Estimated concentration due to probable matrix effects. Sample QC outside acceptance criteria in duplicate analyses.

Stan Van Wagenen
Laboratory Manager

11/19/97
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>Burbank</u>
Arizona	AZ0520	AZ0518	AZ0325
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>Burbank</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

NEL LABORATORIES

CLIENT: Bechtel Nevada Corp.

PROJECT NAME: NA

PROJECT NUMBER: NA

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, July 1992

METHOD: EPA 8015M

MATRIX: Soil

ANALYST: John

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/kg		Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
12-Comm-1/S. Wall	11/17/97	L9711139-01	1800	***	10. mg/kg	85 %	11/18/97	11/19/97
12-Comm-1/W. Wall	11/17/97	L9711139-02	1200	J***	10. mg/kg	48 %	11/18/97	11/19/97
12-Comm-1/N. Wall	11/17/97	L9711139-03	1600	***	10. mg/kg	106 %	11/18/97	11/19/97
12-Comm-1/E. Wall	11/17/97	L9711139-04	740	***	10. mg/kg	76 %	11/18/97	11/19/97
12-Comm-1/N. Btm	11/17/97	L9711139-05	120	***	10. mg/kg	91 %	11/18/97	11/19/97
12-Comm-1/S. Btm	11/17/97	L9711139-06	600	***	10. mg/kg	73 %	11/18/97	11/19/97

*** Oil Range Organics (C12 to C36).

Note: The reporting limit for Oil Range Organics in soil is 50 mg/kg.

QUALITY CONTROL DATA (Total for Gas and Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 971118tphs -BLK	ND	< 10. mg/kg	71 %	NA
LCS, 971118tphs - LCS	73 %	55 - 102 %	87 %	NA
MS, 971118tphs - MS	76 %	55 - 102 %	91 %	L9711139-01
MSD, 971118tphs - MSD	77 %	55 - 102 %	90 %	L9711139-01

ND - Not Detected

* Surrogate used was Octacosane, acceptance limits 70-130%.

This report shall not be reproduced except in full, without the written approval of the laboratory.

QUANTERRA
CASE
NARRATIVE
&
TCLP METALS
RESULTS

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CASE NARRATIVE

Bechtel Nevada Corp.
P.O. Box 98521, MS NTS 273
Las Vegas, NV 89193-8521

December 2, 1997

Attention: Ted Redding

Quanterra Project Number	: 625.01
Date Received	: November 22, 1997
Number of Samples	: Six (6)
SDG Name	: V322
Bechtel Report No.	: NA
Sample type	: Sludge

INTRODUCTION

Six (6) sludge samples from Bechtel Nevada was received at Quanterra Environmental Services, Earth City, MO for TCLP Metals analysis. The analytical test performed, as well as date of receipt and analysis, can be found in the enclosed data package.

The Form 1s were transmitted by Fax on December 1, 1997.

Reviewed and Approved

Allen M. Field
Quanterra Project Manager

PAGE 2 of 3
December 2, 1997
Quanterra Project Number: 625.01

The samples were labeled as follows:

<u>Client ID</u>	<u>Laboratory ID</u>	<u>Matrix</u>
12-COMM-1/S. WALL	16339-001	Sludge
12-COMM-1/W. WALL	16339-002	Sludge
12-COMM-1/N. WALL	16339-003	Sludge
12-COMM-1/E. WALL	16339-004	Sludge
12-COMM-1/N. BTM	16339-005	Sludge
12-COMM-1/S. BTM	16339-006	Sludge

ANALYTICAL RESULTS/METHODOLOGY

The analytical results are presented by analytical test in the attached data package. This report includes information on client identification numbers, lab identification numbers, preparation date, analysis date, results, units, and results for quality control samples.

The following table is a list of the analyses and the methods used for the above samples:

<u>Analysis</u>	<u>Method</u>
TCLP Metals	SW-846 1311/6010&7470

QUALITY CONTROL

A method blank and laboratory control sample were analyzed with the samples.

NONCONFORMANCES

There were no nonconformances associated with the analyses of these samples.

COMMENTS

Analytical Notes

The sample extracts were diluted four fold prior to digestion for ICAP and mercury analysis.

PAGE 3 of 3

December 2, 1997

Quanterra Project Number: 625.01

QUALIFIERS/DEFINITIONS

NC	= No criteria at this time
NA	= Not applicable
ND	= Non - detect
UG/L	= Micrograms per liter
MG/L	= Millograms per liter
%REC	= Percent Recovery
QCBLK	= Method Blank
QCLCS	= Laboratory Control Sample
CRDL	= Customer Required Detection Limit
RPD	= Relative Percent Difference
IDL	= Instrument detection limit
DL	= PQL
D	= Diluted
U	= Non - Detect
B	= Value greater than IDL but less than CRDL (Metals only)
E	= Exceeds calibration

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

[illegible]

Comments:

Signature: _____ Name: _____
Date: _____ Title: _____

TCLP

000002

Lab Name: QUANTERRA MO Contract: 625.01

PBT159506

Lab Code: ITMO Case No.: SAS No.: SDG No.: V322

Matrix (soil/water): WATER

Lab Sample ID: PBT159506

Level (low/med): LOW

Date Received: 12/01/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before: Clarity Before: Texture:

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

TCLP:

00003

1

INORGANIC ANALYSES DATA SHEET

1/E. WALL

000004

1/N. BTM

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V322

Matrix (soil/water): WATER Lab Sample ID: P16339-005

Level (low/med): LOW Date Received: 11/22/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

TCLP

000005

Lab Name: QUANTERRA MO Contract: 625.01

1/N. WALL

Lab Code: ITMO Case No.: SAS No.: SDG No.: V322

Matrix (soil/water): WATER Lab Sample ID: P16339-003

Level (low/med): LOW Date Received: 11/22/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

TCLP

000006

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Comments:

000007

1/S. WALL

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: SAS No.: SDG No.: V322

Matrix (soil/water): WATER Lab Sample ID: P16339-001

Level (low/med): LOW Date Received: 11/22/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before:

Clarity Before:

Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

TCLP

000008

Lab Name: QUANTERRA MO Contract: 625.01

1/W. WALL

Lab Code: ITMO Case No.: SAS No.: SDG No.: V322

Matrix (soil/water): WATER

Lab Sample ID: P16339-002

Level (low/med) : LOW

Date Received: 11/22/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

[illegible]

Color Before:

Clarity Before:

Texture:

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

TCLP :

000009

000010

000011

3
BLANKS

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

[illegible]

TCLP

000012

Lab Name: QUANTERRA MO

Contract: 625.01

Lab Code: ITMO Case No.:

SAS No. :

SDG No. : V322

Solid LCS Source:

Aqueous LCS Source: SOL+/CHEMPUR

[illegible]

U.S. EPA - CLP

10

10

Instrument Detection Limits (Quarterly)

Lab Name: QUANTERRA MO Contract: 625.01

Lab Code: ITMO Case No.: " SAS No.: SDG No.: V322

ICP ID Number: _____ Date: 10/01/97

Flame AA ID Number : PS200

Furnace AA ID Number :

[illegible]

Comments:

FORM X - IN

TCLP:

000016

Furnace AA ID Number : _____

000017

ICP ID Number: TJA61E Date: 10/01/97

Comments:

ICP ID Number: TJA61E Date: 10/01/97

000020

ICP ID Number: TJA61E_____ Date: 10/01/97

Comments:

13
PREPARATION LOG

Method: P₁

[illegible]

TCLP

000022

13
PREPARATION LOG

Method: CV

[illegible]

TCLP

000023

14
ANALYSIS RUN LOG

End Date: 12/01/97

[illegible]

FORM XIV - IN

TCLP

000024

14
ANALYSIS RUN LOG

End Date: 12/01/97

000025

**SUPPORTING
DATA**

SAMPLE DELIVERY GROUP: V322CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 1/22/98DATE REVIEWED: 2/3/98REVIEWED BY:

PCB:

MATRIX: SOILARE PCB DATA ACCEPTABLE: YES

ARE CRITERIA MET

1. ANALYSIS SEQUENCE
2. METHOD BLANK
3. MS/MSD RESULTS
4. SURROGATE RECOVERY
5. HOLDING TIMES

YESYESN/AYESYES

DAYS

ACCEPTABLE

a. Date Sampled:

11/17/9700

b. Date ASL Received:

N/AN/A1

c. Date Contract Lab Received:

11/18/9715

d. Date Extracted:

11/25/978WATER(7), SOIL/OIL(14)

e. Date Analyzed:

11/25/97040

6. CONFIRMED BY SECOND COLUMN:

NO

CONFIRMED BY GC/MS:

NO

7. CALCULATIONS:

YES

8. Correct Conc. units used:

YES

9. FORMS ACCEPTABLE:

YES

10. Chain-of-Custody agrees:

YES

COMMENTS: Method associated quality assurance and control criteria were met. The laboratory did not include the Laboratory Control Sample report page with the package. Review of the raw data indicates the LCS was analyzed and recovered Aroclors 1016 and 1260 at 97% and 91% respectively.

SAMPLE DELIVERY GROUP: V322CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 1/22/98DATE REVIEWED: 01/27/98REVIEWED BY:

TPH - DIESEL / OIL:

MATRIX: SOILARE TPH DIESEL/OIL DATA ACCEPTABLE: YESARE CRITERIA MET

1. QC SAMPLES ACCEPTABLE	<u>YES</u>
2. MATRIX SPIKE ACCEPTABLE	<u>N/A</u>
3. METHOD BLANK ACCEPTABLE	<u>YES</u>
4. HOLDING TIMES ACCEPTABLE	<u>YES</u>

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled:	<u>11/17/97</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>N/A</u>	<u>N/A</u>	<u>1</u>
c. Date Contract Lab Received:	<u>11/18/97</u>	<u>1</u>	<u>5</u>
d. Date Extracted:	<u>11/18/97</u>	<u>1</u>	<u>14</u>
e. Date Analyzed:	<u>11/19/97</u>	<u>1</u>	<u>40</u>

5. CALCULATIONS ACCEPTABLE:	<u>YES</u>
6. CORRECT CONC. UNITS USED:	<u>YES</u>
7. FORMS ACCEPTABLE:	<u>YES</u>
8. CHAIN-OF-CUSTODY AGREES:	<u>YES</u>

COMMENTS: Method associated quality assurance and control criteria were met. All results were
flagged as consisting of oil range contamination. The surrogate recovery in sample 12-Comm-1/W. Wall
was outside the lower acceptable limit. The extract was reanalyzed and produced similar results. Only
the initial analysis was reported.

SAMPLE DELIVERY GROUP: V322CLIENT: RP - JERRY BONNLABORATORY: QUANTERRAFINAL REPORT RECEIVED: 12/4/97DATE REVIEWED: 12/11/97REVIEWED BY: **TCLP METALS:**MATRIX: SOILARE TCLP METALS DATA ACCEPTABLE: YES

1. Are Method Blanks Acceptable:	<u>YES</u>
2. Are Matrix Spikes Acceptable:	<u>N/A</u>
3. Are QC Samples Acceptable:	<u>YES</u>
4. Are Holding Times Acceptable:	<u>YES</u>

		# DAYS	ACCEPTABLE
a. Date Sampled:	<u>11/17/97</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>N/A</u>	<u>N/A</u>	<u>1</u>
c. Date Contract Lab Received:	<u>11/18/97</u>	<u>1</u>	<u>5</u>
d. Date Extracted:	<u>11/25/97</u>	<u>8</u>	<u>Hg-28/Others-180</u>
e. Date Hg Analyzed:	<u>12/1/97</u>	<u>6</u>	<u>28</u>
f. Date Others Analyzed:	<u>12/1/97</u>	<u>6</u>	<u>180</u>
5. Are Forms correct:	<u>YES</u>		
6. Are correct concentration units used:	<u>YES</u>		
7. Are analyses completed:	<u>YES</u>		
8. Chain-of-Custody agrees:	<u>YES</u>		

COMMENTS: Method associated quality assurance and control criteria were met. Sample PBT159506
was an extraction blank carried through the extraction and analysis process. Sample results qualified
with a "B" indicate the concentration is between the PQL and IDL.

11/19 - 11/25

19711139

 11/19/92 11/25/92
 Cond. 11/19/92 11/25/92
 Temp. 26

JOB#:

BECHTEL NEVADA CORPORATION

TODAY'S DATE: 11/17/92

PAGE 1

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST AND CHAIN OF CUSTODY

REV 6/18/96

PROJECT INFORMATION

 ORG #: 2150 Charge #: C4N3A005
 Project #: _____ Funded by: ☐ EM ☐ DP
 Project Manager: DAVE CONNOR/S.B.D.
 Phone: 295-2341 M/S: NTS306

REPORT INFORMATION

 *DATE DUE: 24/11/92 PRELIMINARY ☐ Yes ☐ No
 REPORT: ☐ Yes ☐ No
 *There may be additional charges for reports due in less than the standard turnaround time. See back.
 Send report to: TED READING M/S: _____
 Phone: 295-7220 Fax: 295-4773

LAB USE ONLY

 SDG #: _____ Packet #: _____
 SDG #: _____ Packet #: _____

Is the radioactivity level in any of these samples expected to be above typical environmental or bioassay levels? Yes No (circle)

REQUESTER'S SIGNATURE:

DATE: 11/17/92

NON-RAD ANALYSIS CODES

 RCRA
 V = VOA
 TV = TCLP VOA
 E = IA
 Tb = TCLP BNA
 PS = Pesticide
 P = PCB
 PSP = PEST & PCB
 TF = TPH - Full
 TG = TPH - Gas
 TD = TPH - Diesel
 TO = TPH - Oil
 M = Metals
 TM = TCLP Metals
 C = Chlor-d-lect
 F = Flashpoint
 PH = pH
 IND HYG
 APC = Asb/PCM
 APL = Asb/PLM
 AT = Asb/TEM
 PBF = Pb/Filter
 G = Gravimetric
 OTHERS - SEE BACK

RAD ANALYSIS CODES

 01 = TRITIUM
 02 = GROSS ALPHA
 03 = GROSS BETA
 04 = GAMMA (20 min)
 05 = GFP
 07 = ISO U
 08 = AM
 11 = PU
 13 = TH
 22 = SR-89
 23 = SR-90
 31 = GAMMA (1000 min)
 33 = GAMMA (300 min)
 93 = U NAT (KPA)
 OTHERS - SEE BACK

RAD MATRIX CODES (RAD MC)

SEE BACK

SAMPLE COLLECTION LOCATION

A12 - SITE 12 - Comm-1

ITEM	ID/DESCRIPTION	RAD MC	ANALYSIS CODES						SAMPLING			COMMENTS
									DATE	TIME	MATRIX	
0	12-Comm-1/S.WALL	TD TO	(-01)						11/17/92	1445	SOIL	TPH AS DIESEL OIL 8015m
1	12-Comm-1/W.WALL		(-02)							1450		
2	12-Comm-1/N.WALL		(-03)							1455		
3	12-Comm-1/E.WALL		(-04)							1505		
4	12-Comm-1/N.BTM		(-05)							1515		
	12-Comm-1/S.BTM		(-06)							1520		
6												11/20/92
7												Client added PCB & TCLP 8 ON ALL SAMPLES
8												72 HR TURN DUE 11/25/92
9												

NON-RAD SAMPLES

SAMPLED/RELINQUISHED BY(SIG)

DATE / TIME

RECEIVED BY (SIG):

RAD SAMPLES

SAMPLED/RELINQUISHED BY(SIG)

DATE / TIME

RECEIVED BY (SIG):

11/18/92/6200

D. Connor

CHAIN OF CUSTODY
CHANGE ORDER FORMDate: 11-20-97Change Requested by: JerryNEL Order ID: 19711139-116Name of Client/Contact: Bechtel NevadaDate Client Contacted: 11-20-97Analysis Added: PCBs, TCLP 8 Metals

Analysis Deleted: _____

Samples Added: _____

Samples Deleted: _____

Reason for Change: Client Called And requested
Additional Analyses - PCBs And TCLP 8
on All Samples - requested 72hr TAT.

Is there sufficient sample for analysis/samples added? Yes No

Are the samples properly preserved for analysis/sample added? Yes No

Can the samples be analyzed within hold time? Yes No

Expected Due Date: 11/25/97

Change form faxed to: Burbank Las Vegas Phoenix Reno

Date and time faxed: _____

NEL contact person: JackieSigned: Jackie

CHR# 13467

QUA-4124

L97/1139-

Due 12-1-97

Client Bechtel Nevada Corp.			Project Manager Ted Redding			Date <u>12-1-97 JR</u>		Chain Of Custody Number 23347						
Address P.O. Box 98521, M/S NTS 273			Telephone Number (Area Code)/Fax Number (702) 295-7220, Fax (702) 295-4773			Lab Number								
City Las Vegas		State NV	Zip Code 89193-8521		Site Contact				Analysis <div style="display: flex; justify-content: space-between;"> 8 e </div>					
Project Name Bechtel Nevada					Carrier/Waybill Number									
Contract/Purchase Order/Quote No. 2668														

[illegible]

Special Instructions

*Please sign Chain-of-Custody received from Federal Express.

Possible Hazard Identification			Sample Disposal		
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown			☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months		
Turn Around Time Required ☐ Normal ☐ Rush RESULTS REQ 12-1-97			QC Level ☐ I. ☐ II. ☐ III.		
1. Relinquished By MIKE Ensey			1. Received By to QUANTERA Fed Ex		
2. Relinquished By			2. Received By 2nd M. Del		
3. Relinquished By			3. Received By		
Date 11/21/97			Date 11-22-97		
Time 939			Time 0935		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Quanterra November 24, 1997 09:51 am
 Account: 11113 Project: 625.01 Bechtel Nevada QAS No. 625.01 Rev. 10
 Master Sample Login: 16339

Project Manager: A. Field

Draft: Final:

Entered and Reviewed by: [Signature]

PM Review: [Signature]

Sample Header Template:

Sample No.	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
Comments								
# Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)	
Data:								
16339-001	12-COMM-1/S. WALL	Sludge	17-NOV-97 14:45	22-NOV-97 09:35	01-DEC-97	FED EX	3*	R6731-006
1 GW - Glass Jar-8oz	EXTMETAL/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342728:100)	
1	HG/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342728:100)	
1	ICAP/TCLP/Q4	S	COLD	01-DEC-97	16-MAY-98	R1B	(342728:100)	
1	RAD/CSCREEN/Q4	S	COLD	01-DEC-97	21-MAY-98	R1B	(342728:100)	
16339-002	12-COMM-1/W.WALL	Sludge	17-NOV-97 14:50	22-NOV-97 09:35	01-DEC-97	FED EX	3*	R6731-005
1 GW - Glass Jar-8oz	EXTMETAL/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342730:100)	
1	HG/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342730:100)	
1	ICAP/TCLP/Q4	S	COLD	01-DEC-97	16-MAY-98	R1B	(342730:100)	
1	RAD/CSCREEN/Q4	S	COLD	01-DEC-97	21-MAY-98	R1B	(342730:100)	
16339-003	12-COMM-1/N.WALL	Sludge	17-NOV-97 14:55	22-NOV-97 09:35	01-DEC-97	FED EX	3*	R6731-004
1 GW - Glass Jar-8oz	EXTMETAL/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342731:50)	
1	HG/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342731:50)	
1	ICAP/TCLP/Q4	S	COLD	01-DEC-97	16-MAY-98	R1B	(342731:50)	
1	RAD/CSCREEN/Q4	S	COLD	01-DEC-97	21-MAY-98	R1B	(342731:50)	
16339-004	12-COMM-1/E.WALL	Sludge	17-NOV-97 15:05	22-NOV-97 09:35	01-DEC-97	FED EX	3*	R6731-003
1 GW - Glass Jar-8oz	EXTMETAL/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342732:50)	
1	HG/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342732:50)	
1	ICAP/TCLP/Q4	S	COLD	01-DEC-97	16-MAY-98	R1B	(342732:50)	
1	RAD/CSCREEN/Q4	S	COLD	01-DEC-97	21-MAY-98	R1B	(342732:50)	
16339-005	12-COMM-1/N.BTM	Sludge	17-NOV-97 15:15	22-NOV-97 09:35	01-DEC-97	FED EX	3*	R6731-002
1 GW - Glass Jar-8oz	EXTMETAL/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342733:60)	
1	HG/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342733:60)	
1	ICAP/TCLP/Q4	S	COLD	01-DEC-97	16-MAY-98	R1B	(342733:60)	
1	RAD/CSCREEN/Q4	S	COLD	01-DEC-97	21-MAY-98	R1B	(342733:60)	
16339-006	12-COMM-1/S.BTM	Sludge	17-NOV-97 15:20	22-NOV-97 09:35	01-DEC-97	FED EX	3*	R6731-001

3*=Sample has not been rad screened.

Project Manager: A. Field
Draft: Final: Entered and Reviewed by: PM Review:
Sample Header Template:

Account: 11113

Quanterra November 24, 1997 09:51 am
Project: 625.01 Bechtel Nevada QAS No. 625.01 Rev. 10
Master Sample Login: 16339

Sample No.	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
1	GW - Glass Jar-8oz	EXTMETAL/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342734:50)
1		HG/TCLP/Q4	S	COLD	01-DEC-97	15-DEC-97	R1B	(342734:50)
1		ICAP/TCLP/Q4	S	COLD	01-DEC-97	16-MAY-98	R1B	(342734:50)
1		RAD/CSCREEN/Q4	S	COLD	01-DEC-97	21-MAY-98	R1B	(342734:50)

3*-Sample has not been rad screened.

BW&AP
013467

Login No.: 16339

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Bechtel

Date: 11-22-97 Time: 0935

Project No: 625.D1

Initiated by: John M. Miller

Shipper/No: Fed Ex 800339703524

RFA/COC Numbers: 23347

Condition/Variance (Check all that apply):

1. ☐ Sample received broken/leaking.	8. ☐ Sample ID on container does not match sample ID on paperwork. Explain: _____
2. ☐ Sample received without proper preservative.	
☐ Cooler temperature not within $\pm 3^{\circ}\text{C}$	
Record temperature: _____	
☐ pH _____	9. ☐ All coolers on arrival not received with shipment.
☐ other: _____	10. ☐ Other (explain below): _____
3. ☐ Sample received in improper container.	
4. ☐ Sample received without proper paperwork. Explain: _____	
5. ☐ Paperwork received without sample.	
6. ☐ No sample ID on sample container.	
7. ☐ Custody tape disturbed/broken/missing.	

☐ No variances were noted during sample receipt.

Cooler Temperature Upon Receipt: NA

Notes: No Ice

Corrective Actions:

☐ Client's Name: _____ Informed verbally on: _____ By: _____

☐ Client's Name: _____ Informed in writing on: _____ By: _____

☐ Sample(s) processed "as is".

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