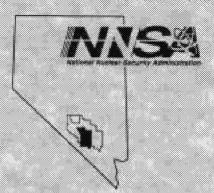
Nevada Environmental Restoration Project

DOE/NV-873-REVI



Closure Report for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, Nevada

Controlled Copy No.:

Revision: 1

April 2003

Environmental Restoration Division

> J.S. Department of Energy National Nuclear Security Astronomy

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CLOSURE REPORT FOR CORRECTIVE ACTION UNIT 398: AREAS 25 SPILL SITES, NEVADA TEST SITE, NEVADA

Prepared for:
U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
Work Performed Under Contract No. DE-AC08-96NV11718

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CLOSURE REPORT FOR CORRECTIVE ACTION UNIT 398: AREA 25 SPILL SITES, NEVADA TEST SITE, NEVADA

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Er	Janet Appenzeller-Wing, Project Manager Industrial Sites Project	-		,	

Environmental Restoration Division

Approved by: Survive Shirt Date: 1-23-33

Runore C. Wycoff Director

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ACRONYMS AND ABBREVIATIONS

bgs below ground surface

BN Bechtel Nevada

CAS Corrective Action Site(s)

CR Closure Report

CAU Corrective Action Unit

cm centimeter(s)

COC contaminant(s) of concern

CSM conceptual site model

DOE/NV U.S. Department of Energy, Nevada Operations Office

DQO Data Quality Objective(s)

E-MAD Engine Maintenance, Assembly, and Disassembly

EPA U.S. Environmental Protection Agency

FFACO Federal Facility Agreement and Consent Order

ft foot(feet)

gal gallon(s)
in inch(es)

km kilometer(s)

L liter(s)
m meter(s)

m³ cubic meter(s)

mg/kg milligram(s) per kilogram

mg/L milligram(s) per Liter

mi mile(s)

NAC Nevada Administrative Code

NDEP Nevada Division of Environmental Protection

NNSA/NSO U.S. Department of Energy, National Nuclear Security Administration Nevada

Site Office

NNSA/NV U.S. Department of Energy, National Nuclear Security Administration Nevada

Operations Office

NTS Nevada Test Site

QA/QC quality assurance/quality control

PCB Polychlorinated Biphenyls

RCRA Resource Conservation and Recovery Act

CLOSURE REPORT - CAU 398 Section: Acronyms and Abbrev.

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ACRONYMS AND ABBREVIATIONS (continued)

SAFER Streamlined Approach for Environmental Restoration

SVOC Semivolatile Organic Compound(s)

TPH Total Petroleum Hydrocarbons

VOC Volatile Organic Compound(s)

yd³ cubic yard(s)

EXECUTIVE SUMMARY

Corrective Action Unit (CAU) 398 consists of 13 Corrective Action Sites (CASs) all located in Area 25 of the Nevada Test Site. The unit is listed in the Federal Facility Agreement and Consent Order (FFACO, 1996) as CAU 398: Area 25 Spill Sites and consists of the following CASs:

- CAS 25-25-02, Oil Spills
- CAS 25-25-03, Oil Spills
- CAS 25-25-04, Oil Spills
- CAS 25-25-05, Oil Spills
- CAS 25-25-06, Oil Spills
- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-16, Diesel Spill (from CAS 25-01-02)
- CAS 25-25-17, Subsurface Hydraulic Oil Spill
- CAS 25-44-01, Fuel Spill
- CAS 25-44-02, Spill
- CAS 25-44-03, Spill
- CAS 25-44-04, Acid Spill (from CAS 25-01-01)

CAU 398 was closed in accordance with the FFACO and the Nevada Division of Environmental Protection-approved Streamlined Approach for Environmental Restoration Plan for CAU 398: Area 25 Spill Sites, Nevada Test Site, Nevada (U.S. Department of Energy, Nevada Operations Office, 2001). The implemented closure strategy consisted of the activities listed below.

Three CASs were closed by taking no further action. At these CASs, analytical sample results showed no contaminants of concern (COCs) present above action levels. The following CASs were closed with no further action:

- CAS 25-25-06, Oil Spills
- CAS 25-44-01, Fuel Spill
- CAS 25-44-04, Acid Spill (from CAS 25-01-01)

Seven CASs were clean closed by removal of all impacted soil. At four CASs total petroleum hydrocarbons (TPH) was identified as the only COC present above action levels. At one CAS TPH and Polychlorinated Biphenyls (PCBs) were identified as COCs present above action levels. At one CAS TPH, PCBs, lead and cadmium were identified as COCs, and at a final CAS, TPH and cadmium were identified as COCs present above action levels. These seven CASs were clean closed by removal of all impacted soil, collecting soil verification samples from the bottom and sidewalls of the excavations, submitting soil samples for laboratory analysis to verify that all impacted soil was removed, backfilling the excavations with clean fill, and grading the backfilled areas to the approximate original site contours. Copies of the analytical results for the collected soil verification samples are included in Appendix B of this report. The following CASs were clean closed:

CAS 25-25-02, Oil Spills

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- CAS 25-25-03, Oil Spills
- CAS 25-25-04, Oil Spills
- CAS 25-25-05, Oil Spills
- CAS 25-25-16, Diesel Spill (from CAS 25-01-02)
- CAS 25-44-02, Spill
- CAS 25-44-03, Spill

Three CASs were closed in place with administrative controls, i.e., implementing use restrictions. TPH as diesel/oil were the only COCs present at two of these sites. At the remaining CAS, TPH and PCBs were the COCs present. Given specific site conditions (e.g., presence of utilities, limited working space, shallow depth to bedrock, and limited lighting), a risk assessment of each of these sites, based on the "A through K" evaluation as presented in Nevada Administrative Code (NAC) Section 445A.277, was performed (NAC, 2002a) for each CAS and land use restrictions implemented. The following CASs were closed in place with administrative controls, i.e., implementing use restrictions:

- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-17, Subsurface Hydraulic Oil Spill

Copies of the CAU Use Restriction Information forms for these three sites are included in Appendix C of this report.

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1.0 INTRODUCTION

This Closure Report (CR) documents the activities performed to close Corrective Action Unit (CAU) 398: Area 25 Spill Sites, in accordance with the Federal Facility Agreement and Consent Order (FFACO) of 1996, and the Nevada Division of Environmental Protection (NDEP)-approved Streamlined Approach for Environmental Restoration (SAFER) Plan for CAU 398: Area 25 Spill Sites, Nevada Test Site, Nevada (U.S. Department of Energy, Nevada Operations Office [DOE/NV], 2001). CAU 398 consists of the following thirteen Corrective Action Sites (CASs) all located in Area 25 of the Nevada Test Site (NTS) (Figure 1):

- CAS 25-25-02, Oil Spills
- CAS 25-25-03, Oil Spills
- CAS 25-25-04, Oil Spills
- CAS 25-25-05, Oil Spills
- CAS 25-25-06, Oil Spills
- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-16, Diesel Spill (from CAS 25-01-02)
- CAS 25-25-17, Subsurface Hydraulic Oil Spill
- CAS 25-44-01, Fuel Spill
- CAS 25-44-02, Spill
- CAS 25-44-03, Spill
- CAS 25-44-04, Acid Spill (from CAS 25-01-01)

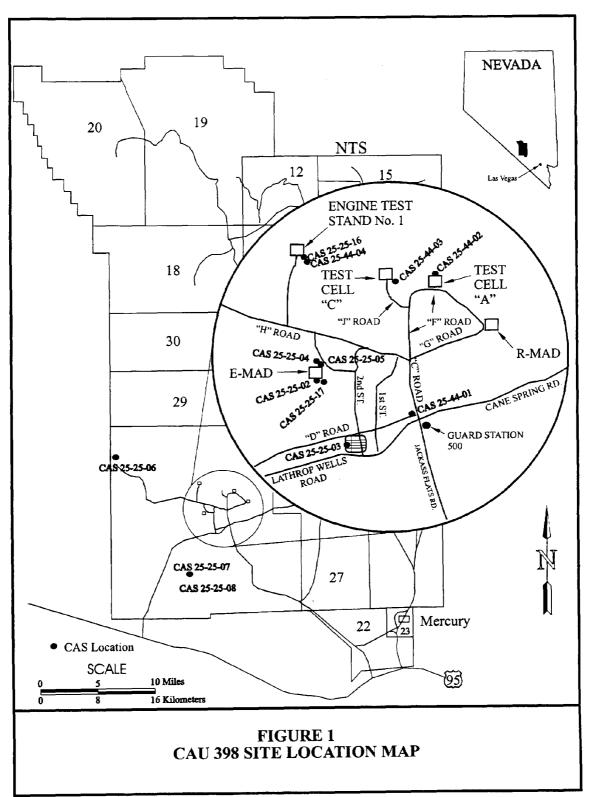
Copies of the analytical results for the site verification samples are included in Appendix B. Copies of the CAU Use Restriction Information forms are included in Appendix C.

1.1 PURPOSE

The purpose of this CR is to document that the closure of CAU 398 complied with all of the closure requirements as stated in the NDEP-approved CAU 398 SAFER Plan, (DOE/NV, 2001). CAU 398 consists of 13 CASs which are spill sites located in Area 25 of the NTS. CAU 398 was closed as detailed in the NDEP-approved SAFER plan (DOE/NV, 2001). Seven CASs were clean closed by removal of all impacted soil, three CASs were closed with no further action being taken and three CASs were closed in place with administrative controls.

1.2 SCOPE

The approved closure strategy for CAU 398 was specified in the SAFER Plan for CAU 398 (DOE/NV, 2001). The implemented closure strategy consisted of the following activities.



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Three CASs were closed by taking no further action. At these CASs, characterization sample results showed no contaminants of concern (COC) present at levels above action levels. Therefore, the following three sites were closed by taking no further action:

- CAS 25-25-06, Oil Spills
- CAS 25-44-01, Fuel Spill
- CAS 25-44-04, Acid Spill (from CAS 25-01-01)

Seven CASs were clean closed by removal of all impacted soil. At four CASs total petroleum hydrocarbons (TPH) was identified as the only COC present above action levels. At one CAS TPH and Polychlorinated Biphenyls (PCBs) were identified as COCs present above action levels. At one CAS TPH, PCBs, lead and cadmium were identified as COCs, and at a final CAS, TPH and cadmium were identified as COCs present above action levels. These seven CASs were clean closed by excavation and removal of impacted soil, collecting soil verification samples from the bottom and sidewalls of the excavations, submitting samples for laboratory analysis to verify that all impacted soil was removed, backfilling the excavation with clean fill, and grading the backfilled sites to the surrounding contours. The following CASs were clean closed:

- CAS 25-25-02, Oil Spills
- CAS 25-25-03, Oil Spills
- CAS 25-25-04, Oil Spills
- CAS 25-25-05, Oil Spills
- CAS 25-25-16, Diesel Spill (from CAS 25-01-02)
- CAS 25-44-02, Spill
- CAS 25-44-03, Spill

Three CASs were closed in place with administrative controls by implementing use restrictions. TPH as diesel/oil was the only COC present at two of these CASs and at the remaining site, TPH and PCBs were the COCs present. Given specific site conditions (e.g., presence of utilities, limited working space, safety considerations, shallow depth to bedrock, restricted access and limited lighting), these three CASs were closed in place. As part of the site closure, a risk assessment for each of the three sites, based on the "A through K" evaluation as presented in Nevada Administrative Code (NAC) Section 445A.227 (NAC, 2002a), was performed. Based on the results of the "A through K" risk assessment, the following three CASs were closed in place with administrative controls by implementing use restrictions:

- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-17, Subsurface Hydraulic Oil Spill

1.3 CLOSURE REPORT CONTENTS

This CR is divided into the following sections:

Section 1.0-Introduction Section 2.0-Closure Activities

CLOSURE REPORT - CAU 398 Section: Introduction

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Section 3.0-Waste Disposition

Section 4.0-Closure Verification Results

Section 5.0-Conclusions and Recommendations

Section 6.0-References

Appendix A-Data Quality Objectives (DQOs) for CAU 398

Appendix B-Verification Sample Analytical Results

Appendix C-Use Restriction Information

Appendix D-Waste Disposition Documentation

Appendix E-Field Photographs

Distribution List

This report was developed using information and guidance from the following documents:

- <u>Streamlined Approach for Environmental Restoration Plan for Corrective Action Unit</u> 398: Area 25 Spill Sites, Nevada Test Site, Nevada, (DOE/NV, 2001).
- <u>Field Management Plan for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, Nevada, (Bechtel Nevada [BN], 2002a).</u>
- Site Specific Health and Safety Plan for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, (BN, 2002b).

Date: April 2003

2.0 CLOSURE ACTIVITIES

This section details the specific corrective action activities completed during the closure of CAU 398: Area 25 Spill Sites. Copies of the analytical data for all collected soil verification samples are included in Appendix B, and copies of the CAU Use Restriction Information forms are included in Appendix C.

2.1 DESCRIPTION OF CORRECTIVE ACTION ACTIVITIES

2.1.1 Preplanning and Site Preparation

Closure of CAU 398 was completed using the NDEP-approved <u>Streamlined Approach for Environmental Restoration Plan for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, Nevada, Revision 0, (DOE/NV, 2001).</u> Prior to beginning closure activities, the following prefield activities were completed:

- Preparation of a National Environmental Policy Act documentation (checklist).
- Preparation of the <u>Field Management Plan for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, Nevada</u>, (BN, 2002a).
- Preparation of the <u>Site-Specific Health and Safety Plan for Corrective Action Unit 398:</u>
 <u>Area 25 Spill Sites, Nevada Test Site,</u> (BN, 2002b).
- Preparation of the U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office (NNSA/NV) Real Estate/Operations Permit.

The following is the scope of the closure actions implemented for CAU 398.

2.1.2 Waste Characterization

Site preliminary assessments were performed by the International Technology Corporation. Waste classification samples were collected and analyzed by BN personnel and the results are presented in the CAU 398 SAFER Plan (DOE/NV, 2001). Table 1 shows the analyses that were conducted for waste classification samples, the results of these analyses, and the resulting waste classification.

Additional waste classification samples for PCBs and Resource Conservation and Recovery Act (RCRA) metals were collected at CAS 25-25-04 and CAS 25-25-05 on April 03, 2002, to determine lateral extent of contamination and to better define and reduce the area of excavation and, hence, to reduce the volume of waste generated.

Approximately 245 cubic meters (m³) (320 cubic yards [yd³]) of impacted soil was excavated from the seven clean closed CASs from April 23 to June 28, 2002.

TABLE 1 - SUMMARY OF CAU 398 WASTE CHARACTERIZATION SAMPLES

CAS	SAMPLE TYPE	ANALYSIS	ANALYTICAL RESULTS	WASTE TYPE	
25-44-01	Soil	TPH ^a , TCLP ^b RCRA ^c Metals, and gamma spectroscopy	All analyses lower than action levels	Sanitary	
25-44-02	Soil	TPH, TCLP RCRA Metals, and gamma spectroscopy	TPH higher than action level	Hydrocarbon	
25-44-03	Soil	TPH, TCLP RCRA Metals, PCBs ^d , and gamma spectroscopy	TPH higher than action level	Hydrocarbon	
25-44-04 (from CAS 25-01-01)	Soil	pH, and gamma spectroscopy	All analyses lower than action levels	No further action	
25-25-02	Soil	TPH, TCLP RCRA Metals, TCLP SVOCs ^c , PCBs, and gamma spectroscopy	TPH and PCBs higher than action level	Hydrocarbon and Polychlorinated Biphenyls	
25-25-03	Soil	TPH, and gamma spectroscopy	TPH higher than action level	Hydrocarbon	
25-25-04	Soil	TPH, TCLP RCRA Metals, TCLP VOCs ^f , TCLP SVOCs, PCBs, and gamma spectroscopy	TPH, RCRA Metals, and PCBs higher than action level	Hydrocarbon, Polychlorinated Biphenyls, Lead, and Cadmium	
25-25-05	Soil	TPH, TCLP RCRA Metals, TCLP VOCs, TCLP SVOCs, PCBs, and gamma spectroscopy	TPH, and RCRA Metals higher than action level	Hydrocarbon and Cadmium	
25-25-06	Soil	TPH, and gamma spectroscopy	All analyses lower than action levels	No further action	
25-25-07	Soil	TPH, PCBs, and gamma spectroscopy	TPH higher than action level	Hydrocarbon	
25-25-08	Soil	TPH, PCBs, and gamma spectroscopy	TPH higher than action level	Hydrocarbon	
25-25-16 (from CAS 25-01-02)	Soil	TPH, and gamma spectroscopy	TPH higher than action level	Hydrocarbon	
25-25-17	Soil	TPH, TCLP RCRA Metals, TCLP SVOCs, PCBs, and gamma spectroscopy	TPH higher than action level	Hydrocarbon	

^a TPH - Total Petroleum Hydrocarbons, by SW-846 8015 modified (U.S. Environmental Protection Agency [EPA], 1996).

^b TCLP - Toxicity Characteristic Leaching Procedure, sample preparation method SW-846 1311 (EPA, 1996).

^c RCRA - Resource Conservation and Recovery Act metals by SW-846 6010B and 7471A (EPA, 1996).

^d PCBs - Polychlorinated Biphenyls, by SW-846 8082 (EPA, 1996).

^e SVOCs - Semivolatile Organic Compounds, by SW-846 8270 (EPA, 1996).

^f VOCs - Volatile Organic Compounds, by SW-846 8260 (EPA, 1996).

2.1.3 Closure Activities

CAS 25-44-01, Fuel Spill (Figure 2). This site is described as a fuel spill on soil that covers a concrete pad. The origins and use of the spilled material are unknown, although the material is suspected of being railroad bedding material. Analytical results for characterization samples showed no COCs present above action levels (DOE/NV, 2001).

As a best management practice the railroad bedding material and construction debris were removed from the site on April 4, 2002. The debris was placed into an end dump and transported to the NTS Area 9 U10c Landfill for disposal. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E. No further action was required at this site.

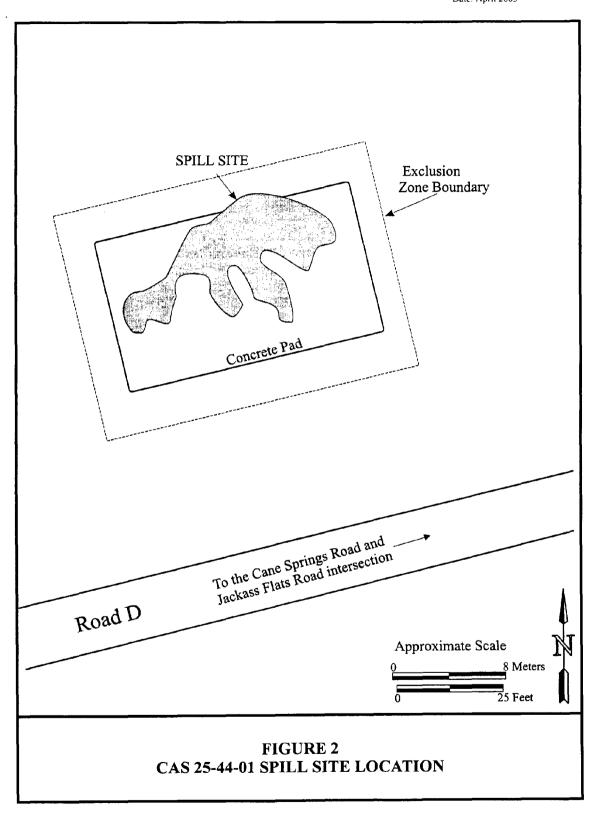
CAS 25-44-02, Spill (Figure 3). This site consisted of a historic spill to soil from leaking drums. The source of the drums is unknown. The drums were removed from the site and disposed of prior to this corrective action. Analytical results for characterization samples showed TPH as the only COC present above action levels (DOE/NV, 2001). This site was clean closed by excavation and disposal of TPH-impacted soil.

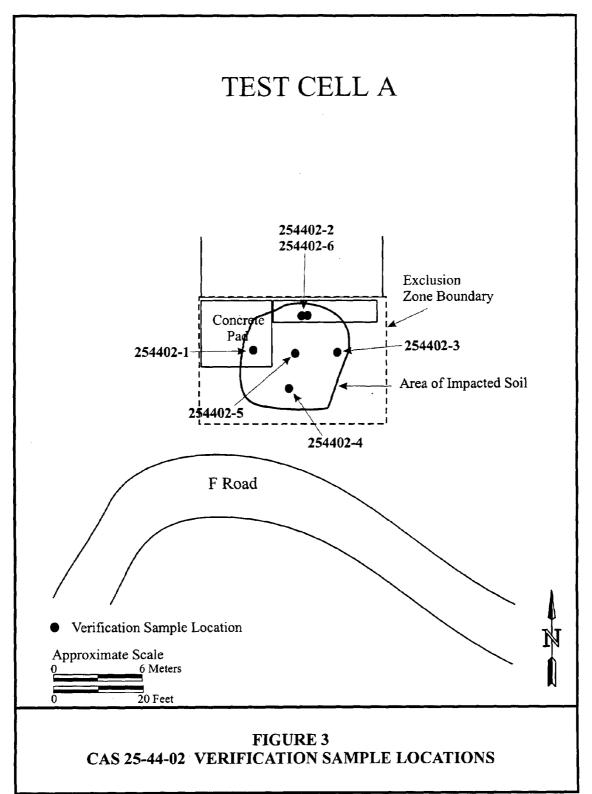
TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal on May 15-20, 2002. Soil verification samples (254402-1, 254402-2, 254402-3, 254402-4, 254402-5, 254402-6) were collected from the excavation on May 20, 2002, and analyzed for TPH. Results showed TPH levels less than the action level of 100 milligrams per kilogram (mg/kg) (NAC, 2002b), verifying that the site was clean closed. The excavation was then backfilled with clean fill and wheel rolled with heavy equipment on June 18, 2002. Analytical results for the verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

CAS 25-44-03, Spill (Figure 4). This site consisted of a spill from leaking drums onto a concrete pad and surrounding soil. The drums were removed prior to this corrective action. Analytical results for characterization samples showed TPH as the only COC present above action levels (DOE/NV, 2001). This site was clean closed by excavation and disposal of TPH-impacted soil.

TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal on April 24-30, 2002. Soil verification samples (254403-1, 254403-2, 254403-3, 254403-4, 254403-5, 254403-6, 254403-7) were collected on May 7, 2002, and analyzed for TPH. Results showed TPH concentrations less than the action level (100 mg/kg) (NAC, 2002b), verifying that the site was clean closed. The excavation was then backfilled with clean fill and wheel rolled with heavy equipment on May 28, 2002. Analytical results for the verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

CAS 25-44-04, Acid Spill (from CAS 25-01-01). This site consisted of spills from two tanks used for a water demineralization process. Tank T-2002 contained sodium hydroxide and Tank T-2003 contained sulfuric acid. The tanks were removed from the site prior to this corrective action (DOE/NV, 1998). Analytical results for characterization samples showed no evidence of





Date: April 2003

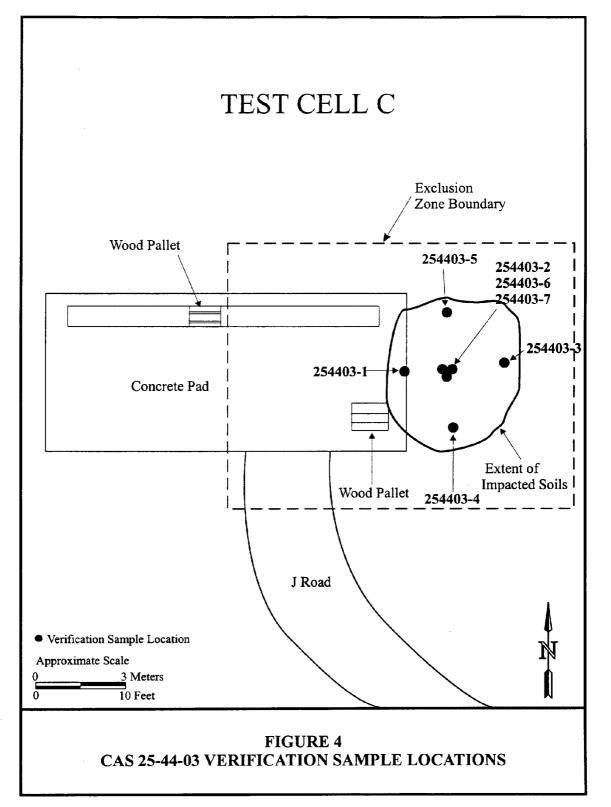


TABLE 2 - SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS, POLYCHLORINATED BIPHENYLS, AND RCRA² METALS IN VERIFICATION SAMPLES

SAMPLE IDENTIFICATION	GASOLINE RANGE ^b (mg/kg) ^c	DIESEL RANGE ^b (mg/kg)	OIL RANGE ^b (mg/kg)	TOTAL PETROLEUM HYDROCARBONS ^b (mg/kg)	POLYCHLORINATED BIPHENYLS ⁴ (mg/kg)	LEAD* (mg/kg)	CADMIUM ^e (mg/kg)
Action Levels	100 ^f	100°	100°	100 ^f	1 ^g	750 ^h mg/kg	450 ^h mg/kg
CAS 25-44-02 (Sample	e Delivery Group	1596)	·	· · · · · · · · · · · · · · · · · · ·		·	
254402-1	ND'	ND	ND	ND	NS ^j	NS	NS
254402-2	ND	ND	ND	ND	NS	NS	NS
254402-3	ND	ND	ND	ND	NS	NS	NS
254402-4	ND	ND	ND	ND	NS	NS	NS
254402-5	ND	ND	ND	ND	NS	NS	NS
254402-6	ND	ND	ND	ND	NS	NS	NS
CAS 25-44-03 (Sample	e Delivery Group	1580)		<u> </u>	<u> </u>		<u> </u>
254403-1	ND	ND	ND	ND	NS	NS	NS
254403-2	ND	ND	ND	ND	NS	NS	NS
254403-3	ND	ND	ND	ND	NS	NS	NS
254403-4	ND	ND	ND	ND	NS	NS	NS
254403-5	ND	ND	ND	ND	NS	NS	NS
254403-6	ND	ND	ND	ND	NS	NS	NS
254403-7	ND	ND	ND	ND	NS	NS	NS
CAS 25-25-02 (Sample	e Delivery Group	V1596 and V	627)				
252502-1	ND	ND	ND	ND	0.870 and 0.630	NS	NS
252502-2	ND	ND	ND	ND	2.6	NS	NS
252502-3	ND	ND	ND	ND	54.0	NS	NS
252502-4	ND	ND	ND	ND	0.190 and 0.140	NS	NS
252502-5	ND	ND	ND	ND	0.120 and 0.240	NS	NS
252502-1*	NS	NS	NS	NS	0.960	NS	NS
252502-2*	NS	NS	NS	NS	0.430	NS	NS
252502-3*	NS	NS	NS	NS	0.064	NS	NS
252502-4*	NS	NS	NS	NS	0.590	NS	NS
252502-5*	NS	NS	NS	NS	0.480	NS	NS

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS, POLYCHLORINATED BIPHENYLS, AND RCRA² METALS IN VERIFICATION SAMPLES (continued)

SAMPLE IDENTIFICATION	GASOLINE RANGE ^b (mg/kg) ^c	DIESEL RANGE ^b (mg/kg)	OIL RANGE ^b (mg/kg)	TOTAL PETROLEUM HYDROCARBONS ^b (mg/kg)	POLYCHLORINATED BIPHENYLS ^d (mg/kg)	LEAD ^e (mg/kg)	CADMIUM' (mg/kg)
Action Levels	100	100	100	100	1	750 mg/kg	450 mg/kg
CAS 25-25-03 (Sample	Delivery Group 1	565)				•	
252503-1	ND	ND	ND	ND	NS	NS	NS
252503-2	ND	ND	ND	ND	NS	NS	NS
252503-3	ND	ND	ND	ND	NS	NS	NS
252503-4	ND	NS	ND	ND	NS	NS	NS
252503-5	ND .	57	530	590	NS	NS	NS
252503-1*	ND	ND	ND	ND	NS	NS	NS
CAS 25-25-04 (Sample	Delivery Group V	/1581, V1609	and V1815)	<u> </u>			
252504-1W	ND	ND	ND	ND	ND	ND	ND
252504-2W	ND	ND	ND	ND	ND	ND	ND
252504-3W	ND	ND	ND	ND	0.045	ND	ND
252504-4W	ND	ND	ND	ND	ND	ND	ND
252504-5W	ND	ND	ND	ND	ND	ND	ND
252504-1E	ND	ND	ND	ND	ND	ND	0.012 mg/L ^k
252504-2E	ND	ND	ND	ND	0.029	ND	ND
252504-3E	ND	ND	ND	ND	ND	ND	0.012 mg/L
252504-4E	ND	ND	ND	ND	ND	ND	ND
252504-5E	ND	ND	ND	ND	ND	ND	ND
252504-1*	ND	ND	ND	ND	NS	NS	NS
252504-2*	ND	ND	ND	ND	NS	NS	NS
252504-3*	ND	ND	ND	ND	NS	NS	NS
252504-4*	ND	ND	ND	ND	NS	NS	NS
252504-5*	ND	ND	ND	ND	NS	NS	NS
252504-6*	ND	ND	ND	ND	NS	NS	NS
252504-7*	ND	ND	ND	ND	NS	NS	NS
252504-8*	ND	ND	ND	ND	NS	NS	NS
252504-9*	ND	ND	ND	ND	NS	NS	NS
252504-10*	ND	ND	ND	ND	NS	NS	NS

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS, POLYCHLORINATED BIPHENYLS, AND RCRA* METALS IN VERIFICATION SAMPLES (continued)

SAMPLE IDENTIFICATION	GASOLINE RANGE ^b (mg/kg) ^c	DIESEL RANGE ^b (mg/kg)	OIL RANGE ^b (mg/kg)	TOTAL PETROLEUM HYDROCARBONS ^b (mg/kg)	POLYCHLORINATED BIPHENYLS ^d (mg/kg)	LEAD ^e (mg/kg)	CADMIUM ^e (mg/kg)
Action Levels	100	100	100	100	1	750 mg/kg	450 mg/kg
252504-11*	ND	ND	ND	ND	NS	NS	NS
252504-12*	ND	ND	ND	ND	NS	NS	NS
252504-V1	NS	NS	NS	NS	NS	5.1	ND
252504-V2	NS	NS	NS	NS	NS	3.6	ND
252504-V3	NS	NS	NS	NS	NS	4.0	ND
252504-V4	NS	NS	NS	NS	NS	4.7	ND
252504-V5	NS	NS	NS	NS	NS	4.1	ND
252504-V6	NS	NS	NS	NS	NS	4.8	ND
252504-V7	NS	NS	NS	NS	NS	3.5	ND
252504-V8	NS	NS	NS	NS	NS	4.5	ND
252504-V9	NS	NS	NS	NS	NS	4.1	ND
252504-V10	NS	NS	NS	NS	NS	4.6	ND
252504-V11	NS	NS	NS	NS	NS	5.8	0.05
CAS 25-25-05 (Sampl	e Delivery Group	V1581 and V18	15)			1	
252505-1	ND	ND	ND	ND	NS	NS	NS
252505-2	ND	ND	68	68	NS	NS	NS
252505-3	ND	ND	ND	ND	NS	NS	NS
252505-4	ND	ND	ND	ND	NS	NS	NS
252505-5	ND	46	ND	46	NS	NS	ND
252505-6	ND	ND	ND	ND	NS	NS	ND
252505-7	ND	ND	ND	ND	NS	NS	ND
252505-8	ND	ND	ND	ND	NS	NS	ND
252505-9	ND	ND	ND	ND	NS	NS	ND
252505-10	ND	ND	ND	ND	NS	NS	ND
252505-V1	NS	NS	NS	NS	NS	4.6	ND
252505-V2	NS	NS	NS	NS	NS	5.3	0.05
252505-V3	NS	NS	NS	NS	NS	4.6	0.04
252505-V4	NS	NS	NS	NS	NS	4.3	ND

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS, POLYCHLORINATED BIPHENYLS, AND RCRA² METALS IN VERIFICATION SAMPLES (continued)

SAMPLE IDENTIFICATION	GASOLINE RANGE ^b (mg/kg) ^c	DIESEL RANGE ^b (mg/kg)	OIL RANGE ^b (mg/kg)	TOTAL PETROLEUM HYDROCARBONS ^b (mg/kg)	POLYCHLORINATED BIPHENYLS ^d (mg/kg)	LEAD ^e (mg/kg)	CADMIUM ^e (mg/kg)
Action Levels	100	100	100	100	1	750 mg/kg	450 mg/kg
252505-V5	NS	NS	NS	NS	NS	5.1	0.04
252505-V6	NS	NS	NS	NS	NS	4.8	0.09
CAS 25-25-16 (from C	CAS 25-01-02) (Sa	mple Delivery C	Froup V1580)				
252516-1	ND	ND	ND	ND	NS	NS	NS
252516-2	ND	ND	ND	ND	NS	NS	NS
252516-3	ND	17	ND	17	NS	NS	NS
252516-4	ND	16	ND	16	NS	NS	NS
252516-5	ND	ND	14	14	NS	NS	NS

^a RCRA - Resource Conservation and Recovery Act

^bTPH - Total Petroleum Hydrocarbon full scan, gasoline, diesel, and waste oil by SW-846 8015 modified (EPA, 1996).

^cmg/kg - milligrams per kilogram.

^dPCBs - Polychlorinated Biphenyls by SW-846 8082 (EPA, 1996).

Total lead and cadmium by method SW-846 6010B (EPA, 1996).

Hydrocarbon action level of 100 mg/kg established by the State of Nevada (NAC, 2002b).

⁸ PCB action level established by 40 Code of Federal Regulation Section 761.61 (EPA, 2001).

h Preliminary Remediation Goals used as action levels were established by U.S. EPA Region 9 (EPA, 2002).

ND - Not Detected at the laboratory reporting limits.

^j NS - Not Sampled.

k mg/L - milligrams per liter.

^{*} Sample was collected from the excavation following the removal of additional soil.

any COCs present above action levels (DOE/NV, 2001). This site was closed by taking no further action.

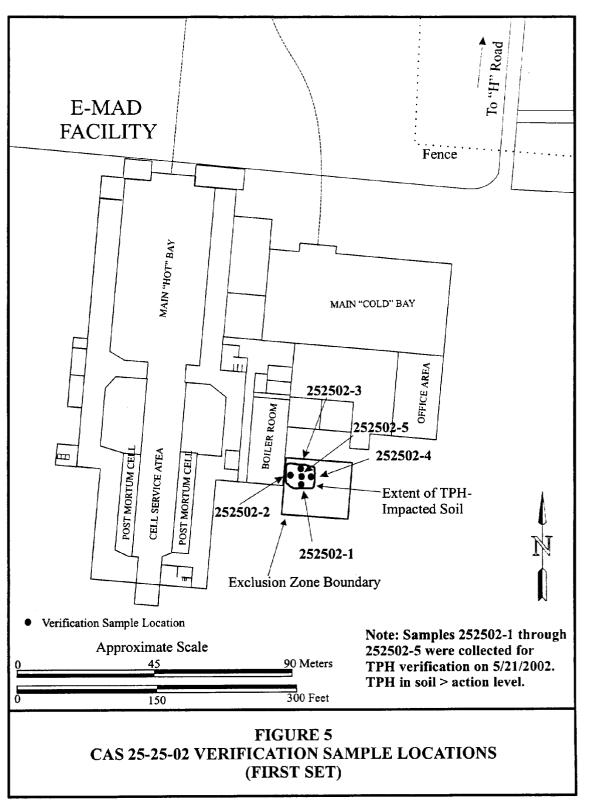
CAS 25-25-02, Oil Spill (Figures 5 and 6). This site consisted of an oil/fuel spill associated with leaking drums that had previously been removed. Analytical results for characterization samples showed TPH and PCBs as the COCs present at concentration greater than action levels (DOE/NV, 2001). This site was clean closed by excavation and removal of TPH- and PCB-impacted soil.

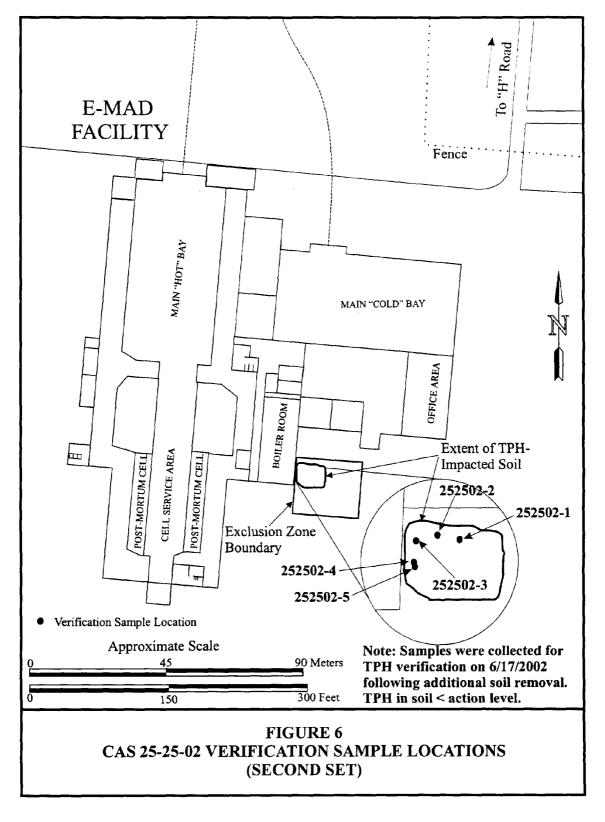
TPH- and PCB-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal on April 25 and 29, 2002. The NTS Area 6 Hydrocarbon Landfill permit allows disposal of soil contaminated with up to 10 mg/kg of PCB. Soil verification samples (252502-1, 252502-2, 252502-3, 252502-4, 252502-5) were collected on May 21, 2002, and submitted for TPH and PCB analysis. Results showed TPH levels less than action levels, but PCB levels above the action level of 1 mg/kg (U.S. Environmental Protection Agency [EPA], 2001) at two locations (252502-2 and 252502-3) at the bottom of the excavation. On June 5, 2002, additional PCB-impacted soil was excavated from the bottom of the excavation and disposed of at the NTS Area 6 Hydrocarbon Landfill. A second set of soil verification samples (252502-1, 252502-2, 252502-3, 252502-4, 252502-5) were collected on June 17, 2002, from the bottom of the excavation. Results showed PCB levels less than the regulatory limit of 1 mg/kg (EPA, 2001), verifying that the site was clean closed. The excavation was then backfilled with clean fill and wheel rolled with heavy equipment on May 27, 2002. Analytical results for both sets of verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

CAS 25-25-03, Oil Spills (Figure 7). This site consisted of a spill adjacent to an over-turned drum. The source of the drum is unknown and the drum was removed prior to this corrective action. Analytical results for characterization samples showed TPH as the only COC present (DOE/NV, 2001). This site was clean closed by excavation of TPH-impacted soil.

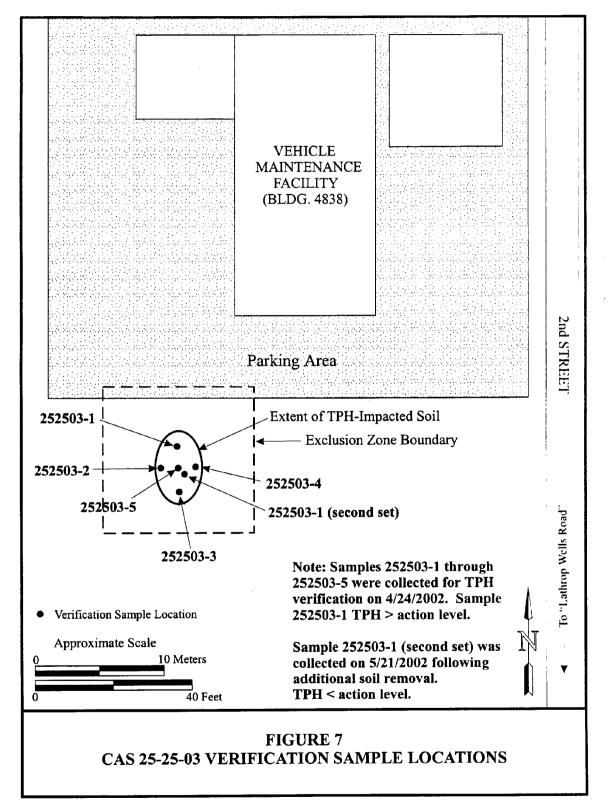
TPH-impacted soil was excavated and transported to the Area 6 Hydrocarbon Landfill for disposal on April 24, 2002. Verification soil samples (252503-1, 252503-2, 252503-3, 252503-4, 252503-5) were collected on April 24, 2002, and analyzed for TPH. Analytical results showed TPH levels greater than the action level at one location in the center of the bottom of the excavation. On May 14, 2002, excavation activities resumed at the site removing additional TPH-impacted soil. On May 21, 2002, and additional verification soil sample (252503-1) was collected from the center of the bottom of the expanded excavation. Analytical results showed TPH concentrations less than the action level of 100 mg/kg (NAC, 2002b), verifying that the site was clean closed. The excavation was then backfilled with clean fill and wheel rolled with heavy equipment on June 6, 2002. Analytical results for the verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

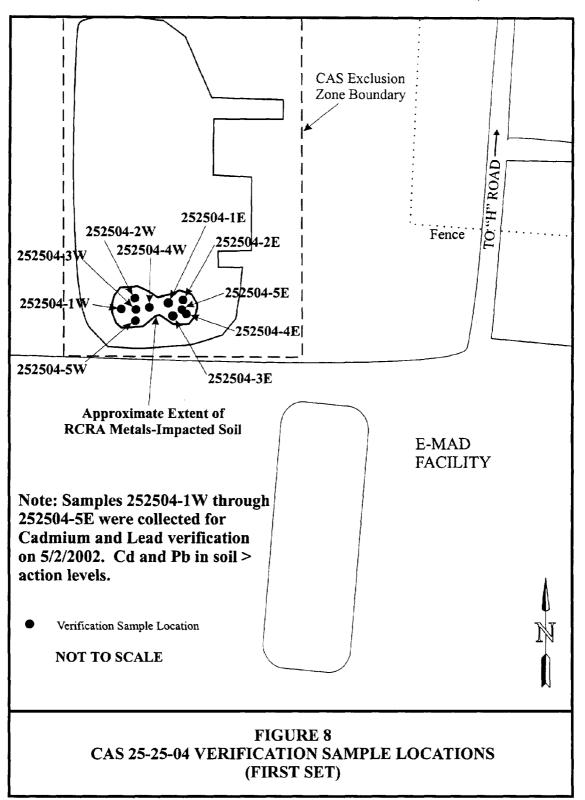
CAS 25-25-04, Oil Spills (Figures 8, 9 and 10). This site consisted of an area on the north side of the Engine Maintenance, Assembly, and Disassembly (E-MAD) facility, where used oils and cooling fluids from metal machining operations had been poured directly onto the ground.

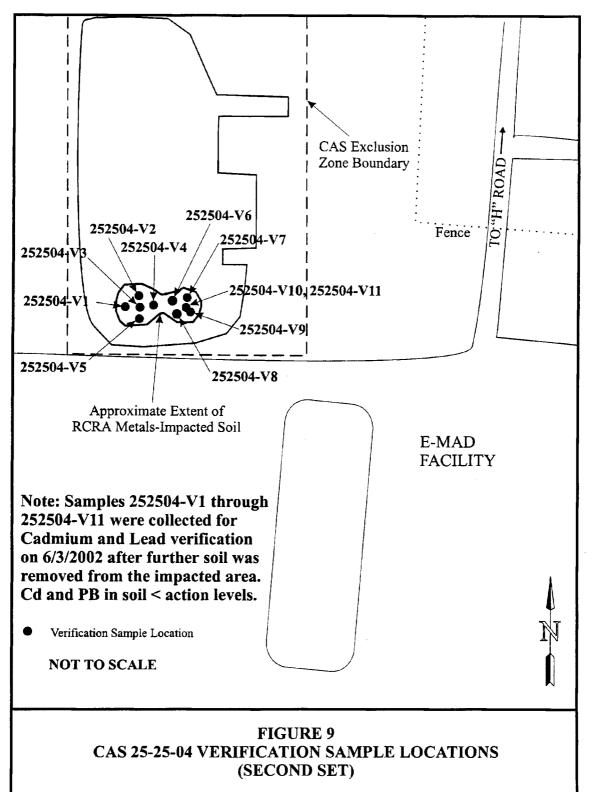


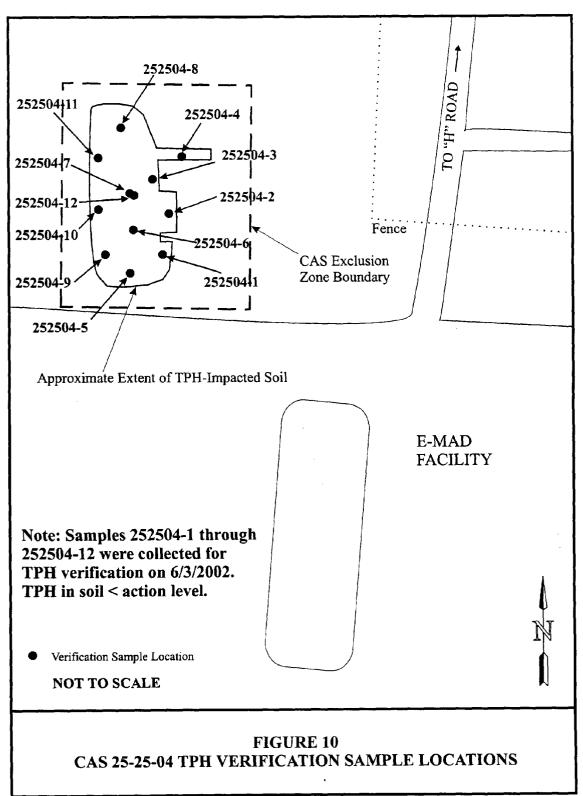


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Analytical results for characterization samples showed TPH, PCBs, and RCRA metals (cadmium and lead) as COCs. PCBs and metal COCs were present in soil confined to a small area located at the south end of the CAS (Figure 9) (DOE/NV, 2001). This site was clean closed by excavation of TPH, PCB, and RCRA metals-impacted soil.

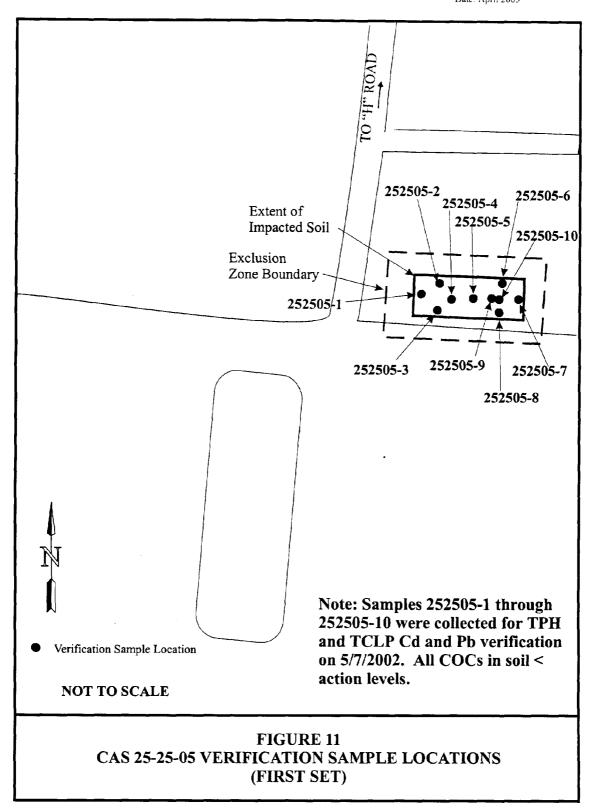
Soil contaminated with TPH, PCBs, lead, and cadmium was excavated from an area measuring approximately 1.2 by 1.8 meters (m) (4 by 6 feet [ft]) located at the south end of the CAS. The excavated soil was placed into fourteen 208-liter (L) (55-gallon [gal]) drums that were moved into a 90-Day Accumulation Area for storage pending off site disposal. On May 1 and 2, 2002, the 14 drums of hazardous waste were shipped off site to an approved permitted hazardous waste disposal facility. Verification soil samples (252504-1W, 252504-2W, 252504-3W, 252504-4W, 252504-5E) were collected on May 2, 2002, from the excavation and analyzed for TPH, PCBs, TCLP lead and TCLP cadmium. Additional soil verification samples (252504-V1 through 252504-V11) were collected on December 13, 2002, and analyzed for total lead and total cadmium. Results showed no COCs above action limits (NAC, 2002b; EPA, 2001; EPA, 2002), verifying that the site was clean closed. Analytical results for the verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

Between May 21-30, 2002, TPH-impacted soil was excavated from the remainder of the CAS and transported to the Area 6 Hydrocarbon Landfill for disposal. Verification soil samples (252504-1, 252504-2, 252504-3, 252504-4, 252504-5, 252504-6, 252504-7, 252504-8, 252504-9, 252504-10, 252504-11, 252504-12) were collected on June 3, 2002, from the excavation and analyzed for TPH. TPH results for all samples were less than the action level (100 mg/kg) (NAC, 2002b), verifying that the site was clean closed. The entire excavation was then backfilled with clean fill and wheel rolled with heavy equipment on June 18, 2002. Analytical results for the verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

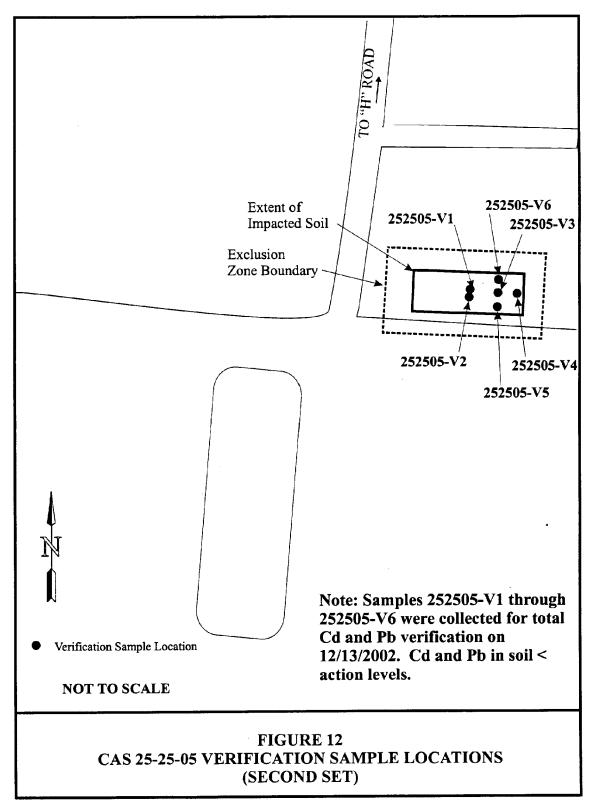
CAS 25-25-05, Oil Spills (Figures 11 and 12). This site consisted of oil and hydraulic fluid spills located where heavy equipment was once staged. Analytical results for characterization samples showed TPH and cadmium as COCs. Cadmium contamination was confined to the east end of the CAS (DOE/NV, 2001). This site was clean closed by excavation of TPH- and cadmium-impacted soil.

TPH-impacted soil was excavated and transported to the Area 6 Hydrocarbon Landfill for disposal on April 23 and 29, 2002. Verification soil samples (252505-1, 252505-2, 252505-3, 252505-4, 252505-5) were collected from the excavation on May 7, 2002, and analyzed for TPH. Results showed TPH levels less than the action level, verifying that the site was clean closed.

On April 29, 2002, cadmium-impacted soil was excavated from the east end of the CAS and placed in four 208-L (55-gal) drums. The drums were moved into the 90-Day Accumulation Area for storage pending off site disposal. The extent of the excavation was guided by field screening results for cadmium using a portable hand-held X-Ray Fluorescence instrument with a detection limit of 50 mg/kg. Verification soil samples (252505-6, 252505-7, 252505-8,



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252505-9, 252505-10) were collected from the excavation on May 7, 2002, and analyzed for TPH and TCLP cadmium. Additional verification samples (252505-V1 through 252505-V6) were collected on December 13, 2002, and analyzed for total lead and total cadmium. Results from the two sets of samples showed TPH, lead and cadmium less than action levels (NAC, 2002b; EPA, 2002), verifying that the site was clean closed. The excavation was then backfilled with clean fill and wheel rolled with heavy equipment on May 28, 2002. Analytical results for the verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

CAS 25-25-06, Oil Spills. This site is listed as diesel fuel stains beneath the location of two generators that had been removed. Analytical results for characterization samples show no evidence of any COCs (DOE/NV, 2001). This site was closed by taking no further action.

CAS 25-25-07, Hydraulic Oil Spill(s). This site consisted of a hydraulic oil spill that was released from a tunnel-boring machine left onsite when X-Tunnel was placed on inactive status. Due to the fact that TPH is the only COC present and that site conditions limit access and successful removal of contaminants, this CAS has been closed in place with administrative controls; i.e., use restrictions implemented. An "A through K" risk assessment (NAC, 2002a) of the site has been provided (Section 4.2), and use restrictions have been implemented. Use restriction information is provided in Appendix C.

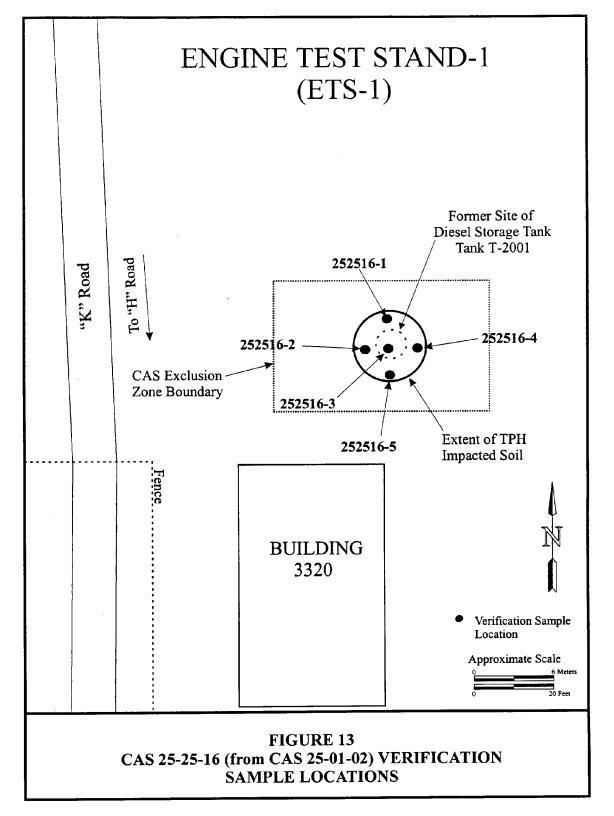
CAS 25-25-08, Hydraulic Oil Spill(s). This site consisted of a hydraulic oil spill that was released from a hydraulic oil pump left onsite when Y-Tunnel was placed on inactive status. Due to the fact that TPH is the only COC present and that site conditions limit access and successful removal of contaminants, this CAS has been closed in place with administrative controls; i.e., use restrictions implemented. An "A through K" risk assessment (NAC, 2002a) of the site has been made (Section 4.2) and use restrictions have been implemented. Use restriction information is provided in Appendix C.

CAS 25-25-16, Diesel Spill (from 25-01-02) (Figure 13). This site consisted of diesel fuel spill from an aboveground storage tank located near Building 3320 at Engine Test Stand-1. The tank was removed prior to these corrective actions. Analytical results showed TPH as the only COC (DOE/NV, 2001) present. This site was clean closed by excavation of TPH-impacted soil.

On May 6, 2002, hydrocarbon-impacted soil was excavated and transported to the Area 6 Hydrocarbon Landfill for disposal. Verification soil samples (252516-1, 252516-2, 252516-3, 252516-4, 252516-5) were collected on May 7, 2002, and analyzed for TPH. Results showed TPH levels less than the action level (100 mg/kg) (NAC, 2002b), verifying that the site was clean closed. The excavation was then backfilled with clean fill and wheel rolled with heavy equipment on May 28, 2002. Analytical results for the verification samples are summarized in Table 2 and are included in Appendix B. Waste disposition documentation is included in Appendix D and photographs documenting the site closure activities in Appendix E.

CAS 25-25-17, Subsurface Hydraulic Oil Spill. This site is associated with the historical operations of a vacuum pump oil recovery system at the E-MAD facility. Due to the fact that TPH is the only COC present and that site conditions limit access and successful removal of contaminants, this CAS has been closed in place with administrative controls; i.e., use

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restrictions implemented. An "A through K" risk assessment (NAC, 2002a) of the site has been made (Section 4.2) and use restrictions have been implemented. Use restriction information is provided in Appendix C.

2.2 **DEVIATIONS FROM SAFER PLAN AS APPROVED**

There were no deviations from the NDEP-approved SAFER plan (DOE/NV, 2001).

2.3 CORRECTIVE ACTION SCHEDULE AS COMPLETED

The corrective action field activities began on April 23, 2002, and were completed on June 28, 2002. A corrective action schedule as completed is provided in Figure 14.

2.4 SITE PLAN/SURVEY PLAT

Because engineered construction was not required as part of this closure, as-built drawings are not included in this CR. Use restriction information forms and Figures showing the location and corner coordinates for sites closed administratively with use restrictions implemented are provided in Appendix C of this CR.



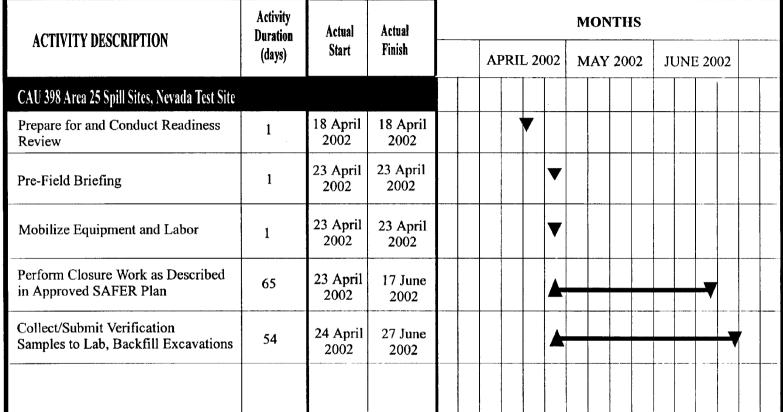


FIGURE 14 - CAU 398 CLOSURE SCHEDULE AS COMPLETED

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3.0 WASTE DISPOSITION

Wastes generated during the closure of CAU 398: Area 25 Spill Sites were disposed of as follows:

- CAS 25-44-01. Approximately 8.2 m³ (9 yd³) of railroad beading and construction debris was removed from the site and transported to the Area 9, U10C Landfill.
- CAS 25-44-02. Approximately 25.6 m³ (28 yd³) of TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal.
- CAS 25-44-03. Approximately 23.8 m³ (26 yd³) of TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal.
- CAS 25-25-02. Approximately 12.8 m³ (14 yd³) of TPH- and PCB-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal. Four drums of PCB-impacted soil were generated and transported to a 90-Day Area for temporary storage. The drums were shipped offsite to Safety-Kleen on June 27, 2002, for disposal.
- CAS 25-25-03. Approximately 1.8 m³ (2 yd³) of TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal.
- CAS 25-25-04. Approximately 182.9 m³ (200 yd³) of TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal. Fourteen drums of TPH-, PCB-, lead-, and cadmium-impacted soil were generated and transported to a 90-Day Area for temporary storage. The drums were shipped offsite to Safety-Kleen on June 27, 2002, for disposal.
- CAS 25-25-05. Approximately 21.0 m³ (23 yd³) of TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal. Four drums of TPH- and cadmium-impacted soil were generated and transported to a 90-Day Area for temporary storage. The drums were shipped offsite to Safety-Kleen on June 27, 2002, for disposal.
- CAS 25-25-16 (from CAS 25-01-02). Approximately 16.5 m³ (18 yd³) of TPH-impacted soil was excavated and transported to the NTS Area 6 Hydrocarbon Landfill for disposal.

A total of approximately 245 m³ (320 yd³) of impacted soil was excavated and removed from CAU 398 during closure activities from April 23 to June 28, 2002. Waste disposition records are provided in Appendix D.

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4.0 CLOSURE VERIFICATION RESULTS

Site closure was verified by collecting verification soil samples from each CAS that was clean closed. A total of 83 verification samples were collected from the seven clean closed CASs. All verification samples were collected with clean disposable plastic scoops, placed in labeled sample containers, and secured with custody seals. The sample containers were then placed on ice in a cooler, transported under chain of custody to the BN Sample Management group in Mercury, Nevada, and shipped to an off site laboratory for analysis. Analytical results for all collected verification samples are summarized in Table 2 and included in Appendix B.

The analytical results verify that no COCs at levels above action levels remain in the ground at the seven CASs that were clean closed by excavation. The action level for TPH in soil is 100 mg/kg as established by the state of Nevada (NAC, 2002b). Action levels for lead and cadmium in industrial soils are 750 mg/kg and 450 mg/kg, respectively, as established by EPA Region 9 (EPA, 2002). The action level for PCBs in soil is 1 mg/kg as established by the Toxic Substance Control Act (EPA, 2001). The analytical results are summarized in Table 2, and the analytical reports are included in Appendix B.

4.1 DATA QUALITY ASSESSMENT

CAU 398 closure activities were performed to the criteria specified in the DQOs provided in the NDEP-approved CAU 398 SAFER Plan (DOE/NV, 2001) and in Appendix A of this CR. The DQOs primary model was the actual scenario for the conditions at the spill sites in Area 25. The proposed activities are based on the assumption that diesel and oil range petroleum hydrocarbons are the prevalent COCs at the sites. The petroleum hydrocarbons are also assumed to act as a carrier for the other COCs which will not extend beyond the limits of the petroleum hydrocarbons. All the sites are expected to fit the primary Conceptual Site Model (CSM) presented in the DQOs (DOE/NV, 2001; Appendix A), with minor variations caused by site-specific preferential pathways.

During collection of all verification soil sample, standard quality assurance/quality control (QA/QC) samples were also collected; e.g., one field duplicate per 20 samples submitted blind to the analytical laboratory for analysis. Also, the analytical laboratory followed standard QA/QC procedures during sample analysis. This included matrix spike/matrix spike duplicate and spiked surrogate percent recovery analysis (Appendix B).

4.2 USE RESTRICTIONS

The three CASs listed below have been closed in place administratively. The only COC at these sites is TPH as diesel/oil. Given specific site condition (e.g., location of utilities, limited space, depth to bedrock, and poor lighting) and the associated problems with removing the TPH-impacted soil and the safety risk to personnel, a risk assessment of each of these sites, based on the "A through K" evaluation as presented in NAC Section 445A.227 was made (NAC, 2002a).

Use restrictions were implemented for the following CASs:

- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-17, Subsurface Hydraulic Oil Spill

CAU Use Restriction Information forms were completed for each of the three CASs and are included in Appendix C. This form includes the CAU number and site description, post-closure monitoring requirements, and survey coordinates of the unit boundaries. Future use is restricted from any activity that may alter or modify the containment controls as approved by the NDEP, unless appropriate concurrence is obtained in advance. The information on the completed form will be added to the U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office (NNSA/NSO) Facility Information Management System and the NNSA/NSO online Common Data Repository. The Original CAU Use Restriction Information forms are filed in the CAU 398 project file. A copy of each form is located in Appendix C of this report.

4.2.1 "A THROUGH K" EVALUATION

Analytical results showed TPH concentration in soil exceeded the state action level of 100 mg/kg at three CASs. To close these sites in place with administrative controls, a risk evaluation based on the eleven factors that are listed as "A through K" in the Section 445A.227 of the NAC (NAC, 2002a) was performed. This section provides the "A through K" evaluation required under NAC 445A.227 (NAC, 2002a) for the three CASs listed above.

4.2.1.1 CAS 25-25-07, Hydraulic Oil Spill(s) "A Through K" Evaluation

Depth of Groundwater (A)

Groundwater is approximately 352 m (1,155 ft) below ground surface (bgs). The estimated depth is taken from the regional general potentiometric surface map provided in the U.S. Geological Survey Water Resources Investigations Report "Summary of Hydrogeologic Controls on Ground-Water Flow at the Nevada Test Site, Nye County, Nevada (Laczniak et. al., 1996) and a letter from the Defense Nuclear Agency (Harris-West, 1992) on the elevations of the X-Tunnel.

Distance to Irrigation or Drinking Water Wells (B)

The nearest drinking water supply is Water Well J-12, which is approximately 9.6 kilometers (km) (6 miles [mi]) east-southeast of the site. The static water level in the well is approximately 225 m (739 ft) bgs (DOE/NV, 1996).

Type of Soil that is Contaminated (C)

The site is located inside X-Tunnel on the south side of Little Skull Mountain. The tunnel was drilled out of bedrock and a thin layer of drilling residue currently covers the tunnel floor. The drilling residue consists of sand with varying amounts of gravel and silt and is approximately 15 centimeters (cm) (6 inches [in]) thick. Bedrock underlies this layer at depths of 15 cm (6 in) bgs and consists of a hard, competent tuff.

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Annual Precipitation (D)

Average annual precipitation for valleys in the South-Central Great Basin ranges from 7.6 to 15 cm (3 to 6 in) and the annual evaporation is roughly 5 to 25 times the annual precipitation, (Winograd and Thordarson, 1975). The high evaporation and low precipitation rates create an negative water balance for the area. However, the CAS is located inside X-Tunnel and receives no direct precipitation; therefore, no driving force associated with precipitation is available to mobilize COCs vertically.

Type of Waste or Substance Released (E)

The spill is non-PCB hydraulic fluid.

Extent of Contamination (F)

The vertical extent of the impacted area does not extend deeper than the bedrock, which is approximately 15 cm (6 in) bgs. Hydrocarbons were detected at concentrations up to 100,000 mg/kg. Due to limited site access the lateral extent of the hydrocarbon contamination was not determined, but is estimated to be approximately 4 by 1.5 m (13 by 5 ft) and 15 cm (6 in) deep.

Present and Potential Land Use (G)

CAS 25-25-07 is located inside X-Tunnel on the south side of Little Skull Mountain, located on NTS which is a restricted area that is guarded on a 24-hour, 365-day per year basis. Unauthorized personnel are not admitted to the NTS. X-Tunnel is currently an inactive facility and is locked with access controlled by the BN Operations Center group. There are no plans to change the future land use of the facility; future use is expected to remain the same. A land use restriction has been implemented for this CAS.

Preferred Routes of Migration (H)

Migration of the hydraulic fluid from the site is not expected to occur. Surface migration is unlikely because the fluid remaining in the soil is located at a depth of approximately 15 cm (6 in) bgs. Additional vertical migration of hydrocarbons downward due to gravity is not likely because of the bedrock barrier beneath the site. The site does not have an exposure pathway because all impacted soil is below the ground surface inside X-Tunnel.

Location of Structures of Impediments (I)

CAS 25-25-07 is located inside X-Tunnel on the South side of Little Skull Mountain. X-Tunnel is currently inactive. CAS 25-25-07 is located adjacent to an escape drift of X-Tunnel. Lateral and vertical impediments consist of bedrock that is located at 15 cm (6 in) bgs.

Potential for a Hazard Related to Fire, Vapor, or Explosion (J)

The potential for fire, vapor ignition, or explosion as a result of the hydraulic fluid release is low due to low volatility of hydraulic fluid and the absence of ignition sources within the tunnel.

Other Information Specific to the Site (k)

The following are additional factors specific to the site which should be considered in the evaluation for closure:

Material contaminated with hydraulic fluid present at the site would be difficult to remove by excavation due to the thickness of contaminated material and limited site

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access. The contaminated material is 15 cm (6 in) or less thick and overlies hard bedrock making it difficult to excavate cleanly using a backhoe. Also, the contaminated material is located in a narrow area of the tunnel which limits site access and working area.

- The CAS is located inside X-Tunnel with no direct exposure to precipitation, which eliminates hydrocarbon migration caused by infiltration of precipitation.
- The CAS is located within the secured boundaries of the NTS, which is a restricted area that is guarded on a 24-hour, 365-day per year basis. Unauthorized personnel are not admitted to the NTS, eliminating the potential of personnel contacting site contaminants. The likelihood that the site will be used for future private use is very low.

4.2.1.2 CAS 25-25-08, Hydraulic Oil Spill(s) A Through K Evaluation

Depth of Groundwater (A)

Groundwater is approximately 351 m (1,154 ft) bgs. The estimated depth is taken from the regional general potentiometric surface map provided in the U.S. Geological Survey Water Resources Investigations Report (Laczniak et. al., 1996) and a letter from the Defense Nuclear Agency (Harris-West, 1992) on the elevations of Y-Tunnel.

Distance to Irrigation or Drinking Water Wells (B)

The nearest drinking water supply is Water Well J-12, which is approximately 9.6 km (6 mi) east-southeast of the site. The static water level in this well is approximately 225 m (739 ft) bgs (DOE/NV, 1996).

Type of Soil that is Contaminated (C)

The site is located inside Y-Tunnel on the south side of Little Skull Mountain. The tunnel was drilled into bedrock and a thin layer of drilling residue currently covers the floor of the tunnel and consists of sand with varying amounts of gravel and silt overlying bedrock. Bedrock underlies this layer at depths of 15 cm (6 in) bgs and consists of a hard, competent tuff.

Annual Precipitation (D)

Average annual precipitation for valleys in the South-Central Great Basin ranges from 7.5 to 15 cm (3 to 6 in) and the annual evaporation is roughly 5 to 25 times the annual precipitation, the high evaporation and low precipitation rates create an negative water balance for the area (Winograd and Thordarson, 1975). In addition, the CAS is located inside Y-Tunnel and receives no precipitation directly; therefore, no driving force associated with precipitation is available to mobilize COCs vertically.

Type of Waste or Substance Released (E)

The spill is non-PCB hydraulic fluid.

Extent of Contamination (F)

The vertical extent of impacted area does not extend deeper than the bedrock which is approximately 15 cm (6 in) bgs. Hydrocarbons were detected at concentrations of 130,000 mg/kg. Limited accessibility to the site prevented determining the lateral extent of the hydrocarbon contamination. The extent of contamination is estimated to be 9.4 by 2.7 m (31 by 9 ft) and 15 cm (6 in) or less in depth.

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Present and Potential Land Use (G)

CAS 25-25-08 is located inside Y-Tunnel on the south side of Little Skull Mountain, which is located on a government-controlled facility. The NTS is a restricted area that is guarded on a 24-hour, 365-day per year basis; unauthorized personnel are not admitted to the facility. The tunnel is currently inactive and there are no plans to change the future land use of the facility. Future use at the site is expected to remain the same. A land use restriction has been implemented for this site.

Preferred Routes of Migration (H)

Migration of the hydraulic fluid from the site is not expected to occur. Surface migration would not occur because the fluid remaining in the soil is located at a depth of approximately 15 cm (6 in) bgs. Additional vertical migration of hydrocarbons downward due to gravity is not likely because of the bedrock barrier beneath the site. The most likely route of migration then becomes subsurface migration laterally; however, further migration of hydrocarbons in the soil is not expected because of the lack of driving forces.

The site does not have an exposure pathway because all impacted soil is below ground surface inside Y-Tunnel. Volatile components of the hydraulic fluid are expected to be minimal because observations indicate that the hydraulic fluid has been present in the soil for many years.

Location of Structures of Impediments (I)

CAS 25-25-08 is located inside Y-Tunnel on the South side of Little Skull Mountain. Y-Tunnel is currently inactive. CAS 25-25-08 is located adjacent to a tunnel boring machine at the end of Y-Tunnel. Lateral and vertical impediments consist of bedrock that is located at 15 cm (6 in) bgs.

Potential for a Hazard Related to Fire, Vapor, or Explosion (J)

The potential for fire, vapor ignition, or explosion because of the hydraulic fluid that has been released is low; there are no ignition sources within the tunnel.

Other Information Specific to the Site (K)

The following are additional factors specific to the site which should be considered in the evaluation for closure:

- Contaminated material at the site would be very difficult to excavate. The material is only 15 cm (6 in) thick and overlies bedrock. A backhoe would not likely be able to excavate this layer cleanly because of the thin layer of material and the hardness of the underlying bedrock.
- The CAS is inside Y-Tunnel, which eliminates hydrocarbon migration caused by precipitation influx.
- The site is located within the secured boundaries of the NTS. The NTS is a restricted area that is guarded on a 24-hour, 365-day per year basis; unauthorized personnel are not admitted to the facility. The likelihood that the site will be used for future private use is very low.

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4.2.1.3 CAS 25-25-17, Subsurface Hydraulic Oil Spill "A Through K" Evaluation

Depth of Groundwater (A)

Ground water is approximately 347 m (1,139 ft) bgs (Laczniak et. al., 1996).

Distance to Irrigation or Drinking Water Wells (B)

The nearest drinking water supply is Water Well J-12, which is approximately 4.8 km (3 mi) east-southeast of the site. The static water level is measured at depths of 225 m (739 ft) bgs (DOE/NV, 1996).

Type of Soil that is Contaminated (C)

The site is located inside a significant power/utility corridor feeding into the E-MAD Building 3900. Soil at the site is thin and consists of sand with varying amounts of gravel and silt.

Annual Precipitation (D)

Average annual precipitation for valleys in the South-Central Great Basin ranges from 7.5 to 15 cm (3 to 6 in) and the annual evaporation is roughly 5 to 25 times the annual precipitation. The high evaporation and low precipitation rates create an negative water balance for the area (Winograd and Thordarson, 1975).

Type of Waste or Substance Released (E)

The hydraulic fluid spill occurred as a result of the continual overfilling of two 38-L (10-gal) aboveground metal containers that were used for recirculating oil in a vacuum pump oil recovery system.

Extent of Contamination (F)

Hydrocarbons were detected at a concentration of 600mg/kg in the sample collected in the corridor. The spill is located within a power/utility corridor feeding into the E-MAD Building 3900. The corridor is approximately 2.7 by 5 m (9 by 16 ft).

Present and Potential Land Use (G)

CAS 25-25-17 spill is located in a significant power/utility corridor feeding into the south side of E-MAD (Building 3900) facility which is located on a government-controlled facility. The E-MAD facility is currently being used; however, the area that is being used will not affect the power/utility corridor. The NTS is a restricted area that is guarded on a 24-hour, 365-day per year basis; unauthorized personnel are not admitted to the facility. A land use restriction has been completed for this site.

Preferred Routes of Migration (H)

The most likely route of subsurface migration is vertically through the porous alluvial soil. However, further migration of hydrocarbons in the soil is not expected because the potential source (spill/overfill) of hydrocarbons was removed when the vacuum oil recovery system was removed and the surrounding impacted soil was removed to a depth of 0.5 m (1.5 ft), then backfilled with clean fill in December 1998 as CAS 25-25-01, part of CAU 297. Hydrocarbons remaining subsurface are in low concentration (600 mg/kg).

Physical contact or disturbance of impacted surface soil is not possible. The impacted soil that was associated with the vacuum oil recovery system was removed to a depth of approximately

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0.5 m (1.5 ft) then backfilled with clean fill. Protection of personnel from exposure and of the environment from improper handling of impacted soil, should it occur, can be controlled through land use restrictions.

Location of Structures of Impediments (I)

CAS 25-25-17 is located in a power/utility corridor feeding into the south side of E-MAD (Building 3900). The power/utility corridor is approximately 2.7 m (9 ft) by 4.9 m (16 ft), the west, north, and east sides of the corridor are surrounded by the E-MAD building with utilities approximately 0.6 m (2 ft) bgs.

Potential for a Hazard Related to Fire, Vapor, or Explosion (j)

The potential for fire, vapor ignition, or explosion because of the hydraulic fluid that has been released is low. The concentration of hydraulic fluid in the soil is low (600 mg/kg). Staining of remaining soil indicates that hydrocarbons have been present in the soil long enough for some degradation to have already occurred.

Other Information Specific to the Site (K)

The following are additional factors specific to the site which should be considered in the evaluation for closure:

- In 1998 during the housekeeping closure of CAU 297 two 38-L (10-gal) metal containers used in the closed vacuum pump oil recovery system were removed. This removes the source that would drive any further migration.
- Soil at the site would be very difficult to excavate because of the location of the utilities in the power/utility corridor and the narrowness of the corridor.
- The site is located within the secured boundaries of the NTS. The NTS is a restricted area that is guarded on a 24-hour, 365-day per year basis; unauthorized personnel are not admitted to the facility.
- This site is also located within the security fencing of the E-MAD compound.

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5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSION

The following site closure activities were performed at each CAS comprising CAU 398 and are documented in the report:

- CAS 25-25-02. All soil containing TPH and PCB levels at or above the action levels of 100 mg/kg and 1.0 mg/kg, respectively (NAC, 2002b; EPA, 2001), was removed and disposed in the NTS Area 6 Hydrocarbon Landfill and/or at an approved permitted off site disposal facility. The excavation was backfilled with clean fill.
- CAS 25-25-03. All soil containing TPH levels at or above the Nevada State action level of 100 mg/kg (NAC, 2002b) was removed and disposed in the NTS Area 6 Hydrocarbon Landfill. The excavation was backfilled with clean fill.
- CAS 25-25-04. All soil containing TPH, PCBs, lead, and cadmium levels at or above the action levels of 100 mg/kg, 1.0 mg/kg, 750 mg/kg, and 810 mg/kg, respectively (NAC, 2002b; EPA, 2001; EPA, 2002), was removed and disposed in the NTS Area 6 Hydrocarbon Landfill and/or at an approved permitted off site disposal facility. The excavation was backfilled with clean fill.
- CAS 25-25-05. All soil containing TPH and cadmium levels at or above the action levels of 100 mg/kg and 810 mg/kg) (NAC, 2002b; EPA, 1996) was removed and disposed in the NTS Area 6 Hydrocarbon Landfill and/or at an approved permitted off site disposal facility. The excavation was backfilled with clean fill.
- CAS 25-25-06. No COC present, site was closed by taking no further action.
- CAS 25-25-07. TPH was the only COC present and due to site location, limited access and safety risks, the site was closed in place with administrative controls instituted.
- CAS 25-25-08. TPH was the only COC present and due to site location, access and safety risks, the site was closed in place with administrative controls instituted.
- CAS 25-25-16 (from CAS 25-01-02). All soil containing TPH levels at or above the Nevada State action level of 100 mg/kg (NAC, 2002b) was removed and disposed in the NTS Area 6 Hydrocarbon Landfill. The excavation was backfilled with clean fill.
- CAS 25-25-17. TPH was the only COC present and due to site conditions and limited access, the site was closed in place with administrative controls instituted.
- CAS 25-44-01. As a best management practice, all railroad bedding and construction debris was removed and disposed of in the NTS Area 9 U10C Landfill. This site was closed by taking no further action.

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- CAS 25-44-02. All soil containing TPH levels at or above the Nevada State action level of 100 mg/kg (NAC, 2002b) was removed and disposed in the NTS Area 6 Hydrocarbon Landfill. The excavation was backfilled with clean fill.
- CAS 25-44-03. All soil containing TPH levels at or above the Nevada State action level of 100 mg/kg (NAC, 2002b) was removed and disposed in the NTS Area 6 Hydrocarbon Landfill. The excavation was backfilled with clean fill.
- CAS 25-44-04. No COC present, site was closed by taking no further action.

5.2 RECOMMENDATIONS

Based upon completion of site activities, it is requested that a notice of completion be provided by the NDEP to the NNSA/NSO for the closure of CAU 398. Upon closure approval, CAU 398 will be promoted from Appendix III to Appendix IV of the FFACO, "Closed Corrective Action Units."

6.0 REFERENCES

- Bechtel Nevada. 2002a. <u>Field Management Plan for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, Nevada</u>, Las Vegas, NV.
- Bechtel Nevada. 2002b. <u>Site-Specific Health and Safety Plan for Corrective Action Unit 398:</u>
 <u>Area 25 Spill Sites, Nevada Test Site, Nevada, Las Vegas, NV.</u>

BN, see Bechtel Nevada.

DOE/NV, see U.S. Department of Energy, Nevada Operations Office.

EPA, see U.S. Environmental Protection Agency.

FFACO, see Federal Facility Agreement and Consent Order.

Federal Facility Agreement and Consent Order. 1996 (as amended). Agreed to by the State of Nevada, U.S. Department of Energy, and U.S. Department of Defense.

Harris-West, B. 1992. Letter to Morris Grives and Parsons Brinkerhoff, 9 July.

Laczniak, R. J., Cole J. C., Sawyer D. A., and Trudeau, D. T. 1996. Summary of Hydrogeological Controls on Ground-Water flow at the Nevada Test Site, Nye County, Nevada, U.S. Geological Survey Water-Resources Investigations Report 96-4109. Denver, CO.

NAC, see Nevada Administrative Code.

- Nevada Administrative Code. 2002a. Section 445A.227, "Contamination of Soil: Order by Director for Corrective Action; Factors to be Considered in Determining Whether Corrective Action is Required." Carson City, NV.
- Nevada Administrative Code. 2002b. Section 445A.2272, "Contamination of Soil: Establishment of Action Levels." Carson City, NV.
- U.S. Department of Energy, Nevada Operations Office. 1996. <u>Final Environmental Impact Statement for the NTS and Off-Site Locations in the State of Nevada</u>, DOE/EIS 0243. Las Vegas, NV.
- U.S. Department of Energy, Nevada Operations Office. 1998. <u>Streamlined Approach for Environmental Restoration Closure Report for Corrective Action Unit 126: Area 25 Aboveground Storage Tanks, Nevada Test Site, Nevada, DOE/NV/11718--260, Las Vegas, NV.</u>

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- U.S. Department of Energy, Nevada Operations Office. 2001. <u>Streamlined Approach for Environmental Restoration Plan for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, Nevada;</u> Rev 0, DOE/NV--785, Las Vegas, NV.
- U.S. Environmental Protection Agency. 1996. <u>Test Methods for Evaluating Solid Waste</u>, <u>Physical/Chemical Methods</u>, EPA Publication SW-846, Third Edition. Washington, D.C.
- U.S. Environmental Protection Agency. 2001. Title 40 Code of Federal Regulations 761.61, *PCB Remediation Waste*, Washington, D.C.
- U.S. Environmental Protection Agency. 2002. <u>Region IX Preliminary Remediation Goals</u> (PRGs), San Francisco, CA.
- Winograd, I. J., and W. Thordarson. 1975. <u>Hydrologic and Hydrochemical Framework, South-Central Great Basin, Nevada-California, with Special Reference to the NTS</u>, U.S. Geological Survey Professional Paper 712C. Washington, DC: U.S. Government Printing Office.

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APPENDIX A DATA QUALITY OBJECTIVES FOR CAU 398*

^{*} As presented in the approved and published Streamlined Approach for Environmental Restoration Plan for Corrective Action Unit 398: Area 25 Spill Sites, Nevada Test Site, Nevada, November 2001, DOE/NV--785, Rev. 0. Las Vegas, NV.

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ACRONYMS AND ABBREVIATIONS

BN Bechtel Nevada

CAS Corrective Action Site

CAU Corrective Action Unit

cm centimeter(s)

COPC Contaminant(s) of potential concern

CR Closure Report

CSM Conceptual Site Model

DQO Data Quality Objective(s)

E-MAD Engin Maintenance Assembly and Disassembly

EPA U.S. Environmental Protection Agency

FFACO Federal Facility Agreement and Consent Order

ft foot(feet)

ft³ cubic feet

gal gallon(s)
in inch(es)

IT International Technology

L liter(s)

m meter(s)

m³ cubic meters

mg/L milligrams per liter

mg/kg milligrams per kilogram

NAC Nevada Administrative Code

NNSA/NSO U.S. Department of Energy, National Nuclear Security Administration Nevada

Site Office

NDEM Nevada Division of Emergency Management

NDEP Nevada Division of Environmental Protection

NTS Nevada Test Site

PCB polychlorinated biphenyls

RCRA Resource Conservation and Recovery Act

SAFER Streamlined Approach for Environmental Restoration

SVOC Semivolatile organic compound

TCLP Toxicity Characteristic Leaching Procedure

TPH Total petroleum hydrocarbons

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ACRONYMS AND ABBREVIATIONS (continued)

VOC Volatile organic compound

 yd^3 cubic yards

Relative Percent Difference RPD

%R Percent Recovery

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ACRONYMS AND ABBREVIATIONS

BN Bechtel Nevada

CAS Corrective Action Site

CAU Corrective Action Unit

cm centimeter(s)

COPC Contaminant(s) of potential concern

CR Closure Report

CSM Conceptual Site Model

DQO Data Quality Objective(s)

E-MAD Engin Maintenance Assembly and Disassembly

EPA U.S. Environmental Protection Agency

FFACO Federal Facility Agreement and Consent Order

ft foot(feet)

ft³ cubic feet

gal gallon(s)

in inch(es)

IT International Technology

L liter(s)

m meter(s)

m³ cubic meters

mg/L milligrams per liter

mg/kg milligrams per kilogram

NAC Nevada Administrative Code

NNSA/NSO U.S. Department of Energy, National Nuclear Security Administration Nevada

Site Office

NDEM Nevada Division of Emergency Management

NDEP Nevada Division of Environmental Protection

NTS Nevada Test Site

PCB polychlorinated biphenyls

RCRA Resource Conservation and Recovery Act

SAFER Streamlined Approach for Environmental Restoration

SVOC Semivolatile organic compound

TCLP Toxicity Characteristic Leaching Procedure

TPH Total petroleum hydrocarbons

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ACRONYMS AND ABBREVIATIONS (continued)

VOC Volatile organic compound

yd³ cubic yards

RPD Relative Percent Difference

%R Percent Recovery

APPENDIX A DATA QUALITY OBJECTIVES WORKSHEET FOR CORRECTIVE ACTION UNIT 398: AREA 25 SPILL SITES

(Presentation of Known Data Related to Corrective Action Unit 398)

The information presented in this worksheet is based on historical data generated from preliminary assessment activities for Corrective Action Unit (CAU) 398 at the Nevada Test Site (NTS). Data quality objective (DQO) worksheets follow the U.S. Environmental Protection Agency (EPA) DQO guidance outline (EPA, 2000). The steps systematically build on the data acquired during preliminary assessment work and background research. Copies of the preliminary assessment work are retained in the project files.

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1.0 PROBLEM STATEMENT

1.1 State the problem

Thirteen sites have been identified for closure. In order to properly close these sites, currently available data must be evaluated to determine if the data adequately identify constituents of potential concern (COPC). These data will also be use to ascertain cleanup levels and verification sampling requirements. CAU 398 is comprised of the following 13 Corrective Action Sites (CASs):

- CAS 25-44-01, Fuel Spill
- CAS 25-44-02, Spill
- CAS 25-44-03, Spill
- CAS 25-44-04, Acid Spill
- CAS 25-25-02, Oil Spills
- CAS 25-25-03, Oil Spills
- CAS 25-25-04, Oil Spills
- CAS 25-25-05, Oil Spills
- CAS 25-25-06, Oil Spills
- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-16, Diesel Fuel
- CAS 25-25-17, Subsurface Hydraulic Oil Spill
- 1.2 Summarize the problem combine the relevant background information into a concise description of the problem to be resolved and known or suspected sources of disposed waste.

1.2.1 CAS 25-44-01, Fuel Spill

This site is located near the northwest corner of Road C and Road D in Area 25 of the NTS on a concrete pad at what was known as the Fuel Storage Facility. During site visits in 1996 and 1998, the spill was determined to be fuel spilled on soil that covers the concrete pad. The dimensions of the spill were measured to be 18 by 12 meters (m) (60 by 40 feet [ft]) with the depth ranging from 0 to 13 centimeters (cm) (0 to 5 inches [in]).

Two samples of the suspected spill material were collected on August 15, 1997, by International Technology Corporation (IT) and analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), total Resource Conservation and Recovery Act (RCRA) metals, gross alpha and beta, and gamma spectroscopy. The results indicated that the only COPCs were the RCRA metals lead (186 milligrams per kilogram [mg/kg]) and chromium (3,120 mg/kg).

Sampling was conducted by BN on May 24, 2001. The spill material sampled was a dense, metallic material and was analyzed for Toxicity Characteristic Leaching Procedure (TCLP) metals and gamma spectroscopy. Samples were also collected of the soil surrounding the down gradient side of the pad and analyzed for full scan TPH. The results indicate that the dense metallic material did not contain TCLP metals or radiological constituents above regulatory levels. The soil surrounding the pad did not contain TPH above regulatory levels.

Historical information about this site is limited. It is unknown where the spill material came from or what it was used for. It is suspected to be railroad bedding material or shielding. There is no process knowledge of the area being used for fuel storage. The surrounding area (not part of the CAS) is littered with various construction debris and concrete. This indicates that the area may have been used as a dumping area for unused concrete and excess construction material.

Available information is adequate to show that this site contains no COPCs and can be properly closed with no further action.

1.2.2 CAS 25-44-02, Spill

This CAS is located on and near a concrete pad on the north side of Building 3117 at Test Cell A, Area 25, NTS. The CAS consists of a spill to the soil caused by leaking drums. A literature search and site visit by IT in 1993 determined that the barrels had been removed and shipped out of state for disposal as hazardous liquid waste. The shipping manifest indicated that the waste contained various oils, lead, and chromium. A previous contractor collected samples from one of the drums and of the soil in the spill area. The samples were analyzed for PCBs, TPH, and total chlorinated hydrocarbons. The only COPC detected was TPH in the soil.

BN conducted a site investigation on May 23, 2001, and collected soil samples from around the pad and the suspected spill area. It appeared that the area had been disturbed as if the impacted soil had been removed. The samples were analyzed for full-scan TPH, TCLP chromium and lead, and gamma spectroscopy. The sample results indicate that THP as diesel/oil above regulatory levels exists on the edge of the spill area pad.

The source of the drums is unknown. Building 3117 was used to support activities at Test Cell A, but it is unclear if activities at Building 3117 created the waste in the drums.

Sufficient information exists to properly clean-close this site by excavation and disposal.

1.2.3 CAS 25-44-03, Spill

This CAS is located on a concrete pad on the southeast side of Test Cell C. This was a temporary drum storage area where two drums labeled as containing PCBs leaked onto the pad and surrounding soil. On December 14, 1990, the drums were removed and shipped to the Area 6 PCB storage facility. The drums were later shipped off site for disposal after being characterized as non-PCB.

IT conducted a site assessment on December 2, 1999, and identified the staining on the pad and soil staining extending approximately 2 m (7 ft) east of the pad. Sampling was conducted by BN on May 24, 2001. The spilled material and surrounding soil were sampled and analyzed for full scan TPH, PCBs, TCLP metals, and gamma spectroscopy. The results indicate that TPH at levels of up to 5,320 mg/kg (diesel/oil range) are in the spill material.

The source of the drums and contents is unknown but likely resulted from the draining of transformers or other electrical equipment. Available documentation indicates that the oil was non-PCB. Adequate information exists to sufficiently clean-close this site by excavation and disposal.

1.2.4 CAS 25-44-04, Acid Spill

This CAS is located on a concrete pad on the east side of Building 3320 at the Engine

Test Stand-1 facility. The site consists of spills from two tanks which were used for a water demineralization process. Tank T-2002 contained sodium hydroxide and Tank T-2003 contained sulfuric acid. Each tank had a 18,927-liter (L) (5,000-gallon [gal]) capacity.

A site visit on December 2, 1999, determined the size of the spill to be approximately 10 by 5 m (33 by 15 ft). The spill extended another 3 m (10 ft) east off the pad into a small gully. The spill was identified by the red-brown and yellow staining. The spill from the sulfuric acid tank was believed to have occurred over a period of time due to corrosion of the tank bottom. The spill was reported to the Nevada Division of Emergency Management (NDEM) as NDEM 980819-3014. The spill was estimated to be approximately 380 L (100 gal). The sodium hydroxide spill (NDEM 980811-3001) occurred on August 10, 1998, during tank removal activities. Approximately 380 L (100 gal) were spilled and mixed with the residue from the sulfuric acid spill. A pH meter measured the pH of the standing liquid to be 8.5. Approximately 2.3 cubic meters (m³) (3 cubic yards [yd³]) of impacted soil were excavated and disposed in the NTS U10c construction landfill on August 12, 1998.

BN collected samples of the material on the pad and soil on May 24, 2001. The samples were analyzed for soil pH and gamma spectroscopy. The results indicated that the pH of the samples ranged from 7.48 to 9.90, which is not RCRA-corrosive. No radiological constituents were present above regulatory levels.

Sufficient information exists to properly close this site with no further action.

1.2.5 CAS 25-25-02, Oil Spills

CAS 25-25-02 is located adjacent to a small concrete loading ramp on the south side of the Engine Maintenance, Assembly, and Disassembly (E-MAD) facility (Building 3900). Available documentation indicates that the spill was associated with leaking drums that were removed in 1992. No documentation exists to indicate that the spill was removed. The source of the drums is not listed in the documentation. The loading ramp leads to the boiler room, so the drums could have been waste oil or fuel from operations conducted there. The spill was described as 3 by 3 m (10 by 10 ft) and approximately 10 cm (4 in) below the surface, and appeared to have been covered with soil.

IT collected a sample of the spill on August 27, 1997. The sample was analyzed for total VOCs, total SVOCs, TPH, PCBs, total RCRA metals, gross alpha/beta, and gamma spectrometry. The results indicated that the only COPCs were lead (137 mg/kg) and PCBs (34 mg/kg).

BN collected two samples of the spill material and soil on May 31, 2001. One sample was collected from the original IT sample location. The other sample was collected just off the southwest corner of the loading ramp from an obvious spill area of a dark grey to black tar-like material. Both samples were analyzed for TPH full scan, PCBs, TCLP SVOCs, TCLP metals, and gamma spectroscopy.

The results indicate that the soil contains TPH at levels up to 566 mg/kg (diesel/oil range) and PCBs up to 5.7 mg/kg. The spill material contained TPH in the diesel/oil range at levels up to 3,440 mg/kg and PCBs up to 9.2 mg/kg. No other chemical or radiological constituents were present above regulatory levels.

Adequate information exists to sufficiently clean-close this site by excavation and disposal.

1.2.6 CAS 25-25-03, Oil Spills

This CAS is located south of Building 4838 (Gas Station) in Area 25 of the NTS. The site was originally described as being a spill adjacent to a tipped-over drum. The drum was documented as being removed in July 1991 and in 1993 the spill was measured at 2 by 1 by 1 m (6 by 3 by 3 ft).

IT collected a sample from the site on August 15, 1997, and analyzed the sample for VOCs, SVOCs, TPH, PCBs, RCRA metals, gross alpha/beta, and gamma spectrometry. No COPCs were detected.

BN collected samples from two locations on May 24, 2001. One sample was collected from the original IT sample location approximately 3 m (10 ft) off the southwest corner of the paved parking area. The second sample was collected approximately 15 m (50 ft) southwest of the first location near where the IT CAS identification stake was. Samples were collected from the surface and at a depth of 0.3 m (1 ft) from both locations. Samples were analyzed for TPH full scan and gamma spectroscopy. The results indicated that TPH levels were below detection limits at the surface and 0.3 m (1 ft) below the surface at the original IT sample location. At the sample near the IT CAS identification stake, TPH levels at the surface were 800 mg/kg diesel and 12,000 mg/kg oil. The TPH results at 0.3 m (1 ft) below ground surface were below regulatory limits.

The source of the drum is not listed in the documentation although the drum was removed. The source of the drum was likely from vehicle maintenance operations at the gas station.

Adequate information exists to sufficiently clean-close this site by excavation and disposal.

1.2.7 CAS 25-25-04, Oil Spills

This site is located on the north side of the E-MAD facility near a flammable storage building. The site is described by the E-MAD facility engineer as an area where used oils and cooling fluids from metal machining operations were poured directly onto the ground. An estimated 133 - 151 L (35 - 40 gal) of waste liquids were discharged to the soil. The spill area is approximately 5 by 5 m (15 by 15 ft).

IT collected two samples on August 27, 1997, and analyzed the samples for VOCs, SVOCs, TPH, PCBs, total RCRA metals, gross alpha and beta, and gamma spectrometry. COPCs include TPH, PCBs (2,300 mg/kg), and the RCRA metals cadmium

(88.5 mg/kg), chromium (9,780 mg/kg) and lead (6,090 mg/kg).

Samples of the area were collected by BN on May 26, 2001. Samples were collected from the original IT locations and from other locations within the CAS. Samples were collected from the surface and from a depth of 1 m (3 ft). Surface samples were analyzed for TPH full scan, PCBs, TCLP VOCs, TCLP SVOCs, TCLP metals, and gamma spectroscopy. Subsurface samples were analyzed for only TPH full scan. The results indicated the presence of PCBs (up to 77 mg/kg), TPH (up to 3,920 mg/kg in the diesel/oil range), and lead (up to 11 milligrams per liter [mg/L]). One sample was collected from a small area on the surface of what appeared to be machine shop trash. This appeared to be a very oily, greasy, absorbent material that contained metal turnings. The analytical results from this area were PCBs at 920 mg/kg, TPH at 21,600 mg/kg total diesel and oil range, and cadmium at 1.1 milligram per liter (mg/L). This area was approximately 0.3 by 0.3 m (1 by 1 ft) and appeared to be only surficial. All the analytical results for samples collected from the 1 m (3 ft) depth were below regulatory limits.

The source of the waste was from operations at the flammable storage building or the machine shop.

Adequate information exists to sufficiently clean-close this site by excavation and disposal.

1.2.8 CAS 25-25-05, Oil Spills

This CAS is located on the northeast side of the E-MAD facility. The spills are oil and/or hydraulic fluid associated with heavy equipment that was stored there. There are four oil spills within the footprint of the heavy equipment. The spills are presumed to be from the same source (equipment oil tank) but leaked from different parts of the equipment.

IT collected two soil samples from the spills on August 27, 1997. The samples were analyzed for VOCs, SVOCs, TPH, PCBs, total RCRA metals, and gross alpha/beta. Possible COPCs include TPH and RCRA metals cadmium at 46.1 mg/kg and lead 208 mg/kg.

BN collected samples from the spill on May 25, 2001. Samples were collected from the surface and from a depth of 0.6 m (2 ft). Surface samples were analyzed for TPH full scan, PCBs, TCLP VOCs, TCLP SVOCs, TCLP metals, pesticides, and gamma spectroscopy. Samples collected from the subsurface were analyzed for only TPH full scan. TPH results revealed concentrations as high as 46,500 mg/kg in the total diesel and

oil range. Cadmium was detected in concentrations as high as 1.1 mg/L. Results of samples collected from 60 cm (2 ft) depth were below regulatory levels.

Adequate information exists to sufficiently clean-close this site by excavation and disposal.

1.2.9 CAS 25-25-06, Oil Spills

CAS 25-25-06 is located at the Drill Hole Wash Monitoring Station which is past the Yucca Mountain facility in Area 25 of the NTS. The site was described as diesel fuel stains underneath two generators. The generators likely provided power for two trailers and monitoring equipment. A January 1996 site visit by IT determined that the generators were gone and no soil staining was apparent. The two trailers remained. A later IT site visit on March 5, 1998, revealed that the larger of the two trailers was gone. However, dark-brown staining was evident on the soil where the larger trailer had been. The staining was approximately 9 by 2 m (28 by 8 ft). No samples were collected.

A BN site visit on May 31, 2001, revealed no indication of the staining identified earlier. Based on descriptions and photographs, the location of the previously stained area was noted and samples were collected. Samples were analyzed for full scan TPH and gamma spectroscopy. The results indicated that TPH and radiological constituents are not present in the soil above regulatory limits. This CAS contains no COPCs and can be properly closed with no further action.

1.2.10 CAS 25-25-07, Hydraulic Oil Spill(s)

This site is located adjacent to a tunnel boring machine in an escape drift of X-Tunnel. The boring machine was left in place when X-Tunnel was placed on inactive status in 1982. Over time, the hydraulic lines leaked fluid to the surrounding substrate material. The lines may also have leaked due to damage from removing salvageable parts from the boring machine. It is estimated that approximately 1,514 L (400 gal) of hydraulic fluid may have been released. The substrate material is estimated to be 0.3 m (1 ft) thick with bedrock beneath. Since the site is underground, there is no driving force for migration of the hydraulic fluid except for gravity.

A sample of the hydraulic reservoir was collected on January 31, 1997, and analyzed for PCBs. Results indicated that PCBs were below regulatory levels. The reservoir was later drained.

BN collected samples of the impacted material on June 20, 2001. The samples were analyzed for full scan TPH, PCBs, and gamma spectroscopy. Due to the presence of fixed depleted uranium within the drift, a radiological control technician was present during sampling activities. No radiological levels above background were detected in the sampling areas. Sample results indicated TPH concentrations in the diesel/oil range of up to 105,000 mg/kg.

Based on the safety risks to personnel associated with cleaning up the hydrocarbon-impacted soil (confined mine shaft, limited lighting, hanging utility lines) as compared to the risk associated with leaving the soil in place, closure should consist of administrative controls using a use restriction with no further action.

1.2.11 CAS 25-25-08, Hydraulic Oil Spill(s)

This site is located adjacent to a tunnel boring machine at the end of the main drift of Y-Tunnel. The boring machine was left in place when Y-Tunnel was placed on inactive status in 1982. Over time, the hydraulic lines leaked fluid to the surrounding substrate material. The lines may also have leaked due to damage from removing salvageable parts from the boring machine. It is estimated that approximately 1,514 L (400 gal) of hydraulic fluid may have been released. The substrate material is estimated to be 0.3 m (1 ft) thick with bedrock beneath. Since the site is underground, there is no driving force for migration of the hydraulic fluid except for gravity.

BN collected samples of the impacted substrate material on June 20, 2001. The samples were analyzed for full-scan TPH, PCBs, and gamma spectroscopy. A radiological control technician was present during sampling activities as a precautionary measure. No radiological levels above background were detected in the sampling areas. Sample results indicated TPH results in the diesel/oil range of up to 140,000 mg/kg.

Based on the safety risks to personnel associated with cleaning up the hydrocarbon-impacted substrate material (confined mine shaft, limited lighting, hanging utility lines) as compared to the risk associated with leaving the substrate material in place, closure should consist of administrative controls using a use restriction with no further action.

1.2.12 CAS 25-25-16, Diesel Fuel

This site is located east of the Engine Test Stand entrance in Area 25 of the NTS. The site consists of soil staining from a diesel release from an aboveground storage tank. Tank T-2001 was a 79,000-L (21,000-gal) capacity steel tank used to store diesel fuel for a boiler located in Building 3320.

The tank was removed during August 1998 closure activities for CAU 126. There was no evidence that the tank had leaked. However, the soil surrounding a valve connected to the drain pipe was moist and had a strong diesel odor.

On August 10, 1998, an attempt was made to determine the extent of the spill. Approximately 10.7 m³ (14 yd³) were removed and disposed before it was determined that additional excavation was beyond the scope of that project.

BN collected samples from the surface and from a depth of up to 0.6 m (2 ft) in the area of the impacted soil on May 25, 2001. The samples were analyzed for full-scan TPH and gamma spectroscopy. The results indicated that diesel and oil range organics were present at a maximum concentration of 1,320 mg/kg at the surface.

Adequate information exists to sufficiently clean-close this site by excavation and disposal.

1.2.13 CAS 25-25-17, Subsurface Hydraulic Oil Spill

This CAS is located on the south side of the E-MAD facility. The spill was identified on

December 1, 1998, during the housekeeping closure of CAU 297. Closure activities consisted of the removal of two 38 L (10 gal) metal containers used in a closed vacuum pump oil recovery system.

Completion of the closure activities identified a hydrocarbon release associated with historical operations of the oil recovery system. The spill is located in a significant power/utility corridor feeding into the building. The first of the utilities was located at a depth of approximately 1 m (3 ft). Impacted soil was removed to a maximum depth of approximately 46 cm (18 in). Work was discontinued due to the extent of the impacted area, confining work space limitations, and proximity to utilities. Clean soil was used to backfill over the excavated area.

Samples of the soil were collected by BN for verification and waste disposition during CAU 297 closure activities. The samples were analyzed for TPH, TCLP VOCs, TCLP SVOCs, TCLP metals, PCBs, pesticides, and gamma spectroscopy. The results indicated COPCs as TPH and PCBs (7.2 mg/kg).

BN re-sampled the site on May 31, 2001. Soil samples were collected from a minimum depth of 0.3 m (1 ft) to get below the level of the backfill. The samples were analyzed for full-scan TPH, PCBs, and gamma spectroscopy. The results indicate the soil is impacted with petroleum hydrocarbons up to 647 mg/kg.

Based on the risks (utility corridor) associated with cleaning up the hydrocarbonimpacted soil as compared to the risk associated with leaving the soil in place, closure should consist of administrative controls using a use restriction with no further action.

2.0 DEVELOP AND REFINE THE CONCEPTUAL SITE MODEL (CSM)

Available information, including site process knowledge and historical background information, is sufficient to support the CSMs for CAU 398. The CSMs describe the most probable scenarios for current conditions at each site and define the assumptions that are the basis for identifying appropriate data collection methods.

Ten of the eleven above-ground sites involve releases of petroleum hydrocarbons to surface or near-surface soil. Other COPCs are present at some of these sites and are associated with the petroleum hydrocarbons, which acts as a carrier for the other COPCs. The remaining above-ground site is an acid release to surface soil. In the X- and Y-tunnel sites, petroleum has been released to the floor of the tunnel. The released substances will typically migrate downward due to gravity and will also flow downslope from the source if the substrate conditions do not allow the fuel to seep in as quickly as the release is occurring. Previously disturbed ground, such as occurs along buried piping and utility corridors, will also serve as a preferential pathway. After the initial release has stopped, the fuel typically continues to migrate downward with gravity until equilibrium is reached. If additional pressure is added to the system after equilibrium is reached, such as what occurs with a new release or as a result of rainfall, downward migration will continue.

2.1 Primary Conceptual Site Models

The primary CSMs are considered the most probable scenarios for current conditions at the CAU 398 sites. Available information from which the CSMs are based were derived from site process knowledge, historical background information, and site sampling and analysis. The proposed activities are based on the assumption that diesel- and oil- range petroleum hydrocarbons are the most prevalent COPCs at the sites. The petroleum hydrocarbons are also assumed to act as a carrier for the other COPCs which will not extend beyond the limits of the petroleum hydrocarbons. All of the sites are expected to fit the basic CSM with minor variations caused by site-specific preferential pathways, as identified below for each CAS:

- CAS 25-44-01, Fuel Spill: A CSM has not been developed for this site because sample analysis indicated that COPCs are not present above regulatory levels. No further action is recommended for this site.
- CAS 25-44-02, Spill: The primary CSM assumes that only petroleum hydrocarbons were released to the soil. Sample analysis supports this CSM and indicates that petroleum hydrocarbons extend to a depth of 0.6 m (2 ft) below ground surface. There are no preferential pathways identified for this site.
- CAS 25-44-03, Spill: The primary CSM assumes that only petroleum hydrocarbons were released to the soil. Sample analysis supports this CSM. It is assumed that the hydrocarbons extend to a maximum depth of 0.3 m (1 ft) below the ground surface. There are no preferential pathways identified for this site.
- CAS 25-44-04, Acid Spill: A CSM has not been developed for this site because sample analysis indicated that COPCs are not present above regulatory levels. No further action is recommended for this site.
- CAS 25-25-02, Oil Spills: The primary CSM assumes that only petroleum hydrocarbons and associated PCBs were released to the soil. It is also assumed that the PCBs did not extend beyond the limits of the hydrocarbon release and that the PCBs present are below land ban concentration of 50 mg/kg. It is assumed that the COPCs extend to a maximum depth of 0.3 m (1 ft) below the ground surface. The preferential pathway for this site may be down along the foundation of the E-MAD Building.
- CAS 25-25-03, Oil Spills: The primary CSM assumes that only petroleum hydrocarbons were released to the soil. Sample analysis supports this CSM and
 - indicates that petroleum hydrocarbons extend to a depth of 0.3 m (1 ft) below ground surface. There are no preferential pathways identified for this site.
- CAS 25-25-04, Oil Spills: The primary CSM assumes that only petroleum hydrocarbons and associated COPCs (PCBs, lead, cadmium) were released to the soil and that the COPCs did not extend beyond the limits of the hydrocarbon release. Sample analysis supports this CSM and indicates that petroleum hydrocarbons extend to a depth of 1 m (3 ft) below ground surface. It is assumed that PCBs will be present

in concentrations above the land ban limit of 50 mg/kg. Lead and cadmium are also assumed to be above the land ban concentrations of 7.5 mg/kg and 1.1 mg/kg, respectively. The preferential pathway for this site may be the nearby (within 3 m [10 ft]) storm drain.

- CAS 25-25-05, Oil Spills: The primary CSM assumes that only petroleum hydrocarbons and associated COPCs (cadmium) were released to the soil and that the COPCs did not extend beyond the limits of the hydrocarbon release. Sample analysis supports this model and indicates that petroleum hydrocarbons extend to a depth of 0.6 m (2 ft) below ground surface. It is assumed that cadmium is present above the land ban concentration of 1.1 mg/kg. There are no preferential pathways identified for this site.
- CAS 25-25-06, Oil Spills: A CSM has not been developed for this site because sample analysis indicated that COPCs are not present above regulatory levels. No further action is recommended for this site.
- CAS 25-25-07, Hydraulic Oil Spill(s): The primary CSM assumes that only petroleum hydrocarbons were released to the substrate in X-Tunnel. Sample analysis supports this CSM. It is assumed that the hydrocarbons extend to a maximum depth of 0.3 m (1 ft) below the ground surface. There are no preferential pathways identified for this site.
- CAS 25-25-08, Hydraulic Oil Spill(s): The primary CSM assumes that only petroleum hydrocarbons were released to the substrate in Y-Tunnel. Sample analysis supports this CSM. It is assumed that the hydrocarbons extend to a maximum depth of 0.3 m (1 ft) below the ground surface. There are no preferential pathways identified for this site.
- CAS 25-25-16, Diesel Spill: The primary CSM assumes that only petroleum hydrocarbons were released to the soil. Sample analysis supports this CSM. It is assumed that the hydrocarbons extend to a maximum depth of 0.6 m (2 ft) below the ground surface. There are no preferential pathways identified for this site.
- CAS 25-25-17, Subsurface Hydraulic Oil Spill: The primary CSM assumes that only petroleum hydrocarbons were released to the soil. Sample analysis supports this CSM. It is assumed that the hydrocarbons extend to a maximum depth of 0.6 m (2 ft) below the ground surface. Preferential pathways for this site may be the utility corridor and the building foundation.

2.2 Alternate Conceptual Site Models

The conditions under the alternate CSM are considered less likely than conditions outlined in the primary CSM.

- CAS 25-44-01, Fuel Spill: An alternate CSM is not necessary for this site because sample analysis indicated that COPCs are not present above regulatory levels.
- CAS 25-44-02, Spill: An alternate CSM has not been developed for this site because

existing data show the primary CSM to be an adequate representation of current site conditions.

- CAS 25-44-03, Spill: The alternate CSM provides for a more extensive petroleum hydrocarbon release (depth) than assumed in the primary CSM.
- CAS 25-44-04, Acid Spill: An alternate CSM is not necessary for this site because sample analysis indicated that COPCs are not present above regulatory levels.
- CAS 25-25-02, Oil Spills: The alternate CSM provides for a more extensive release of COPCs than assumed in the primary CSM. The preferential pathway remains the same as in the primary CSM.
- CAS 25-25-03, Oil Spills: The alternate CSM provides for a more extensive release of petroleum hydrocarbons than assumed in the primary CSM.
- CAS 25-25-04, Oil Spills: The alternate CSM provides for a more extensive release of COPCs than assumed in the primary CSM. The preferential pathway remains the same as in the primary CSM.
- CAS 25-25-05, Oil Spills: An alternate CSM has not been developed for this site because existing data show the primary CSM to be an adequate representation of current site conditions.
- CAS 25-25-06, Oil Spills: An alternate CSM is not necessary for this site because sample analysis indicated that COPCs are not present above regulatory levels.
- CAS 25-25-07, Hydraulic Oil Spill(s): The alternate CSM for the X-Tunnel spill provides for a more extensive release of petroleum hydrocarbons that has impacted the bedrock.
- CAS 25-25-08, Hydraulic Oil Spill(s): The alternate CSM for the Y-Tunnel spill provides for a more extensive release of petroleum hydrocarbons that has impacted the bedrock.
- CAS 25-25-16, Diesel Spill: The alternate CSM provides for a more extensive release of petroleum hydrocarbons than assumed in the primary CSM.
- CAS 25-25-17, Subsurface Hydraulic Oil Spill: The alternate CSM provides for a more extensive release of petroleum hydrocarbons than assumed in the primary CSM and for PCB concentrations above the cleanup level. The preferential pathways remain the same as in the primary CSM.

3.0 IDENTIFY THE DECISION

Development of a Streamlined Approach for Environmental Restoration (SAFER) plan can begin based on the currently available process knowledge, historical data, and sampling data.

Decisions regarding the closure alternatives for the CASs can be made based on the available site data. The CASs have been grouped into three closure alternatives based on site conditions. The most probable closure decisions are identified below:

3.1 No Further Action

The CASs included in the no further action alternative are as follows:

- CAS 25-44-01, Fuel Spill
- CAS 25-44-04, Acid Spill
- CAS 25-25-06, Oil Spills

Are existing data sufficient to support the no further action alternative?

3.2 Clean Closure

The CASs and associated COPCs included in the clean closure alternative are as follows:

 CAS 25-44-02, Spill CAS 25-44-03, Spill CAS 25-25-02, Oil Spills CAS 25-25-03, Oil Spills 	COPC=TPH as diesel/oil COPC=TPH as diesel/oil; PCBs (below land ban) COPC=TPH as diesel/oil
• CAS 25-25-04, Oil Spills	COPCs=TPH as diesel/oil; lead, cadmium, PCBs (above land ban)
• CAS 25-25-05, Oil Spills	COPCs=TPH as diesel/oil; cadmium (above land ban)
• CAS 25-25-16, Diesel Fuel	COPC=TPH as diesel/oil

Are existing data sufficient to support the clean closure by excavation and disposal alternative?

3.3 Administrative Closure

The sites included in this group are as follows:

- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-17, Subsurface Hydraulic Oil Spill

Are existing data sufficient to support administrative closure of these sites with no further action other than implementation of a Use Restriction?

4.0 IDENTIFY THE INPUTS TO THE DECISION

4.1 Identify the information inputs needed and resolve the decision.

4.1.1 No Further Action

The sites included in this group are as follows:

- CAS 25-44-01, Fuel Spill
- CAS 25-44-04, Acid Spill
- CAS 25-25-06, Oil Spills

At these CASs, sample results revealed no evidence of COPCs above action levels. Therefore, these sites can be properly closed with no further action.

4.1.2 Clean Closure

The sites included in this group are as follows:

- CAS 25-44-02, Spill
- CAS 25-44-03, Spill
- CAS 25-25-02, Oil Spills
- CAS 25-25-03, Oil Spills
- CAS 25-25-04, Oil Spills
- CAS 25-25-05, Oil Spills
- CAS 25-25-16, Diesel Fuel

Sufficient information exists for these CASs to be clean closed by excavation and disposal of impacted soil. All of these sites consist of TPH-impacted soil. Three sites contain COPCs in addition to TPH and are associated with the TPH. CAS 25-25-02 also contains PCBs below the land ban restrictions; CAS 25-25-05 also contains cadmium above land ban restrictions; CAS 25-25-04 contains lead, cadmium, and PCBs above land ban restrictions in addition to the TPH. CASs with COPCs above the land ban restrictions must be sent to an off-site treatment and disposal facility.

4.1.3 Administrative Closure

The sites included in this group are as follows:

- CAS 25-25-07, Hydraulic Oil Spill(s)
- CAS 25-25-08, Hydraulic Oil Spill(s)
- CAS 25-25-17, Subsurface Hydraulic Oil Spill

TPH as diesel/oil is the only COPC at sites included in this group. Given specific site conditions (utilities, limited space, limited lighting), it is likely that a risk assessment of each of these sites, based on the "A through K" evaluation as presented in Nevada Administrative Code (NAC) 445A.227 (NAC, 2002), would show that there is no significant risk to human health or the environment from the hydrocarbon-impacted soil.

This "A through K" evaluation is recommended for inclusion in the SAFER Plan, so data supporting administrative closure of the site must be gathered. If risk-based closure is supported, the sites would then be recommended for administrative closure with no further action and a use restriction prepared for inclusion in the Closure Report (CR).

4.2 List types of COPCs and affected media.

The CASs and their associated COPCs are listed below:

- CAS 25-44-01, Fuel Spill No COPCs above action levels
- CAS 25-44-04, Acid Spill No COPCs above action levels
- CAS 25-25-06, Oil Spills No COPCs above action levels
- CAS 25-44-02, Spill TPH as diesel/oil
- CAS 25-44-03, Spill TPH as diesel/oil
- CAS 25-25-02, Oil Spills TPH as diesel/oil, PCBs
- CAS 25-25-03, Oil Spills TPH as diesel/oil
- CAS 25-25-04, Oil Spills TPH as diesel/oil, lead, cadmium, PCBs
- CAS 25-25-05, Oil Spills TPH as diesel/oil, cadmium
- CAS 25-25-16, Diesel Fuel TPH as diesel/oil
- CAS 25-25-07, Hydraulic Oil Spill(s) TPH as diesel/oil
- CAS 25-25-08, Hydraulic Oil Spill(s) TPH as diesel/oil
- CAS 25-25-17, Subsurface Hydraulic Oil Spill TPH as oil

For all of the CASs, the affected media is soil.

4.3 Identify potential sampling approaches and appropriate analytical methods.

Existing documentation, process knowledge, and sample data are adequate to close the sites under the no further action and administrative closure alternatives without collecting additional data. For these sites, existing data will be referenced in the SAFER Plan and documented in the closure documentation to demonstrate adequate closure of the sites. The sites under the clean closure by excavation and disposal alternative can also be closed using existing data but will also require confirmation samples to verify that all COPCs have been removed to below action levels. The confirmation sampling approach will be discussed in the SAFER Work Plan.

5.0 DEFINE THE BOUNDARIES OF THE STUDY

5.1 Define the geographic areas of the field investigation.

5.1.1 Define the geographic area within which all decisions must apply (in some cases this may be defined by the CAU).

The geographic areas of the field investigation are those areas of each CAS which are impacted by COPCs as identified by the CSM. Descriptions of each area are found in Section 1.2 of this report.

5.1.2 Specify the characteristics that define the population of interest.

The population of interest consists of soil containing COPCs at concentrations above action levels.

5.2 Define the time frame of the decision.

5.2.1 Determine the time frame to which the study data apply.

- The study data should be relevant with the length of time allowed for by the SAFER process under the Federal Facility Agreement and Consent Order (FFACO) (FFACO, 1996).
- Migration (if occurring) is assumed to be imperceptibly slow. This is based on minimal surface water infiltration and the constraints of the CSM.

5.2.2 Determine when to collect data.

Field activities are scheduled to take place in Fiscal Year 2002 after approval of the final SAFER Work Plan. Field activities will be conducted at times that meet the security and safety constraints of the NTS.

5.2.3 Define relevant time constraints.

The FFACO deadline for delivery of the final SAFER Work Plan is December 31, 2001.

The FFACO deadline for delivery of the final CR is December 31, 2002.

5.3 Identify any practical constraints on data collection.

- Approval of the DQO process and the SAFER Plan by the NDEP.
- Site operations NTS operational and security constraints.
- Equipment and personnel access.
- Meteorological.
- Availability of heavy equipment.
- Health and safety of workers.

6.0 DEVELOP A DECISION RULE - DEFINE A LOGICAL BASIS FOR CHOOSING AMONG ALTERNATIVE ACTIONS

6.1 Specify the action level or preliminary action level for the decision.

Sufficient analytical data and process knowledge exists to support the CSM. The action level is 100 mg/kg for TPH based on NAC 445A.2272 (NAC, 2002). Based on Preliminary Remediation Goals for EPA Region 9 for Industrial Soils, the action levels are 1.0 mg/kg for PCBs, 750 mg/kg for lead, and 810 mg/kg for cadmium.

7.0 OPTIMIZE THE DESIGN - OUTLINE A SAMPLING DESIGN, SPECIFYING THE OPERATIONAL DETAILS OF THE SAMPLING PLAN WHICH FALLS WITHIN THE PROJECT'S CONSTRAINTS

7.1 Develop general sampling and analysis design alternatives.

Refer to Section 4.3 for sampling and analysis alternatives.

7.2 Select the most resource-effective design that satisfies all of the DQOs.

- For those sites requiring clean closure by excavation and disposal, excavate impacted to lateral and vertical extent and collect confirmation samples to verify that all soil impacted with COPCs above action levels has been removed.
- Survey and implement Use Restrictions for those sites to be administratively closed.

7.3 Document the operational details and theoretical assumptions of the selected design in the sampling and analysis plan.

Detailed documentation of sampling and analysis will be discussed in the SAFER Work Plan.

TABLE A1 - LABORATORY ANALYTICAL REQUIREMENTS FOR CAU 398 SOIL SAMPLES

Parameter or Analyte	Medium or Matrix	Analytical Method	Minimum Reporting Limit	Regulatory Limit	Relative Percent Difference (RPD) ^a	Percent Recovery (%R) ^b
Cadmium	Soil	6010B°	1 mg/kg ^e		35	Lab - specific ^d
Lead	Soil	6010B°	0.3 mg/kg ^e		35	Lab - specific ^d
Polychlorinated Biphenyls (PCBs)	Soil	8082°	Analyte- specific ^c Contract- required quantitation limit	0.001 mg/kg	Lab - specific ^d	Lab - specific ^d
Total Petroleum Hydrocarbons (TPH)	Soil	8015B modified ^c	25 mg/kg ^e	100 mg/kg	Lab - specific ^d	Lab - specific ^d

^a RPD - relative percent difference is used to calculate precision.

^b % R - percent recovery is used to calculate accuracy.

^c U.S. Environmental Protection Agency (EPA) *Test Methods for Evaluating Solid Waste*, 3rd Edition, Parts 1-4, SW-846 (EPA, 1996).

^d In-House Generated RPD and %R Performance Criteria.

^e Industrial Sites Quality Assurance Project Plan (NNSA/NV, 2002).

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REFERENCES

- FFACO, see Federal Facility Agreement and Consent Order.
- Federal Facility Agreement and Consent Order. 1996 (as amended). Agreed to by the State of Nevada, U.S. Department of Energy, and U.S. Department of Defense.
- NAC, see Nevada Administrative Code.
- NNSA/NV, see U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office
- Nevada Administrative Code. 2002. Section 445A.227, "Contamination of Soil: Order by Director for Corrective Action; Factors to be Considered in Determining Whether Corrective Action is Required." Carson City, NV.
- U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office. 2002. <u>Industrial Sites Quality Assurance Project Plan</u>, DOE/NV--372--REV. 3, Las Vegas, NV.
- U.S. Environmental Protection Agency. 1996. <u>Test Methods for Evaluating Solid Waste</u>, <u>Physical/Chemical Methods</u>, EPA Publication SW-846, Third Edition. Washington, D.C.
- U.S. Environmental Protection Agency. 2000. <u>Guidance for the Data Quality Objective Process</u>, <u>EPA QA/G-4</u>, Washington, D.C.

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CLOSURE REPORT - CAU 398

Section: Appendix B
Revision: 1
Date: April 2003

APPENDIX B VERIFICATION SAMPLE ANALYTICAL RESULTS

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TABLE OF CONTENTS - SAMPLE ANALYTICAL RESULTS BY SAMPLE DELIVERY GROUP

Analytical results for the verification samples collected at the Corrective Action Unit 398 Corrective Action Sites (CASs) are presented in this Appendix. The analytical results are grouped into Sample Delivery Groups (SDGs), which are arranged in numerical order in this Appendix. Analytical results for a specific CAS can be found in the indicated SDGs, or by consulting Table 2 in the main document text.

CAS 25-25-02, Oil Spills: SDG V1596 and V1627

CAS 25-25-03, Oil Spills: SDG V1565

CAS 25-25-04, Oil Spills: SDG V1581, V1609 and V1815

CAS 25-25-05, Oil Spills: SDG V1581 and V1815

CAS 25-25-16, Diesel Spill (from CAS 25-01-02): SDG V1580

CAS 25-44-02, Spill: SDG V1596 CAS 25-44-03, Spill: SDG V1580

Six CASs in CAU 398 were closed by implementing closure alternatives other than clean closure; three CASs were closed by taking no further action, and three CASs were closed in place with administrative controls. For these CASs no verification samples were required or collected as part of the CAU 398 closure. Analytical results for characterization samples collected at these CASs were presented in the approved CAU 398 SAFER plan, and are included in this Appendix as required by the agreed upon Closure Report outline. The analytical results are grouped by SDG which are arranged numerically. Results for a specific CAS can be found in the indicated SDGs.

CAS 25-25-07, Hydraulic Oil Spill(s): SDG V1169 and V1170

CAS 25-25-08, Hydraulic Oil Spill(s): SDG V1169 and V1170

CAS 25-25-17, Subsurface Hydraulic Oil spill: SDG V1139 and V1140

CAS 25-25-06, Oil Spills: SDG V1139 and V1140

CAS 25-44-01, Fuel Spill: SDG V1122, V1123 and V1170

CAS 25-44-04, Acid Spill (from CAS 25-01-01): SDG V1122 and V1123

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1122

CLOSURE RÉPORT - CAU 398

Section: Appendix B
Revision: 1
Date: April 2003

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Reno . Las Vegas . Boise Phoenix • Sacramento

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

P.O. Box 98521, M/S NTS273

Las Vegas, NV 89193-8521

ATTN:

Ted Redding

PROJECT NAME:

V1122

NEL ORDER ID: L0105275

PROJECT NUMBER: 23081

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 5/29/01.

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

Some QA results have been flagged as follows:

Jl - The batch MS and/or MSD were outside acceptance limits. The batch LCS was acceptable. Some surrogate results have been flagged as follows:

- Sample required dilution. Sample QC results were diluted outside the calibrated range.

Van Wagenen Laboratory Manager

CERTIFICATIONS:

of Engineers

Las Vegas S. California Reno AZ0518 AZ0520 AZ0605

2264

2002

Arizona 1707 California

Certified

US Army Corps Certified Montana Nevada L.A.C.S.D.

Idaho

Certified Certified Certified Certified

NV033 NV052

Reno

CA084 10228

Las Vegas S. California

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122

PROJECT #: 23081 CLIENT ID:

254404-1-0

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-04

TEST:

Inorganic Non-Metals

MATRIX:

Solid

PARAMETER	RESULT	R. L.	D. F.	METHOD	UNITS	ANALYZED
pH	8.85	2.	1	EPA 9045C	pH Units	6/1/01
pH Temperature	26.8	1.	1	EPA 9045C	°C	6/1/01

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122

PROJECT #:

23081

CLIENT ID:

254404-2-0

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-05

TEST:

Inorganic Non-Metals

MATRIX:

Solid

PARAMETER	RESULT	R. L.	<u>D. F.</u>	METHOD	UNITS	ANALYZED
pН	7.48	2.	1	EPA 9045C	pH Units	6/1/01
pH Temperature	26.6	1.	1	EPA 9045C	°C	6/1/01

R.L. - Reporting Limit

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1122 23081

CLIENT ID:

254404-3-0

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-06

TEST:

Inorganic Non-Metals

MATRIX:

Solid

PARAMETER	RESULT	R. L.	<u>D. F.</u>	METHOD	UNITS	ANALYZED
pH	9.77	2.	1	EPA 9045C	pH Units	6/1/01
pH Temperature	26.3	1.	1	EPA 9045C	°C	6/1/01

R.L. - Reporting Limit

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: V

V1122 23081 CLIENT ID:

254404-4-0

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-07

TEST:

Inorganic Non-Metals

MATRIX:

Solid

PARAMETER	RESULT	R. L	D. F.	METHOD	UNITS	ANALYZED
pН	9.90	2.	1	EPA 9045C	pH Units	6/1/01
pH Temperature	26.4	1.	1	EPA 9045C	°C	6/1/01

R.L. - Reporting Limit

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

PROJECT ID:

PROJECT #:

Bechtel Nevada

V1122

CLIENT ID:

254403-1-0

DATE SAMPLED: 5/24/01

23081

NEL SAMPLE ID: L0105275-12

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082. Dec. 1996

EPA 8082

ANALYST:

JRW - Las Vegas Division

METHOD: MATRIX:

EXTRACTED:

5/30/01

DILUTION:

Solid

ANALYZED:

6/6/01

		Reporting
PARAMETER	Result	Limit
Aroclor-1016	ND	100. μg/kg
Aroclor-1221	ND	100. μg/kg
Aroclor-1232	ND	1 0 0. μg/kg
Aroclor-1242	ND	100. μg/kg
Aroclor-1248	ND	100. μg/kg
Aroclor-1254	ND	100. μg/kg
Aroclor-1260	ND	100. μg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	133	46 - 155
Tetrachloro-m-xylene	127	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

V1122

CLIENT ID:

254403-2-0

PROJECT ID: PROJECT #: 23081 DATE SAMPLED: 5'24:01

NEL SAMPLE ID: L0105275-13

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

5.30:01

DILUTION: 5 ANALYZED:

6/6/01

PARAMETER	Result	Reporting		
		Limit		
Aroclor-1016	ND	100. µg/kg		
Aroclor-1221	ND	100. μg/kg		
Aroclor-1232	ND	100. μg/kg		
Aroclor-1242	ND	100. μg/kg		
Aroclor-1248	ND	100. μg/kg		
Aroclor-1254	ND	100. μg/kg		
Aroclor-1260	ND	100. µg/kg		

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	155	46 - 155
Tetrachloro-m-xylene	133	49 - 140

ND - Not Detected

Bechtel Nevada CLIENT:

V1122 PROJECT ID:

CLIENT ID: 252503-1-1

DATE SAMPLED: 5/24/01

23081 PROJECT #:

NEL SAMPLE ID: L0105275-10

TEST: METHOD: Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992 EPA 8015M ANALYST:

CCS - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

DILUTION:

ANALYZED:

5/30/01

5/31/01

PARAMETER	Result	ReportingLimit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery 70

Acceptable Range

54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: V1122 CLIENT ID:

252503-2-1

DATE SAMPLED: 5/24/01

PROJECT #:

23081

NEL SAMPLE ID: L0105275-11

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

ì

EXTRACTED:

5/30/01

DILUTION:

ANALYZED:

5/31/01

PARAMETER	Result	Reporting <u>Limit</u>
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Octacosane	79	54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122 23081

CLIENT ID:

254403-3-0

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-14

TEST:

PROJECT #:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

EXTRACTED:

5/30/01

DILUTION:

5

ANALYZED:

5/31/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	50. mg/kg
Diesel Range (C12-C22)	520 mg/kg	50. mg/kg
Oil Range (C12-C34)	4800 mg/kg	250. mg/kg
Total	5320 mg/kg	50. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery

Acceptable Range

54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

V1122

CLIENT ID:

254403-4-0

PROJECT ID: 23081 DATE SAMPLED: 5/24/01 NEL SAMPLE ID: L0105275-15

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

METHOD:

PROJECT #:

EPA 8015M

ANALYST:

CCS - Las Vegas Division

EXTRACTED:

MATRIX:

Solid

5/30/01

DILUTION:

5

ANALYZED:

5/31/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	50. mg/kg
Diesel Range (C12-C22)	520 mg/kg	50. mg/kg
Oil Range (C12-C34)	4800 mg/kg	250. mg/kg
Total	5320 mg/kg	50. mg/kg

QUALITY CONTROL DATA:

Surrogate % Recovery Acceptable Range 54 - 130 Octacosane D

ND - Not Detected

CLIENT:

Bechtel Nevada

V1122

CLIENT ID:

254403-6-0

DATE SAMPLED: 5/24/01

PROJECT ID: PROJECT #:

23081

NEL SAMPLE ID: L0105275-16

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

EXTRACTED:

5/30/01

DILUTION:

1

ANALYZED:

5/31/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Octacosane	80	54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: V1122

PROJECT #: 23081

CLIENT ID:

252503-3-1

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-17

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

METHOD:

EPA 8015M

ANALYST:

CCS - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

5/30/01

DILUTION:

1

ANALYZED:

5/31/01

PARAMETER	Result	ReportingLimit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate% RecoveryAcceptable RangeOctacosane8854 - 130

ND - Not Detected

CLIENT: Bechtel Nevada

CLIENT ID: PROJECT ID: V1122 DATE SAMPLED: NA

NEL SAMPLE ID: 010530PCBS-BLK PROJECT #: 23081

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD: EPA 8082

ANALYST:

MATRIX: Solid EXTRACTED: 5/30/01 ANALYZED: 6/6/01

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

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	82	46 - 155
Tetrachloro-m-xylene	92	49 - 140

ND - Not Detected

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CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

Method Blank

JRW - Las Vegas Division

PROJECT ID:

V1122

DATE SAMPLED: NA

PROJECT #: 23081 NEL SAMPLE ID: 010530TPHS-FP-BLK

TEST:

EPA 8015M

ANALYST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992 CCS - Las Vegas Division

METHOD: MATRIX:

Solid

EXTRACTED:

5/30/01

ANALYZED:

5/31/01

		Reporting
PARAMETER	Result	<u>Limit</u>
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range	
Octacosane	81	54 - 130	

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122

PROJECT #: 23081

CLIENT ID:

254401-1-0

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-01

TEST:

TCLP-8 Metals

MATRIX:

Solid

	RESULT	REPORTING		• • • • • • • • • • • • • • • • • • •	TCLP/STLC EXTRACTION		
<u>PARAMETER</u>	mg/L	LIMIT	D. F.	METHOD	DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Barium	ND	1. mg/L	1	EPA 6010	6/4/01	6./5/01	6/6/01
Cadmium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Chromium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Lead	0.18	0.05 mg/L	1	EPA 6010	6/4/01	6.′5/01	6/6/01
Mercury	ND	$0.002~\mathrm{mg/L}$	10	EPA 7470A	6/4/01	6/5/01	6/5/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122

PROJECT #: 23081

CLIENT ID: 254401-2-0 DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-02

TEST:

TCLP-8 Metals

MATRIX:

Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION DATE		ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Barium	ND	1. mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Cadmium	ND	0.01 mg/L	I	EPA 6010	6/4/01	6/5/01	6/6/01
Chromium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Lead	0.12	0.05 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/4/01	6/5/01	6/5/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122

PROJECT #:

23081

CLIENT ID:

254401-3-0

DATE SAMPLED: 5.24 01

NEL SAMPLE ID: L0105275-03

TEST:

TCLP-8 Metals

MATRIX:

Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION DATE		ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Barium	1.7	1. mg/L	1	EPA 6010	6/4/01	6.′5/01	6/6/01
Cadmium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Chromium	0.38	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Lead	ND	0.05 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/4/01	6/5/01	6/5/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1122

23081

CLIENT ID: 254403-1-0

DATE SAMPLED: 5/24/01 NEL SAMPLE ID: L0105275-12

TEST:

TCLP-8 Metals

MATRIX:

Solid

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	D ANALYZEI	
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Barium	ND	1. mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Cadmium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Chromium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Lead	0.10	0.05 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/4/01	6/5/01	6/5/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01

D.F. - Dilution Factor

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122

PROJECT #: 23081

CLIENT ID:

254403-2-0

DATE SAMPLED: 5/24/01

NEL SAMPLE ID: L0105275-13

TEST:

TCLP-8 Metals

MATRIX:

Solid

· · · · · · · · · · · · · · · · · · ·	RESULT	REPORTING	TCLP/STLC EXTRACTION					
PARAMETER	mg/L	LIMIT	D. F.	METHOD	DATE	DIGESTED	ANALYZED	
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01	
Barium	ND	1. mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01	
Cadmium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01	
Chromium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01	
Lead	0.18	0.05 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01	
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/4/01	6/5/01	6/5/01	
Selenium	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01	
Silver	ND	0.02 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01	

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID:

V1122

DATE SAMPLED: NA

PROJECT #: 23081

NEL SAMPLE ID: L5275HGTCLP-BLK

TEST:

TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A. July 1992

MATRIX:

TCLP Extract

				TCLP/STLC				
		REPORTING		EXTRACTION				
PARAMETER	RESULT	LIMIT	<u>D. F.</u>	METHOD _	DATE	DIGESTED	ANALYZED	
Mercury	ND	$0.002\mathrm{mg/L}$	10	EPA 7470A	6/4/01	6/5/01	6/5/01	

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID:

V1122

DATE SAMPLED: NA

PROJECT #: 2

23081

NEL SAMPLE ID: L52751-BLK

TEST:

TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX:

TCLP Extract

		REPORTING					
PARAMETER	RESULT	LIMIT	<u>D. F.</u>	METHOD _	DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Barium	ND	1. mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Cadmium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Chromium	ND	0.01 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Lead	ND	0.05 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/4/01	6/5/01	6/6/01
Silver	ND	$0.02\mathrm{mg/L}$	1	EPA 6010	6/4/01	6/5/01	6/6/01

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1122 23081

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

MATRIX:

Solid

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	RPD
Aroclor-1016	010530PCBS-LCS	333	2 62	79	63 - 127	
Aroclor-1016	010530PCBS-LCSD	333	258	7 7	63 - 127	1.5
Aroclor-1016	L0105277-01-MS	333	0	0 Л	55 - 142	
Aroclor-1016	L0105277-01-MSD	333	0	0 Л	55 - 142	0.
Aroclor-1260	010530PCBS-LCS	333	274	82	57 - 138	
Aroclor-1260	010530PCBS-LCSD	333	244	73	57 - 138	11.6
Aroclor-1260	L0105277-01-MS	333	340	102	48 - 129	
Aroclor-1260	L0105277-01-MSD	333	337	101	48 - 129	0.9

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1122 23081

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

MATRIX:

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Diesel Range (C12-C22)	010530TPHS-FP-LCS	166.7	128	77	53 - 91	
Diesel Range (C12-C22)	010530TPHS-FP-LCSD	166.7	133	80	53 - 91	3.8
Diesel Range (C12-C22)	L0105247-02-MS	166.7	135	81	34 - 114	
Diesel Range (C12-C22)	L0105247-02-MSD	166.7	142	85	34 - 114	5.1
Total	010530TPHS-FP-LCS	166.7	128	77	53 - 91	
Total	010530TPHS-FP-LCSD	166.7	133	80	53 - 91	3.8
Total	L0105247-02-MS	166.7	135	81	34 - 114	
Total	L0105247-02-MSD	166.7	142	85	34 - 114	5.1

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1122 23081

TEST:

Inorganic Non-Metals

MATRIX:

		Spike	Spike	Percent	Acceptable	
<u>PARAMETER</u>	NEL Sample ID	Amount	Result	Recovery	Range	<u>RPD</u>
7.00 Buffer	010601PH2-LCS	7	6.98	100	99 - 101	

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1122 23081

TEST:

TCLP/STLC Metals

MATRIX:

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Mercury	L5275HGTCLP-LCS	0.05	0.0515	103	85 - 115	
Mercury	L0105275-01-MS	0.05	0.0518	104	75 - 125	
Mercury	L0105275-01-MSD	0.05	0.056	112	75 - 125	7.8

CLIENT:

Bechtel Nevada

PROJECT ID:

V1122 23081

PROJECT #:

TCLP/STLC Metals

TEST: MATRIX:

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	<u>Amount</u>	Result	Recovery	Range	RPD
Arsenic	L5275I-LCS	0.5	0.529	106	85 - 115	
Arsenic	L0105275-01-MS	0.5	0.553	111	75 - 125	
Arsenic	L0105275-01-MSD	0.5	0.547	109	75 - 125	1.1
Silver	L5275I-LCS	0.5	0.434	87	85 - 115	
Silver	L0105275-01-MS	0.5	0.45	90	75 - 125	
Silver	L0105275-01-MSD	0.5	0.455	91	75 - 125	1.1
Barium	L5275I-LCS	1	0.99	9 9	85 - 115	
Barium	L0105275-01-MS	1	1.2	120	75 - 125	
Barium	L0105275-01-MSD	1	1.19	119	75 - 125	0.8
Cadmium	L5275I-LCS	0.5	0.472	94	85 - 115	
Cadmium	L0105275-01-MS	0.5	0.484	97	75 - 125	
Cadmium	L0105275-01-MSD	0.5	0.505	101	75 - 125	4.2
Chromium	L5275I-LCS	0.5	0.478	96	85 - 115	
Chromium	L0105275-01-MS	0.5	0.504	101	75 - 125	
Chromium	L0105275-01-MSD	0.5	0.513	103	75 - 125	1.8
Lead	L5275I-LCS	1	0.928	93	85 - 115	
Lead	L0105275-01-MS	1	1.11	93	75 - 125	
Lead	L0105275-01-MSD	1	1.17	99	75 - 125	6.2
Selenium	L5275I-LCS	0.5	0.507	101	85 - 115	
Selenium	L0105275-01-MS	0.5	0.48	96	75 - 125	
Selenium	L0105275-01-MSD	0.5	0.485	97	75 - 125	1.

Bechtel Nevada

ANALYTICAL SERVICES LABORATORY

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	ECT/ CLIENT INFORM		_				_			ORMAT						SAMPLE INFORMATION
Project: CAU3	78	BN Org#:	2152	Send Rep	ort ta:	DA	<u>لم</u>	TO!	3//	<u> 4501</u>	<u>)</u>	1110				Sampling Site: CAM 3 9 \$
Charge No.:C アゴ3	3 <i>E</i> //	ASL Prog].: 	Phone:	-616	9		ت ^{.xa}	-7	761		M/S:	7	DL.		The samples submitted contain (check); () Hazardous () Radioactive (X) Unknown
Project Manager:	AYNE JOHA	hose		Turnarou	nd: ()	Standa Rush I	rd - 30 Prelimir	days N ary by	on-rac	d, 60 Day	s Rad,	Other:_ Final by	/:			contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure
Phone: 5-0573	5-7761	1 171	/S: 7432 C L L	Final repo	ort form	at: 🌠	Standa	rd () !	NTS-V	VAC ()	Other:_					compliance with applicable regulations and allow for the safe handling of the sample materials.
	LAB USE ON	LY	•						ANA	LYSES	& ME	THOD				SAMPLE RECEIPT INFORMATION
Rad SGD:	Non-Ra	SDG:	VIIa	رک	3	-	-									Are all sample containers received intact (A Yes ()) Comments:
Rad Packet:	Non-Rac				of he	S015 N										
Client Services Repres	entative:				17.03	38.	5406	9 33		4						Do the labels agree with this form? Comments:
•				•	3	00507	HOLD HE SEN	E.H.	I I	0.17 67 7.0						Was a Material Clearance Tag submitted? Yes () Comments:
T ID/D	ESCRIPTION	SAM! DATE	PLING	MATRIX	7.cc P.	J HOT	N. C.	PAY E	77 75	16-						COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc
0 25440	1-1-0	5/24	0910	Sa-1A	×											4ºc 1P250mljor
1 25440	1-2-0	5/24	0915	SOLID	X			<u> </u>								per sample
2 254401	-3-0	5/24	0120	SOLIA	X				_							
3 25440	1-1-0	5/24	1015	SOIL			X									
4 254464	-2-0	1/24	1020	SOIL			入			1						
5 254404	-3-0	5/24	1025	Soil	Γ.		×		T						,	
6 254404	1-4-0	1		SOIL			X		1	1					,	. 0
7 252503		1		Soil		X			1	1						
8 252503-			12cm			文				1						
9 252503			1215			X			1	+						
Transfer of samples su		<u> </u>					<u> </u>	1	1	Complete	for san	nples sh	ipped t	o an O	FF-SITE	E Subcontract Laboratory UE/
Sampled/Relinquished	(Signature/Organization			Received by				on)	F	Relinquis	ed (BN	Repre	sentativ	e Sign	ature)	DATE / TIME Received (Courier & Tracking Info.)
J:1571	- BNER-	5/24	1622	CA Ca	sta	ua	2		1	CA) (Relinquisi		י יוני		- ks/s `		5/29/01/13(2) BN (CUL)E72 DATE TIME Received (1st tier Subconfractor Rec
	<u> </u>	+							+					<u> </u>	lor	
		 							-	Relinquis					~~~	DATE / TIME Received (2nd tier Subcontractor Re
		1							$\neg \vdash$						··	

10/2) () 13

10 - 10 20 had Sugar - 10 12 Was a Material Clearance Tag submitted? XXYes () No X Yes () No Are all sample containers received intact (X Yes () No Received (2nd lier Subcontractor Rep) Received (1st fier Subcontractor Rep) J (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.) Ò Received (Courier & Tracking Info.) Z Linknown compliance with applicable regulations and allow for the safe Page $\frac{2}{2}$ of contamination. If known, attach a brief narrative summary BN COURSER 107 identifying contaminants. This information will ensure 40c-16 252x COMMENTS SAMPLE INFORMATION Do the labels agree with this form? Comments: 10 25WARS The samples submitted contain (check); () Radioactive Sampling Site: CAU 39.8 all simile handling of the sample materials chranch Complete for samples shipped to an OFF-SITE Subcontract Laboratory 5/39/1/1/100 DATE / TIME DAFE / TIME DATE / TÍME 110-12-5 () Hazardous Comments: Comments: SL 250107 726 SERVICES REQUEST & CHAIN OF CUSTODY RECORD Relinquished (BN Representative Signature) WELZY Refinquished (1st tier Subcontractor Rep) COURTER Refinquished (Courier & Tracking Info.) ANALYTICAL SERVICES LABORATORY CD Carthugale Final by: ANALYSES & METHOD Turnaround () Standard - 30 days Non-rad, 60 Days Rad, Other:

Turnaround () Standard Preliminary by: () Days Final I Final report format: Kg Standard () NTS-WAC () Other: REPORT INFORMATION 1061130N Fax 5- 7761 PAY ITEH PAY ITEH 4.a3 PAY ITEM P1.01 - H9T 21 Received by (Signature/Organization) Send Report to: AAN Stry 16 22 CD Cattorieda 1151 Phone: 6/69 W5/08 (475 retained by laboratory performing final analysis retained by laboratory performing intermediate analysis retained by Analytical Services Laboratory retained by sampler. () YES () NO () N/A 1,05 ンシン 5/24/1430 Soil MATRIX 1220 5016 1350 Jevic 524 1255 SOL 4:1 1315 SOIL Will these analyses be performed under a signed SOW? () YES () NO 1/24 1/220 BN Org#: 2/5-2 いいろうしん 5/24/100 Date DATE / TIME DATE | TIME SAMPLING 200 1/2/2 ASI. Prog Project Manager: WAYNE SOHNSP! Non-Rad Packet: PROJECT/CLIENT INFORMATION Non-Rad SDG: If so, do analyses entered here agree with the SOW? LAB USE ONLY Sampled/Relinquished (Signature/Organization) 7-7761 Bechtel Nevada CSR initials indicating review and approval: Transfer of samples submitted for analyses BNRG 252503-2-1 254403-6-0 254403-3-0 ID / DESCRIPTION 254403-1-0 254403-2-0 4 254403-4-0 252563-3-1 LFTSSE!! Project CAM 393 Client Services Representative Copy 1 - To be re Copy 2 - To be re Copy 3 - To be re If not, identify the variation Phone: 5-05-23 Rad Packet: Charge No **Distribution:** Rad SGD: S ဖ œ 6 © -<u>E</u>20

BN-0732 (02/98)

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1

Date: April 2003

SAMPLE DELIVERY GROUP

V1123

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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CHAIN OF CUSTODY

43010%

Bechtel Nevada

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page \bot of \bot

32	NVICES REGUEST &	STAIN OF COSTOD FRECON	raye0i			
PROJECT/ CLIENT INFORMATION	REPO	RT INFORMATION	SAMPLE INFORMATION			
Project CAU 378 BN Org#: 2/5-2. Charge No.: 0.7 The second ASL Prog.:	Send Report to: SAN 77	D. ASU:)	Sampling Site: CAY 378			
Project <i>CAU</i> 398 BN Org#: 2/5-2 Charge No.: C75:33 € // ASL Prog.:	Phone: 5-6/67 Fax:	1-7761 WS: NTS3C4	The samples submitted contain (check); () Hazardous () Radioactive (Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure			
Project Manager: WAYNE JUHNSON	Phone: Fax: STurnaround: () Standard - 30 days I Rush Preliminary by	lon-rad, 60 Days Rad, Other:Final by:				
Phone: 5-0573	Final report format: KStandard ()	NTS-WAC () Other:	compliance with applicable regulations and allow for the safe handling of the sample materials.			
LAB USE ONLY		ANALYSES & METHOD	SAMPLE RECEIPT INFORMATION			
Rad SGD: VII23 Non-Rad SDG:			Are all sample containers received intact (YYes () No Comments:			
Rad Packet: Non-Rad Packet:						
Client Services Representative:	100 NA 96		Do the labels agree with this form? (/)-Yes () No Comments:			
Will these analyses be performed under a signed SOW? () YES (NO & S					
If so, do analyses entered here agree with the SOW? () YES (If not, identify the variation			Was a Material Clearance Tag submitted? (Y) Yes () No Comments:			
CSR initials indicating review and approval: Date	\ \frac{1}{5} \cdot \frac{1}{5}					
SAMPLING T E ID / DESCRIPTION DATE TIME	MATRIX 27		COMMENTS (Preservative, size/volume, MS/MSD,			
			special analysis, rad matrix code, count time, etc.)			
0 254401-3-0 424 0920			16 some Milsen in			
1 254404-2-0 5/24 1020			per Sample you			
2 252503-2-0 Fey /2w						
3 254403-1-0 5/24 1345	3014 X					
4						
5						
6						
7						
8						
9						
Transfer of samples submitted for analyses		Complete for samples shipped to an OFF-SITE	Subcontract Laboratory GEL			
	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME Received (Courier & Tracking Info.)			
DOTSEL 5-24/117	Ch Contracta	CD Cashude	5/27/01/B > Fill 1x# 817152673435			
	Distal Hand 5/20/000	Refinquished (Courier & Tracking Info.)	DATE / TIME Received (1st tier Subcontractor Rep)			
		Relinquished (1st tier Subcontractor Rep)	DATE / TIME Received (2nd tier Subcontractor Rep)			
Distribution: Original - To be retained by laboratory performing final an	alysis		91 0723 (0799)			

Copy 1 - To be retained by laboratory performing intermediate analysis
Copy 2 - To be retained by Analytical Services Laboratory
Copy 3 - To be retained by Analytical Services Laboratory

COOLER RECEIPT CHECKLIST

SAMPLE RECEIPT REVIE	W			•
Client Bechfel				
Received by Sinstal Land	•			
SAMPLE REVIEW CRITERIA	YES	NO_1	NYA (COMMENTS/QUALIFIERS
Were shipping containers received intact and sealed? If no, notify the Project Manager	1-1		\Box	
Were chain of custody documents included?				
3 Shipping container temperature(s) checked:	-			
4 Is temperature documented on Chain of Custody				•
Was shipping container temperature within specifications (4 +/- 2 C) If no, notify Project Manager				5.2
6 Are any of the samples identified by the client as radioactive? If yes, complete radioactive receipt form		1		
Any samples not indentified by the client as radioactive must be screened for radioactivity.		10	,	observed background CPM
If screening results indicate > x2 background inform the RSO.		40	_	observed sample CPM
7 Were chain of custody documents completed correctly? (Ink, signed, match containers)				
8 Were sample containers received intact and sealed? If no, notify the Project Manager	-			
9 Were all sample containers properly labeled?	-			
10 Were correct sample containers received?	1/	1		
11 Preserved samples checked for pH?			-	soil
12 Were samples preserved correctly? If no, notify Project Manager		-		·
13 Were samples received within holding time? If No, notify Project Manager	-			
14 Were VOA viais free of headspace?				
15 ARCOC#				
16 SDG#				
PM(A) Review:				
Date Reviewed:				
Additional Comments:				
				•

RADIOLOGICAL ANALYSIS

CASE NARRATIVE

Radiochemistry Case Narrative Bechtel Nevada Corp. (NEVA) SDG V1123

Method/Analysis Information

Sample ID

Batch Number:

80749

Procedure:

Determination of Gamma Isotopes in Water and Soil

Analytical Method:

DOE EML HASL 300

Client ID

JP)

SOP Reference

Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, Inc. as Standard Operating Procedures (SOP). The data discussed in this narrative has been prepared and analyzed in accordance with GL-RAD-A-013.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume(s) in this batch.

Designated QC

The following sample(s) was used for QC: 42918001.

OC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation

No NCR were generated for the preparation or analysis of this sample set.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

K-40 is being reported in all samples in this batch.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Leviewer: Books	Christopher	 _



Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada Corp.

2621 Losee Road Address:

North Las Vegas, NV 89030-4134

Contact:

Ted Redding

Project: Environmental Rad Services Report Date: June 7, 2001

Page 1 of 1

Client Sample ID: Sample ID: Matrix:

254401-3-0 43010001 Soil

NEVA102000 NEVA001 Project: Client ID:

Collect Date: Receive Date: Collector:

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec											
Gammaspec, Gamn	ıa, solid										
Americium-241	U	0.0811	+/-0.0392	0.0846	0.0392	0.200	pCi/g		CRB 06/04/0	1138	80749 1
Cesium-137		0.157	+/-0.0432	0.0267	0.0432	1.00	pCi/g				
Potassium-40		1.65	+/-0.350	0.230	0.350	0.500	pCi/g				
Uranium-235		0.901	+/-0.290	0.256	0.290	0.200	pCi/g				
Uranium-238		6.B9	+/-2.04	0.731	2.04	2.00	pCi/g				

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	CCM1	05/31/01	1534	80663

The following Analytical Methods were performed

Method Description

DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy L. Griffin at 843-556-8171 Ext. 4264.

Reviewed by

POBox 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407 (843) 556-8171 - Fax (843) 766-1178



Meeting today's needs with a vision for tomorrow

Certificate of Analysis

Company: Bechtel Nevada Corp.

Address:

2621 Losee Road

North Las Vegas, NV 89030-4134

0.142

0.970

Contact:

Ted Redding

Project:

Environmental Rad Services

Report Date: June 7, 2001

CRB 06/04/01 2233 80749 1

Page 1 of 1

Time Batch Mtd.

Client Sample ID:

254404-2-0 43010002

Project: Client ID:

pCi/g

NEVA102000 NEVA001

AnalystDate

Sample ID: Matrix: Collect Date: Receive Date:

Collector:

24-MAY-01 30-MAY-01 Client

0.162

0.771

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF
Rad Gamma Spec				·				
Gammaspec, Gamm	a, solid							
Americium-241	U	0.000845	+/-0.0474	0.0899	0.0474	0.200	pCi/g	
Cesium-137		0.0464	+/-0.030	0.0249	0.030	1.00	pCi/g	
Potessium-40		31.0	+/-3 42	0.217	3.42	0.500	nCi/g	

+/-0.143

+/-0.815

The following Frep Methods were performed										
Method	Description	Analyst	Date	Time	Prep Batch					
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	CCM1	05/31/01	1534	80663					

0.143

0.815

0.200

2.00

The following Analytical Methods were performed

Method	Description

Uranium-235 Uranium-238

DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

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Reviewed by

POBox 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407 (843) 556-8171 - Fax (843) 766-1178



Meeting today's needs with a vision-for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada Corp.

Address:

2621 Losec Road

North Las Vegas, NV 89030-4134

Contact:

Ted Redding

Matrix: Collect Date: Receive Date:

Project:

Enviornmental Rad Services

2.08

+/-0.948

252503-2-0 43010003 Soil

2.00

pCi/g

Report Date: June 7, 2001 Page 1 of 1

NEVA102000 NEVA001

Client Sample ID: Sample ID:

30-MAY-01

Client

Collector: **Parameter** Qualifier Result DL. TPU RL Units DF AnalystDate Time Batch Mtd. Rad Gamma Spec Gammaspec, Gamma, solid 0.0703 CRB 06/05/01 0057 80749 1 Americium-241 -0.0145 +/-0.0401 0.0401 0.200 pCi/g ŧ) 0.0488 0.0276 +/-0.0276 1.00 pCi/g Cesium-137 U 0.0095 0.500 pCi/g +/-3.88 0.465 3.88 Potassium-40 36.3 0.223 0.194 0.200 Uranium-235 IJ 0.112 +/-0.194 pCi/g 0.680

0.948

The following Prep Methods were performed									
Method	Description	Analyst	Date	Time	Prep Batch				
Dry Soil Prep	Dry Soil Pren RAD A-021 A-021B A-026	CCM1	05/31/01	1534	80663				

The following Analytical Methods were performed

Method Description

Notes:

Uranium-238

The Qualifiers in this report are defined as follows:

DOE EML HASL 300

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

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This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy L. Griffin at 843-556-8171 Ext. 4264.

Reviewed by



Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada Corp.

Client Sample ID: Sample ID:

Address:

2621 Losee Road

North Las Vegas, NV 89030-4134

Contact:

Ted Redding

Project:

Enviornmental Rad Services

254403-1-0 43010004 Soil 24-MAY-01 30-MAY-01

Client

NEVA102000 NEVA001

Report Date: June 7, 2001

Page 1 of 1

Matrix: Collect Date: Receive Date: Collector:

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec					•						
Gammaspec, Gamma	, solid										
Americium-241	ับ	0.0796	+/-0.121	0.161	0.121	0.200	pCi/g		CRB 06/04/01	1144	80749 1
Cesium-137		0.188	+/-0.0538	0.0318	0.0538	1.00	pCi/g				
Potassium-40		30.6	+/-3.68	0.308	3.68	0.500	pCi/g				
Uranium-235	U	0.000765	+/-0.144	0.214	0.144	0.200	pCi/g				
Uranium-238	U	0.772	+/-1.50	1.42	1.50	2.00	pCi/g				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	CCM1	05/31/01	1534	80663

The following Analytical Methods were performed

Method Description

DOE EMIL HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- ** Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy L. Griffin at 843-556-8171 Ext. 4264.

Reviewed by

P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407 (843) 556-8171 • Fax (843) 766-1178



Meeting today's needs with a vision for tomorrow.

QC Summary

Report Date: June 7, 2001

Page 1 of 2

Client:

Bechtel Nevada Corp.

2621 Losee Road North Las Vegas, NV 89030-4134

Contact:

Ted Redding

Workorder: 43010

Parmname	NOM	Sample ()val	QC	Units	RPD%	REC:	6 Range Ar	lst Date Time
Rad Gamma Spec									
Batch 80749									
QC1200013918 42918001 DUP	:								
Americium-241	ט	-0.00041	U	0.0291	pCi/g	N/A		(+/-0.200) C	RB 06/05/01 01:04
	Uncert:	+/-0.0574	•	+/-0.115	POLS			(0.200)	
	TPU:	0.0574		0.115					
Cesium-137		0.048		0.0378	pCi/g	24 ^		(+/-1.00)	
	Uncert:	+/-0.023		+/-0.0292	P			(
	TPU:	0.023		0.0292					
Potassium-40		35.2		35.6	pCi/g	1		,	
	Uncert:	+/-3.91		+/-4.21	75	•			
	TPU:	3.91		4.21					
Uranium-235	U.U.	0.0615	U	0.056	pCi/g	10 ^		(+/-0.200)	
	Uncert:	+/-0.159	_	+/-0.172	Post	••		(** 0200)	
	TPU:	0.159		0.172					
Uranium-238	11 C.	0.752		1.90	pCi/g	87 ^		(+/-2.00)	
V	Uncert:	+/-0.975		+/-1.56	POSE	0,		(17-2.00)	
•	TPU:	0.975		1.56					
QC1200013919 LCS	IFO.	0.775		1.50					
Americium-241				1220	pCi/g				06/05/01 07:09
	Uncert:			+/-132	16				
	TPU:			132					
Cesium-137	441			486	pCi/g		110	(75%-125%)	
	Uncert:			+/-61.1	F			(1010 12570)	
	TPU:			61.1					
Potassium-40	110.		ប	-0.383	pCi/g				
	Uncert:		_	+/-2.19	76				
4	TPU:			2.19					
Uranium-235	11,0.		U	0.744	pCi/g				
	Uncert:		-	+/-1.81	F				
	TPU:			1.81					
Uranium-238	110.		U .	-1.93	pCi/g				
	Uncert:		•	+/-6.52	Por				
	TPU:			6.52					
QC1200013917 MB	110.			0.52					
Americium-241			U	0.030	pCi/g				06/05/01 07:08
	Uncert:			+/-0.0852					
	TPU:			0.0852					
Cesium-137	110.		U	0.0211	pCi/g				
	Uncert:		-	+/-0.0117	FB				
	TPU:			0.0117					
Potassium-40	11 0.		υ	0.253	pCi/g				
	Uncert:		-	+/-0.181	PB				
•	TPU:			0.181					
Uranium-235	IFU;		υ	0.0501	pCi/g				
	Uncert:		J	+/-0.102	P-v B				
	CHOCK.								

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QC Summary

Workorder: 43010							Page 2	of 2		
Paraname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anist	Date	Time
Rad Gamma Spec Batch 80749										
	TPU:		0.102							
Uranium-238		U	0.919	pCi/g						
•	Uncert:		+/-0.650							
	TPU:		0.650							

Notes:

The Qualifiers in this report are defined as follows:

- •• Indicates the analyte is a surrogate compound.
- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike cone. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP V1139

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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CHAIN OF CUSTODY

<u>Bechtel Nevada</u>

ANALYTICAL SERVICES LABORATORY **SERVICES REQUEST & CHAIN OF CUSTODY RECORD**

Page / of /

										·
PROJECT/ CLIENT INFORMATION		.	REPORT IN		<u>N</u> .				INFORMATION	
Project: CAU 378 BN Org Charge No.: C7733E11 ASL Pro	#: 2/5 2 Send	Report to: DFA	DAN 706,4500)				Sa	mpling Site: CAL	1998	
Charge No.: CFT33E11	og.: Phone	5-6165	Fax: 5-7	761	M/S:	15306	The	e samples submitted (contain (check);) Radioactive	✓Unknown
		around: () Standard - Rush Prei	30 days Non-ra	d, 60 Days	Rad, Other:		cor	ntamination. If known	, attach a brief narra	live summary
Project Manager: CUAVNE TOHINSON Phone: Fax: 777						y		ntifying contaminants mpliance with applicat		
	M/S: いろJ <i>い</i> り Final	report format: 🔀 Sta						ndling of the sample n		
LAB USE ONLY			AN.	ALYSES 8	METHOE) 	 		E RECEIPT INFORI	
Rad SGD: VII3G Non-Rad SDG:		_ -		1 1		1 1		Comments:	amers received intac	t (X) Yes () No
Rad Packet: Non-Rad Packet:										
Client Services Representative:		N69: A-00						Do the labels agree Comments:	with this form?	() Yes () No
Will these analyses be performed under a signed SOW?) () YES () NO	1 1 S								
If so, do analyses entered here agree with the SOW?	()YES ()NO ()	N/A & \$			ľ			Was a Material Clea	arance Tag submitte	d? ()(Yes ()No
If not, identify the variation	Date							Johnnesks.		
T ID / DESCRIPTION DATE	MPLING MATRI	D A S C						(Presen	COMMENTS vative, size/volume, s, rad matrix code,	, MS/MSD, count time, etc.)
0 252506-30 Jah	11128 SOIL	_ X								
1 252501-6-0	1140	X						-4- SC	sione Ni	
2 2525/7-1-1	1312						 	7-2.5	- Jour	
3 252502-1-1	140:	X					 			
4										
5				1	- 	 	 			
6	s n		- -	+ +		 	 			
7	1/56					 	 			
	13 m		_ -		- $+$ $-$	 	 			
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Transfer of samples submitted for analyses	T-							contract Laboratory	~~~	
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Distribution: Original - To be retained by laboratory performance of the copy 1 - To be retained by laboratory performance of the copy 2 - To be retained by Analytical Servicopy 3 - To be retained by sampler	ces reporatory	aiysis .								pa oraz (uzra
Sopy of a localities by samples)	1	1			Ì	1		.

COOLER RECEIPT CHECKLIST

ВЕМРЕ ВЕСЕІРТ REVIEW

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31	e soc#					
91	я мисоси					
V	Secretable of the adaptace?					·
E	Were samples received within holding time? If No, notify Project Manager	1		()		
	Were samples preserved correctly? If no, notify Project Manager		_			
	States between the property of the sale of		_			
1	Were consciouslinus received?					
Ī	Were all sample containers properly tabeled?	1		-	· · · · ·	
Ī	Were sample containers received intact and sealed? If no, notify the Project Manager	11		-		
	Were chain of custody documents completed correctly? (ink, signed, match containers)	K				
	The RSO		00		<u> </u>	
	Any eamples not indentified by the client as radioactive must be acreened for radioactivity.		97		graved samp	
	Are any of the samples identified by the client as radioactive? If yes, complete radioactive receipt form	1		<u> </u>	adaed havias	Aground CPN
٨	Was shipping containst temperature within specifications (4 +4-2 C) if no, notify Project Managet		4	_		
	s temperature documented on Chain of Custody	. -	-	4		: _
_	hipping conlainer temperature(s) checked:	1	_		-	
_	Vere chain of custody documents included?	-	}	٠,	07	a
_	Vere shipping containers received intact and sealed? If no, notify the Project Manager	-۲,	-			
V	ИМЕЕ НЕЛЕМ СИТЕМУ ДЕ	1	- 1	1		

至59九5111 6178 井村 023

Additional Comments:

PM(A) Review.__

DATA REVIEW QUALIFIER FLAG DEFINITION SHEET

General Engineering Laboratories, Inc.

DATA QUALIFIERS FOR INORGANIC ANALYSES

Data Qualifiers used on Form 1s or Certificates of Analysis (C 0f A) follow the specifications set forth in the technical specifications of the most current CLP Statement of Work and are defined as follows.

The qualifier that is used when the percent difference between the parent sample and its serial dilution's concentrations exceeds and EI 10%. The sample's concentration must be greater than 50 times the IDL/MDL for ICP (6010B/ILMO 3.0) or 100 times the absolute value of the preparation blank's concentration (6020). However, if analyzing ILMO 4.0 (ICP-MS), the parent sample's concentration must be 20 times the CRDL before the "E" flag is	•
10%. The sample's concentration must be greater than 50 times the IDL/MDL for ICP (6010B/ILMO 3.0) or 100 times the absolute value of the preparation blank's concentration (6020). However, if analyzing ILMO 4.0 (ICP-MS), the parent sample's concentration must be 20 times the CRDL before the "E" flag is	
the IDL/MDL for ICP (6010B/ILMO 3.0) or 100 times the absolute value of the preparation blank's concentration (6020). However, if analyzing ILMO 4.0 (ICP-MS), the parent sample's concentration must be 20 times the CRDL before the "E" flag is	
absolute value of the preparation blank's concentration (6020). However, if analyzing ILMO 4.0 (ICP-MS), the parent sample's concentration must be 20 times the CRDL before the "E" flag is	
However, if analyzing ILMO 4.0 (ICP-MS), the parent sample's concentration must be 20 times the CRDL before the "E" flag is	
concentration must be 20 times the CRDL before the "E" flag is	İ
- I	
applied	
* The qualifier that is used to indicate that the duplicate sample Form 1	
analysis for an analyte is out of control. and EI	
Correlation coefficient the Method of Standard Addition (MSA) Form 2	' 1
is less than 0.095. and ED	
B The qualifier is used to indicate that the reported result fell above Form 1.	· 1
the IDL/MDL but below the CRDL. and ED	
M The qualifier is used to indicate that the replicate injection Form 1.	1
readings of the GFAA sample analysis do not agree within 20% and ED	ן מי
relative standard deviation (RSD) or coefficient of variation (CV).	
N This qualifier is used to indicate that the matrix or pre-digested Form 1,	Ę
spike sample recovery for an analyte is not within the specified and EDI control limit.)
S The reported value was determined by the Method of Standard Form 1.	••
Addition (MSA).	o
U The analyte's result was less than the IDL/MDL C of A.	Form 1.
and EDI)
W Post-digestion spike for GFAA analysis is out of control limits EDD, an	d
(85%-115%), while sample results are less than 50% of the spike Form 5.	part 2
absorbance.	`
X Other reporting flag as defined in report narrative. Form 1,	
and EDE)
Thus qualifier is used to indicate that the Laboratory Compol QC Sum	mary
Sample (LCS) recovery for an analyte is outside of the specified Report	1
limits.	

All surrogate recoveries and acceptance ranges are reported at the bottom of Form 2 or C of A.

Any recoveries falling outside the acceptance range will be flagged with a ***.

All flags do not apply to QC Summary and Certificate of Analysis packages.

RADIOLOGICAL ANALYSIS

CASE NARRATIVE

Radiochemistry Case Narrative Bechtel Nevada Corp. (NEVA) SDG V1139

Method/Analysis Information

Batch Number: 82420

Procedure: Determination of Gamma Isotopes in Water and Soil

Analytical Method: DOE EML HASL 300

Sample ID	Client ID
43345001	252506-3-0
43345002	252506-6-0
43345003	252517-1-1
43345004	252502-1-1
1200018241	MB for batch 82420
1200018242	252506-3-0(43345001DUP)
1200018243	LCS for batch 82420

SOP Reference

Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, Inc. as Standard Operating Procedures (SOP). The data discussed in this narrative has been prepared and analyzed in accordance with GL-RAD-A-013.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume(s) in this batch.

Designated QC

The following sample(s) was used for QC: 43345001.

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation

No NCR were generated for the preparation or analysis of this sample set.

Manual Integration

No manual integrations were performed on data in this batch.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package. The following data validator verified the information presented in this case narrative:



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Certificate of Analysis

Address:

Company: Bechtel Nevada Corp. 2621 Losec Road

North Las Vegas, NV 89030-4134

Contact:

Ted Redding

Project: Environmental Rad Services Report Date: June 20, 2001

NEVA102000 NEVA001

Project: Client ID:

Page 1 of 1

Client Sample ID:

Sample ID: Matrix: Collect Date: Receive Date: 252506-3-0 43345001 Soil

31-MAY-01 05-JUN-01 Client

	Conector:			· · · · · · · · · · · · · · · · · · ·							
Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec											
Gammaspec, Gamma	. soliď										
Americium-241	υ	0.235	+/-0.283	0.295	0.283	0.200	pCi/g		CRB 06/14/01	0741	82420 1
Cesium-137		0.0542	+/-0.0469	0.0417	0.0469	1.00	pCi/g				
Potassium-40		38.4	+/-4.66	0.363	4.66		pCi/g				
Uranium-235	υ	0.129	+/-0.214	0.256	0.214	0.200	pCi/g				
Uranium-238	ប	0.951	+/-2.08	2.23	2.08	2.00	pCi/g				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	WEO	06/06/01	1126	81601

The following	g Analytical Methods were performed
Method	Description
1	DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- < Actual result is less than amount reported
- Actual result is greater than amount reported
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy L. Griffin at 843-556-8171 Ext. 4264.

Reviewed by



Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada Corp.

Address:

2621 Losee Road

North Las Vegas, NV 89030-4134

Ted Redding

Contact: Project:

Environmental Rad Services

Report Date: June 20, 2001

Page 1 of 1

Client Sample ID:

252506-6-0

Project: Client ID:

NEVA102000

NEVA001

Sample ID: Matrix:

43345002 Soil

Collect Date: Receive Date: Collector

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec						*					
Gammaspec, Gamma	, solid										
Americium-241	บ	0.0681	+/-0.0855	0.093	0.0855	0.200	pCi/g		CRB 06/14/01	0742	82420 1
Cesium-137	U	-0.023	+/-0.0327	0.0565	0.0327	1.00	pCi/g				
Potassium-40		34.8	+/-1.47	0.385	1.48		pCi/g				
Uranium-235	U	0.172	+/-0.256	0.299	0.256	0.200	pCi/g				
Uranium-238		2.20	+/-1.13	0.908	1.13	2.00	pCi/g				

Inc following &	rep Methods wer	c pertormed	 	
Method	Description		 Analyst	Da

Time Prep Batch Dry Soil Prep Dry Soil Prep RAD A-021,A-021B,A-026 WEQ 06/06/01 1126 81601

The following Analytical Methods were performed

Method Description

DOE EMIL HASL 300

Notes:

The Qualifiers in this report are defined as follows:

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- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

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Reviewed by

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GENERAL ENGINEERING LABORATORIES

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Certificate of Analysis

Company: Bechtel Nevada Corp.

Address:

2621 Losee Road

North Las Vegas, NV 89030-4134

Contact: Project:

Ted Redding

Enviornmental Rad Services

Report Date: June 20, 2001

Page 1 of 1

Client Sample ID: Sample ID: Matrix:

252517-1-1 43345003

Project: Client ID:

NEVA102000 NEVA001

Collect Date: Receive Date: 31-MAY-01 05-JUN-01

Collector: Client

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd
Rad Gamma Spec											
Gammaspec, Gamma	a, solid										
Americium-241	U	0.00649	+/-0.0389	0.0686	0.0389	0.200	pCi/g		CRB 06/14/0	0749	82420 1
Cesium-137	U	-0.00384	+/-0.0288	0.0495	0.0288	1.00	pCi/g				
Potassium-40		29.4	+/-3.17	0.385	3.17		pCi/g				
Uranium-235	U	0.0621	+/-0.238	0.236	0.238	0.200	pCi/g				
Uranium-238		1.45	+/-0.873	0.666	0.873	2.00	pCi/g				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	WEO	06/06/01	1126	81601

The following Analytical Methods were performed

Method	Description
TATOTANO	Description

DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- ** Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

wow

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy L. Griffin at 843-556-8171 Ext. 4264.

Reviewed by

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16



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada Corp.

Address:

2621 Losee Road

North Las Vegas, NV 89030-4134

Report Date: June 20, 2001

Contact: Project:

Ted Redding

Environmental Rad Services

Page 1 of 1

Client Sample ID: Sample ID:

252502-1-1 43345004 Soil

Proiect: Client ID:

NEVA102000 NEVA001

Matrix: Collect Date: Receive Date: 31-MAY-01 05-JUN-01

Collector:

Client

Parameter	Qualifier	Result		DI.	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec											-
Gammaspec, Gamn	ıa, solid										
Americium-241	บ	-0.031	+/-0.077	0.140	0.077	0.200	pCi/g		CRB 06/14/01	0933	82420 I
Cesium-137		0.110	+/-0.0239	0.0229	0.0239	1.00	pCi/g				
Potassium-40		21.3	+/-2.57	0.233	2.57		pCi/g				
Uranium-235	บ	0.0434	+/-0.123	0.172	0.123	0.200	pCi/g				
Uranium-238	บ	0.731	+/-1.08	1.15	1.08	2.00	pCi/g				

The following P	rep Methods were performed				
Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	WEO	06/06/01	1126	81601

The following Analytical Methods were performed

Method Description

DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy L. Griffin at 843-556-8171 Ext. 4264.

Reviewed by

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GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

QC Summary

Report Date: July 12, 2001

Page 1 of 2

Client: Bechtel Nevada Corp.

2621 Losee Road North Las Vegas, NV 89030-4134

Contact:

Ted Redding

Workorder: 43345

Parmname		NOM	Sample (Qual	QC	Units	RPD%	REC%	Range	Anist	Date	Time
Rad Gamma Spec												
Batch 82420												
QC1200018242 433	345001 DUP											
Americium-241		บ	0.235	U	0.0596	pCi/g	119 ^		(+/-0.200)	CRB	06/14/01	13:5
		Uncert	+/-0.283		+/-0.120							
		TPU:	0.283		0.120							
Cesium-137			0.0542	U	0.0269	pCi/g	67 ^		(+/-1.00)			
		Uncert	+/-0.0469		+/- 0. 025 1							
		TPU:	0.0469		0.0251							
Potassium-40			38.4		38 .6	pCi/g	1					
		Uncert:	+/-4.6 6		+/-4.55							
		TPU:	4.66		4.55							
Uranium-235		. U	0.129	U	0.00889	pCi/g	174 ^		(+/-0.200)			
		Uncert	+/-0.214		+/-0.133							
11 220		TPU:	0.214		0.133							
Uranium-238		ັ	0.951		1.93	pCi/g	68 ^		(+/-2.00)			
		Uncert	+/-2.08		+/-1.69							
OC1000016043 T	CC	TPU:	2.08		1.69							
QC1200018243 L Americium-241	CS				1250	-0.4						
Americanti Pal		Uncert:			1250	pCi/g					06/14/01	13:33
		TPU:			+/-135							
Cesium-137		441			135 487	aCi/a		110 (75%-125%)			
		Uncert			+/-61.1	pCi/g		110 (1370-12370}			
		TPU:			61.1							
Potassium-40		IFU:		U	0.923	pCi/g						
		Uncert:		٠.	+/-1.55	beng						
		TPU:			1.55							
Jranium-235		IFU.		U	0.966	pCi/g						
		Uncert:		•	+/-1.29	perg						
		TPU:			1.29							
Jranium-238				บ	-1.17	pCi/g						
		Uncert:		_	+/-4.64	Park						
		TPU:			4.64							
QC1200018241 M	В	0.										
Americium-241				U	-0.00539	pCi/g					06/14/01 (9:33
•		Uncert			+/-0.0369							
		TPU:			0.0369							
esium-137			•	U	0.00704	pCi/g						
		Uncert			+/-0.012							
		TPU:			0.012							
otassium-40				U	0.0295	pCi/g						
		Uncert			+/-0.234							
		TPU:			0.234							
Franium-235				U	0.038	pCi/g						
		Uncert:			+/-0.140							



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

QC Summary

Workorder: 43345							Page 2	2 of 2		
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anist	Date	Time
Rad Gamma Spec Batch 82420										
Uranium-238	TPU:	U	0.140 0.0446	pCi/g						
	Uncert: TPU:		+/-0.651 0.651							

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported <
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- Indicates the compound was analyzed for but not detected above the detection limit

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more. ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result. For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1140

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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Reno • Las Vegas • Boise Phoenix • Sacramento

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



CLIENT:

Bechtel Nevada

P.O. Box 98521, M/S NTS273 Las Vegas, NV 89193-8521

ATTN:

Ted Redding

PROJECT NAME:

V1140

PROJECT NUMBER: 23081

NEL ORDER ID: L0106022

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 6/4/01.

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

Stan Van Wagenen Laboratory Manager

CERTIFICATIONS:

Las Vegas S. California Reno AZ0520 AZ0518 AZ0605

California US Army Corps Certified Certified

of Engineers

Arizona

1707 2002 2264

Reno Las Vegas S. California Idaho Certified Montana

Certified NV033

Certified Certified

NV052

CA084

L.A.C.S.D.

Nevada

10228

Bechtel Nevada

CLIENT ID:

252506-1-0

PROJECT ID:

V1140

DATE SAMPLED: 5/31/01

PROJECT #:

23081

NEL SAMPLE ID: L0106022-01

TEST:

EPA 8015M

ANALYST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

METHOD:

CCS - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

6/5/01

DILUTION: 1

ANALYZED:

6/6/01

		Reporting
PARAMETER	Result	Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Acceptable Range Surrogate % Recovery 54 - 130 Octacosane

ND - Not Detected

Bechtel Nevada

CLIENT ID:

252506-2-0

PROJECT ID: PROJECT #:

V1140

DATE SAMPLED: 5/31/01

23081

NEL SAMPLE ID: L0106022-02

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

EXTRACTED:

6/5/01

DILUTION:

1

ANALYZED:

6/6/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ИD	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate % Recovery Acceptable Range Octacosane 79 54 - 130

ND - Not Detected

Bechtel Nevada

CLIENT ID: 252506-3-0

V1140 PROJECT ID:

DATE SAMPLED: 5/31/01

PROJECT #:

NEL SAMPLE ID: L0106022-03

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

1

23081

EXTRACTED:

6/5/01

DILUTION:

ANALYZED:

6/6/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Octacosane	84	54 - 130

ND - Not Detected

Bechtel Nevada

CLIENT ID:

252506-4-0

PROJECT ID: PROJECT #:

V1140 23081

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106022-04

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

EXTRACTED:

6/5/01

DILUTION:

1

ANALYZED:

6/6/01

PARAMETER	Result	ReportingLimit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Octacosane	83	54 - 130

ND - Not Detected

Bechtel Nevada

V1140

PROJECT ID: PROJECT #:

23081

CLIENT ID:

252506-5-0

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106022-05

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX: DILUTION: Solid 1

EXTRACTED:

6/5/01

ANALYZED:

6/6/01

		Reporting		
PARAMETER	Result	Limit		
Gasoline Range (C8-C12)	ND	10. mg/kg		
Diesel Range (C12-C22)	. ND	10. mg/kg		
Oil Range (C12-C34)	ND	50. mg/kg		
Total	ND	10. mg/kg		

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Octacosane	83	54 - 130

ND - Not Detected

Bechtel Nevada

PROJECT ID: PROJECT #:

V1140

23081

CLIENT ID:

252506-6-0

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106022-06

TEST:

EPA 8015M

ANALYST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992 CCS - Las Vegas Division

METHOD:

EXTRACTED:

MATRIX: Solid DILUTION:

1

6/5/01

ANALYZED:

6/6/01

		Reporting		
PARAMETER	Result	Limit		
Gasoline Range (C8-C12)	ND	10. mg/kg		
Diesel Range (C12-C22)	ND	10. mg/kg		
Oil Range (C12-C34)	ND	50. mg/kg		
Total	ND ND	10. mg/kg		

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery 79

Acceptable Range

54 - 130

ND - Not Detected

Bechtel Nevada

PROJECT ID: V1140

PROJECT #:

CLIENT ID:

252506-7-0

DATE SAMPLED: 5/31/01

23081

NEL SAMPLE ID: L0106022-07

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX: DILUTION: Solid

1

EXTRACTED: ANALYZED:

6/5/01 6/6/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	1 0 . mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Octacosane	84	54 - 130

ND - Not Detected

Bechtel Nevada

CLIENT ID:

252506-8-0

PROJECT ID: PROJECT #:

V1140

DATE SAMPLED: 5/31/01

TEST: METHOD:

23081

NEL SAMPLE ID: L0106022-08

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

EPA 8015M

ANALYST:

CCS - Las Vegas Division

MATRIX: DILUTION:

Solid 1 ${\tt EXTRACTED}:$

6/5/01

ANALYZED:

6/6/01

PARAMETER	Result	ReportingLimit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate % Recovery
Octacosane 77

Acceptable Range

54 - 130

ND - Not Detected

Bechtel Nevada

CLIENT ID:

252506-9-0

PROJECT ID:

V1140

DATE SAMPLED: 5/31/01

PROJECT #:

23081

NEL SAMPLE ID: L0106022-09

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992 EPA 8015M

ANALYST:

CCS - Las Vegas Division

METHOD:

MATRIX:

EXTRACTED:

6/5/01

DILUTION:

Solid 1

ANALYZED:

6/5/01

PARAMETER	Result	ReportingLimit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range	
Octacosane	89	54 - 130	

ND - Not Detected

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID: PROJECT #:

V1140 23081

DATE SAMPLED: NA

NEL SAMPLE ID: 010605TPHS-FP1-BLK

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

EXTRACTED: AN

6/5/01

ALYZED:	6/5/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery 93

Acceptable Range 54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID:

V1140

PROJECT #:

23081

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

MATRIX:

Solid

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	RPD
Diesel Range (C12-C22)	010605TPHS-FP1-LCS	166.7	154	92	53 - 91	
Diesel Range (C12-C22)	010605TPHS-FP1-LCSD	166.7	160	96	53 - 91	3.8
Total	010605TPHS-FP1-LCS	166.7	154	92	53 - 91	
Total	010605TPHS-FP1-LCSD	166.7	160	96	53 - 91	3.8

8/11

101060 ZL

Bechtel	Nevada
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ANALYTICAL SERVIĆES LABORATORY

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Proj	ect Manager: WAY NE JOH	'NUSEL)	Turnarou	nd: () S	tandard - : tush Prelin	30 days N minary by:	on-rad /4/	60 Day	رع Rad,	Other: Final b	y:			ide	ntamination. If know ntifying contaminant	n, attach a brief nar s. This information	rative summary will ensure
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Reno • Las Vegas • Boise Phoenix • Sacramento

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

P.O. Box 98521, M/S NTS273 Las Vegas, NV 89193-8521

ATTN:

Ted Redding

PROJECT NAME:

V1140

PROJECT NUMBER: 23081

NEL ORDER ID: L0106023

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 6/4/01.

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:

Di - Results reported from analysis at a higher dilution.

Some QA results have been flagged as follows:

- C Sample concentration is a least 5 times greater than spike contribution. Spike recovery criteria do not apply. Some surrogate results have been flagged as follows:
- Sample required dilution. Sample QC results were diluted outside the calibrated range.

Stan Van Wagenen Laboratory Manager

CERTIFICATIONS:

Las Vegas S. California Reno AZ0605 AZ0520 AZ0518

Certified

US Army Corps Certified

1707

of Engineers

Arizona

California

2002 2264

Reno Idaho Montana

Certified Certified NV033

Certified Certified NV052

Las Vegas S. California

CA084

L.A.C.S.D.

Nevada

10228

CLIENT: Bechtel Nevada

 PROJECT ID:
 V1140
 DATE SAMPLED: 5/31/01

 PROJECT #:
 23081
 NEL SAMPLE ID: L0106023-01

TEST: PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD: EPA 8082 ANALYST: JRW - Las Vegas Division

 MATRIX:
 Solid
 EXTRACTED:
 6/18/01

 DILUTION:
 1
 ANALYZED:
 6/7/01

		Reporting
PARAMETER	Result	Limit
Aroclor-1016	ND	20. μg/kg
Aroclor-1221	ND	20. μg/kg
Aroclor-1232	ND	20. μg/kg
Aroclor-1242	ND	20. μg/kg
Aroclor-1248	ND	20. μg/kg
Aroclor-1254	39 μg/kg	20. μg/kg
Aroclor-1260	39 μg/kg	20. μg/kg

CLIENT ID:

252517-1-1

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	75	46 - 155
Tetrachloro-m-xylene	75	49 - 140

ND - Not Detected

CLIENT: PROJECT ID: Bechtel Nevada

V1140 23081

CLIENT ID:

252517-2-1 DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-02

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082. Dec. 1996

METHOD:

PROJECT #:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX: DILUTION: Solid 1

EXTRACTED: ANALYZED:

6/18/01 6.7/01

		Reporting
PARAMETER	Result	<u>Limit</u>
Arocior-1016	ND	20. μg/kg
Arocior-1221	ND	20. μg/kg
Aroclor-1232	ND	20. μg/kg
Aroclor-1242	ND	20. μg/kg
Aroclor-1248	ND	20. μg/kg
Aroclor-1254	310 μg/kg	20. μg/kg
Aroclor-1260	310 ug/kg	20. μg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	90	46 - 155
Tetrachloro-m-xylene	105	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

PROJECT ID: V1140 23081 PROJECT #:

CLIENT ID: 252517-3-1 DATE SAMPLED: 5/31/01 NEL SAMPLE ID: L0106023-03

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082. Dec. 1996

METHOD:

EPA 8082

1

ANALYST:

JRW - Las Vegas Division

 $20.\ \mu g/kg$

MATRIX: DILUTION:

Aroclor-1260

Solid EXTRACTED: ANALYZED:

6/18/01 6.7/01

PARAMETER	Result	Reporting		
TARAVIETER	жен	<u>Limit</u>		
Arociot-1016	ND	20. μg/kg		
Aroclor-1221	ND	20. μg/kg		
Aroclor-1232	ND	20. μg/kg		
Aroclor-1242	ND	20. μg/kg		
Aroclor-1248	ND	20. μg/kg		
Aroclor-1254	55 μg/kg	20. μg/kg		

55

µg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	7 7	46 - 155
Tetrachloro-m-xylene	91	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

V1140 23081

CLIENT ID:

252502-1-1

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-04

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD:

PROJECT ID:

PROJECT #:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

6/18/01

DILUTION: 1 ANALYZED:

6/7/01

PARAMETER	Result	Reporting Limit		
Aroclor-1016	ND	20. μg/kg		
Aroclor-1221	ND	20. μg/kg		
Aroclor-1232	ND	20. μg/kg		
Arocior-1242	ND	20. μg/kg		
Aroclor-1248	ND	20. μg/kg		
Aroclor-1254	2850 Di μg/kg	100. μg/kg		
Aroclor-1260	2850 Di μg/kg	100. μg/kg		

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	71	46 - 155
Tetrachloro-m-xvlene	66	49 - 140

ND - Not Detected

CLIENT ID: 252502-2-1 MS/MSD

 PROJECT ID:
 V1140
 DATE SAMPLED: 5/31/01

 PROJECT #:
 23081
 NEL SAMPLE ID: L0106023-05

TEST: PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD: EPA 8082 ANALYST: JRW - Las Vegas Division

MATRIX: Solid EXTRACTED: 6/18/01 DILUTION: 1 ANALYZED: 6/7/01

	_	Reporting		
PARAMETER	Result	Limit		
Arocior-1016	ND	20. μg/kg		
Aroclor-1221	ND	20. μg/kg		
Aroclor-1232	ND	20. μg/kg		
Aroclor-1242	ND	20. μg/kg		
Aroclor-1248	ND	20. μg/kg		
Aroclor-1254	4600 Di μg/kg	200. μg/kg		
Aroclor-1260	4600 Di μg/kg	200. μg/kg		

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	98	46 - 155
Tetrachloro-m-xvlene	83	49 - 140

ND - Not Detected

CLIENT: PROJECT ID:

Bechtel Nevada

V1140 23081

CLIENT ID:

252502-3-1

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-06

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD:

PROJECT #:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX:

Solid

1

EXTRACTED:

6/18/01

DILUTION:

ANALYZED:

6'7/01

		Reporting
PARAMETER	Result	Limit
Aroclor-1016	ND	20. μg/kg
Aroclor-1221	ND	20. μg/kg
Aroclor-1232	ND	20. μg/kg
Aroclor-1242	ND	20. μg/kg
Aroclor-1248	ND	20. μg/kg
Aroclor-1254	1700 Di μg/kg	100. μg/kg
Aroclor-1260	1700 Di µg/kg	100. µg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	99	46 - 155
Tetrachloro-m-xylene	72	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

PROJECT ID: V1140

DATE SAMPLED: 5/31/01

PROJECT #:

23081

NEL SAMPLE ID: L0106023-01

TEST:

ANALYST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992 CCS - Las Vegas Division

METHOD:

EPA 8015M

CLIENT ID:

MATRIX:

Solid

EXTRACTED:

6/6/01

252517-1-1

DILUTION:

1

ANALYZED:

6/8/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	4 7 mg/kg	10. mg/kg
Oil Range (C12-C34)	600 mg/kg	50. mg/kg
Total	647 mg/kg	10. mg/kg

QUALITY CONTROL DATA:

Acceptable Range Surrogate % Recovery 54 - 130 63 Octacosane

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

252517-2-1

PROJECT ID:

V1140 23081

DATE SAMPLED: 5/31/01

PROJECT #:

NEL SAMPLE ID: L0106023-02

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

1

EXTRACTED:

6/6/01

DILUTION:

ANALYZED:

6/8/01

PARAMETER	Result	ReportingLimit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	530 mg/kg	50. mg/kg
Total	530 mg/kg	10. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery 77

Acceptable Range

54 - 130

ND - Not Detected

 CLIENT:
 Bechtel Nevada
 CLIENT ID:
 252517-3-1

 PROJECT ID:
 V1140
 DATE SAMPLED:
 5/31/01

 PROJECT #:
 23081
 NEL SAMPLE ID:
 L0106023-03

TEST: Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992
METHOD: EPA 8015M ANALYST: CCS - Las Vegas Division

 MATRIX:
 Solid
 EXTRACTED:
 6/6/01

 DILUTION:
 1
 ANALYZED:
 6/8/01

Reporting **PARAMETER** Result Limit 10. mg/kg Gasoline Range (C8-C12) ND 10. mg/kg Diesel Range (C12-C22) 25 mg/kg ND 50. mg/kg Oil Range (C12-C34) 10. mg/kg Total 25 mg/kg

QUALITY CONTROL DATA:

Surrogate% RecoveryAcceptable RangeOctacosane7554 - 130

ND - Not Detected

CLIENT:

PROJECT ID:

PROJECT #:

Bechtel Nevada

V1140 23081

CLIENT ID:

252502-1-1

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-04

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

EXTRACTED:

6/6/01

DILUTION:

Solid

ANALYZED:

6/8/01

PARAMETER	Result		ReportingLimit
Gasoline Range (C8-C12)	ND		10. mg/kg
Diesel Range (C12-C22)	56 m	g/kg	10. mg/kg
Oil Range (C12-C34)	510 m	g/kg	50. mg/kg
Total	566 m	g/kg	10. mg/kg

QUALITY CONTROL DATA:

Surrogate % Recovery Acceptable Range 77 54 - 130 Octacosane

ND - Not Detected

CLIENT: Bechtel Nevada

CLIENT ID:

252502-2-1 MS/MSD

PROJECT ID: PROJECT #:

V1140

DATE SAMPLED: 5/31/01 NEL SAMPLE ID: L0106023-05

TEST:

23081

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

METHOD:

EPA 8015M

ANALYST:

CCS - Las Vegas Division

MATRIX:

Solid

2

EXTRACTED:

6/6/01

DILUTION:

ANALYZED:

6/8/01

PARAMETER	Result	Reporting Limit
Gasoline Range (C8-C12)	ND	20. mg/kg
Diesel Range (C12-C22)	350 mg/kg	20. mg/kg
Oil Range (C12-C34)	1600 mg/kg	100. mg/kg
Total	1950 mg/kg	20. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery D

Acceptable Range

54 - 130

ND - Not Detected

Bechtel Nevada CLIENT:

PROJECT ID: V1140

23081 PROJECT #:

CLIENT ID:

252502-3-1

DATE SAMPLED: 5/31/01 NEL SAMPLE ID: L0106023-06

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

METHOD:

EPA 8015M

ANALYST:

CCS - Las Vegas Division

MATRIX:

EXTRACTED:

DILUTION:

Solid 5

ANALYZED:

6/6/01 6/8/01

PARAMETER	Result	ReportingLimit
Gasoline Range (C8-C12)	ND	50. mg/kg
Diesel Range (C12-C22)	640 mg/kg	50. mg/kg
Oil Range (C12-C34)	2800 mg/kg	250. mg/kg
Total	3440 mg/kg	50. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery

Acceptable Range 54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID: PROJECT #:

V1140 23081

DATE SAMPLED:

NA NEL SAMPLE ID: 010605PCBS-BLK

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

EPA 8082

ANALYST:

JRW - Las Vegas Division

METHOD:

EXTRACTED:

6/18/01

MATRIX: Solid

ANALYZED:

6'7/01

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

QUALITY CONTROL DATA:

Surrogate Decachlorobiphenyl Tetrachloro-m-xylene % Recovery 83 87

Acceptable Range 46 - 155

49 - 140

ND - Not Detected

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CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID: PROJECT #:

V1140 23081

DATE SAMPLED: NA

NEL SAMPLE ID: 010606TPHS-FP-BLK

TEST:

EPA 8015M

ANALYST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992 CCS - Las Vegas Division

METHOD: MATRIX:

Solid

EXTRACTED:

6/6/01

ANALYZED:

6/8/01

		Reporting
PARAMETER	Result	<u>Limit</u>
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C12-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery 80

Acceptable Range 54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID:

V1140

PROJECT #:

23081

CLIENT ID:

252502-1-1

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-04

TEST:

TCLP-8 Metals

MATRIX:

Solid

	RESULT	REPORTING			TCLP/STLC EXTRACTION		
PARAMETER	mg/L	LIMIT	D. F.	METHOD	DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Barium	ND	1. mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Cadmium	0.029	0.01 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Chromium	ND	0.01 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Lead	3.5	0.05 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/6/01	6/7/01	6/7/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01

D.F. - Dilution Factor

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1140

#: 23081

CLIENT ID:

252502-2-1 MS/MSD

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-05

TEST:

TCLP-8 Metals

MATRIX:

Solid

	RESULT	REPORTING			TCLP/STLC EXTRACTION		
<u>PARAMETER</u>	mg/L	<u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	DATE	DIGESTED	ANALYZED
Arsenic	ИD	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Barium	ND	l. mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Cadmium	0.017	0.01 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Chromium	0.015	0.01 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
L e ad	0.11	0.05 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/6/01	6/7/01	6/7/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01

CLIENT:

Bechtel Nevada

PROJECT ID:

V1140

PROJECT #: 23081

CLIENT ID:

252502-3-1

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-06

TEST:

TCLP-8 Metals

MATRIX:

Solid

	RESULT	REPORTING			TCLP/STLC EXTRACTION		
PARAMETER	mg/L	LIMIT	D. F.	METHOD	DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Barium	ND	l. mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Cadmium	0.024	0.01 mg/L	1	EPA 6010	6/6/01	6.77/01	6/8/01
Chromium	0.013	0.01 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
L e ad	0.38	0.05 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Mercury	ND	0.002 mg/L	10	EPA 7470A	6/6/01	6/7/01	6/7/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01

CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID:

V1140

DATE SAMPLED: NA

PROJECT #: 23081

NEL SAMPLE ID: L06016-THg-BLK

TEST:

TCLP by EPA 1311, July 1992 & Mercury by EPA 7470A, July 1992

MATRIX:

TCLP Extract

<u> </u>			TCLP/STLC				
		REPORTING		EX	TRACTIO	N	
PARAMETER	RESULT	LIMIT	<u>D. F.</u>	METHOD	DATE	DIGESTED	ANALYZED
Mercury	ND	$0.002~\mathrm{mg/L}$	10	EPA 7470A	6/6/01	6/7/01	6/7/01

D.F. - Dilution Factor

ND - Not Detected

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CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID:

V1140

DATE SAMPLED: NA

PROJECT #:

23081

NEL SAMPLE ID: L60161-BLK

TEST:

TCLP by EPA 1311, July 1992 & 7 Metals by EPA 6010A, July 1992

MATRIX:

TCLP Extract

		REPORTING		_	CLP/STLC		
PARAMETER	RESULT	LIMIT	D. F.	METHOD	DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Barium	ND	l. mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Cadmium	ND	0.01 mg/L	1	EPA 6010	6/6/01	<i>6/</i> 7/01	6/8/01
Chromium	ND	0.01 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Lead	ND	$0.05\mathrm{mg/L}$	ı	EPA 6010	6/6/01	6/7/01	6/8/01
Selenium	ND	0.1 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01
Silver	ND	0.02 mg/L	1	EPA 6010	6/6/01	6/7/01	6/8/01

D.F. - Dilution Factor

ND - Not Detected

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CLIENT: CLIENT ID: 252502-1-1 Bechtel Nevada DATE SAMPLED: 5/31/01 PROJECT ID: V1140

NEL SAMPLE ID: L0106023-04 PROJECT #: 23081

TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, Dec. 1996 TEST:

TCLP EXTRACT DATE: 6/6/01 METHOD: EPA 8270 MATRIX: **EXTRACTED** 6/15/01 Solid DILUTION: ANALYZED: 6/19/01 1

	Result	Reporting
PARAMETER	mg/L	Limit
1,4-Dichlorobenzene (p-DCB)	ND	0.1 mg/L
2,4-Dinitrotoluene (DNT)	ND	0.1 mg/L
Hexachlorobenzene	ND	0.1 mg/L
Hexachlorobutadiene	ND	0.1 mg/L
Hexachloroethane	ND	0.1 mg/L
2-Methylphenol	ND	0.1 mg/L
3,4-Methylphenol (isomeric pair)	ND	0.1 mg/L
Nitrobenzene	ND	0.1 mg/L
Pentachlorophenol	ND ·	0.1 mg/L
Pyridine	ND	0.1 mg/L
2,4,5-Trichlorophenol	ND	0.1 mg/L
2,4,6-Trichlorophenol	ND	0.1 mg/L

QUALITY CONTROL DATA:		
Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	36	0 - 161
2-Fluorobiphenyl	19	16 - 127
2-Fluorophenol	18	0 - 88
Nitrobenzene-d5	23	9 - 132
p-Terphenyl-d14	. 34	16 - 163
Phenol-d5	14	0 - 63

CLIENT: Bechtel Nevada CLIENT ID:

252502-2-1 MS/MSD

PROJECT ID: PROJECT #:

V1140 23081

DATE SAMPLED: 5/31/01

NEL SAMPLE ID: L0106023-05

TEST:

TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, Dec. 1996

METHOD:

EPA 8270

TCLP EXTRACT DATE: 6/6/01

MATRIX:

EXTRACTED

6/15/01

DILUTION:

Solid

1

ANALYZED:

6/19/01

Result	Reporting
mg/L	Limit
ND	0.1 mg/L
	mg/L ND

QUALITY CONTROL DATA:		
Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	44	0 - 161
2-Fluorobiphenyl	22	16 - 127
2-Fluorophenol	18	0 - 88
Nitrobenzene-d5	24	9 - 132
p-Terphenyl-d14	32	16 - 163
Phenol-d5	16	0 - 63

 CLIENT:
 Bechtel Nevada
 CLIENT ID:
 252502-3-1

 PROJECT ID:
 V1140
 DATE SAMPLED:
 5/31/01

 PROJECT #:
 23081
 NEL SAMPLE ID:
 L0106023-06

TEST: TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, Dec. 1996

 METHOD:
 EPA 8270
 TCLP EXTRACT DATE:
 6/6/01

 MATRIX:
 Solid
 EXTRACTED
 6/15/01

 DILUTION:
 1
 ANALYZED:
 6/19/01

	Result	Reporting
PARAMETER	mg/L	Limit
1,4-Dichlorobenzene (p-DCB)	ND	0.1 mg/L
2,4-Dinitrotoluene (DNT)	ND	0.1 mg/L
Hexachlorobenzene	ND	0.1 mg/L
Hexachlorobutadiene	ND	0.1 mg/L
Hexachloroethane	ND	0.1 mg/L
2-Methylphenol	ND	0.1 mg/L
3,4-Methylphenol (isomeric pair)	ND	0.1 mg/L
Nitrobenzene	ND	0.1 mg/L
Pentachlorophenol	ND	0.1 mg/L
Pyridine	ND	0.1 mg/L
2,4,5-Trichlorophenol	ND	0.1 mg/L
2,4,6-Trichlorophenol	ND	0.1 mg/L

QUALITY CONTROL DATA:		
Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	47	0 - 161
2-Fluorobiphenyl	22	16 - 127
2-Fluorophenol	19	0 - 88
Nitrobenzene-d5	24	9 - 132
p-Terphenyl-d14	32	16 - 163
Phenol-d5	17	0 - 63

CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID: PROJECT #:

V1140 23081

DATE SAMPLED: NA

NEL SAMPLE ID: 0615E1 TCLP8270-BLK

TEST:

TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C. Dec. 1996

METHOD:

EPA 8270

TCLP EXTRACT DATE: 6/6/01

MATRIX:

EXTRACTED

6'15/01

TCLP Extract

ANALYZED:

6'19'01

	Result	Reporting	
PARAMETER	mg/L	Limit	
1,4-Dichlorobenzene (p-DCB)	ND	0.1 mg/L	
2,4-Dinitrotoluene (DNT)	ND	0.1 mg/L	
Hexachlorobenzene	ND	0.1 mg/L	
Hexachlorobutadiene	ND	0.1 mg/L	
Hexachloroethane	ND	0.1 mg/L	
2-Methylphenol	ND	0.1 mg/L	
3,4-Methylphenol (isomeric pair)	ND	0.1 mg/L	
Nitrobenzene	ND	0.1 mg/L	
Pentachlorophenol	ND	0.1 mg/L	
Pyridine	ND	0.1 mg/L	
2,4,5-Trichlorophenol	ND	0.1 mg/L	
2,4,6-Trichlorophenol	ND	0.1 mg/L	

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	32	0 - 161
2-Fluorobiphenyl	18	16 - 127
2-Fluorophenol	20	0 - 88
Nitrobenzene-d5	22	9 - 132
p-Terphenyl-d14	30	16 - 163
Phenol-d5	16	0 - 63

ND - Not Detected

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

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1140 23081

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

MATRIX:

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	RPD
Aroclor-1016	010605PCBS-LCS	333	283	85	63 - 127	
Aroclor-1016	010605PCBS-LCSD	333	226	68	63 - 127	22.4
Aroclor-1016	L0106023-06-MS	333	355	107	55 - 142	
Aroclor-1016	L0106023-06-MSD	333	306	92	55 - 142	14.8
Aroclor-1260	010605PCBS-LCS	333	332	100	57 - 138	
Aroclor-1260	010605PCBS-LCSD	333	264	79	57 - 138	22.8
Aroclor-1260	L0106023-06-MS	333	1810	33 C	48 - 129	
Aroclor-1260	L0106023-06-MSD	333	2040	102 C	48 - 129	102.2

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1140 23081

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

MATRIX:

		Spike	Spike	Percent	Acceptable	2
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	<u>RPD</u>
Diesel Range (C12-C22)	010606TPHS-FP-LCS	166.7	138	83	53 - 91	
Diesel Range (C12-C22)	010606TPHS-FP-LCSD	166.7	145	87	53 - 91	4.9
Total	010606TPHS-FP-LCS	1 6 6.7	138	83	53 - 91	
Total	010606TPHS-FP-LCSD	166.7	145	87	53 - 91	4.9

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1140 23081

TEST:

TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, Dec. 1996

MATRIX:

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	RPI
Pyridine	0615E1 TCLP8270-LCS	80	56.5	71	10 - 130	
Pyridine	0615E1 TCLP8270-LCSD	80	72.8	91	10 - 130	25.
Pyridine	L0106023-04-MS	80	61.8	77	10 - 130	
1,4-Dichlorobenzene (p-DCB)	0615E1 TCLP8270-LCS	80	67.4	84	7 - 105	
1,4-Dichlorobenzene (p-DCB)	0615E1 TCLP8270-LCSD	80	74.5	93	7 - 105	10
1,4-Dichlorobenzene (p-DCB)	L0106023-04-MS	80	56	70	7 - 105	
Hexachloroethane	0615E1 TCLP8270-LCS	80	50.6	63	43 - 104	
Hexachloroethane	0615E1 TCLP8270-LCSD	80	54	68	43 - 104	6.5
Hexachloroethane	L0106023-04-MS	80	43.5	54	43 - 104	
Nitrobenzene	0615E1 TCLP8270-LCS	80	96.4	121	28 - 124	
Nitrobenzene	0615E1 TCLP8270-LCSD	80	82.9	104	28 - 124	15.
Nitrobenzene	L0106023-04-MS	80	84.4	106	28 - 124	
Hexachlorobutadiene	0615E1 TCLP8270-LCS	80	53	66	39 - 111	
Hexachlorobutadiene	0615E1 TCLP8270-LCSD	80	57	71	39 - 111	7.3
Hexachlorobutadiene	L0106023-04-MS	80	46.6	58	39 - 111	
2-Methylphenol	0615E1 TCLP8270-LCS	80	76.8	96	30 - 130	
2-Methylphenol	0615E1 TCLP8270-LCSD	80	82.9	104	30 - 130	7.0
2-Methylphenol	L0106023-04-MS	80	64.5	81	30 - 130	
3,4-Methylphenol (isomeric pair)	0615E1 TCLP8270-LCS	80	67.6	85	30 - 130	
3,4-Methylphenol (isomeric pair)	0615E1 TCLP8270-LCSD	80	71.8	90	30 - 130	6.
3,4-Methylphenol (isomeric pair)	L0106023-04-MS	80	56.3	70	30 - 130	
2,4,6-Trichlorophenol	0615E1 TCLP8270-LCS	80	102.7	128	43 - 110	
2,4,6-Trichlorophenol	0615E1 TCLP8270-LCSD	80	93.8	117	43 - 110	9.1
2,4,6-Trichlorophenol	L0106023-04-MS	80	88.4	111	43 - 110	
2,4,5-Trichlorophenol	0615E1 TCLP8270-LCS	80	70.1	88	30 - 130	
2,4,5-Trichlorophenol	0615E1 TCLP8270-LCSD	80	97.5	122	30 - 130	32.
2,4,5-Trichlorophenol	L0106023-04-MS	80	97.4	122	30 - 130	
2,4-Dinitrotoluene (DNT)	0615E1 TCLP8270-LCS	80	101.8	127	50 - 111	
2,4-Dinitrotoluene (DNT)	0615E1 TCLP8270-LCSD	80	95.8	120	50 - 111	6.1
2,4-Dinitrotoluene (DNT)	L0106023-04-MS	80	86.1	108	50 - 111	
Hexachlorobenzene	0615E1 TCLP8270-LCS	80	96.7	121	41 - 125	
Hexachlorobenzene	0615E1 TCLP8270-LCSD	80	92.1	115	41 - 125	4.9
Hexachlorobenzene	L0106023-04-MS	80	76.8	96	41 - 125	
Pentachlorophenol	0615E1 TCLP8270-LCS	80	63.1	79	47 - 127	
Pentachlorophenol	0615E1 TCLP8270-LCSD	80	73.1	91	47 - 127	14.
Pentachlorophenol	L0106023-04-MS	80	67.7	85	47 - 127	

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1140 23081

TEST:

TCLP/STLC Metals

MATRIX:

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Mercury	L06016-THg-LCS	0.05	0.0495	99	85 - 115	
Mercury	L0106016-01-MS	0.05	0.045	90	75 - 12 5	
Mercury	L0106016-01-MSD	0.05	0.0453	91	75 - 125	0.7

CLIENT:

Bechtel Nevada

PROJECT ID:

V1140 23081

PROJECT #: TEST:

TCLP/STLC Metals

MATRIX:

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	<u>RPD</u>
Arsenic	L6016I-LCS	0.5	0.498	100	85 - 115	
Arsenic	L0106016-01-MS	0.5	0.505	101	75 - 125	
Arsenic	L0106016-01-MSD	0.5	0.508	102	75 - 125	0.6
Silver	L6016I-LCS	0.5	0.45	90	85 - 115	
Silver	L0106016-01-MSD	0.5	0.466	93	75 - 125	22.2
Barium	L6016I-LCS	1	0.991	99	85 - 115	
Barium	L0106016-01-MS	1	0.97	-43	75 - 125	
Barium	L0106016-01-MSD	1	2.91	151	75 - 125	359.3
Cadmium	L6016I-LCS	0.5	0.504	101	85 - 115	
Cadmium	L0106016-01-MS	0.5	0.587	87	75 - 125	
Cadmium	L0106016-01-MSD	0.5	0.58	86	75 - 1 25	1.6
Chromium	L6016I-LCS	0.5	0.496	99	85 - 115	
Chromium	L0106016-01-MS	0.5	0.554	99	75 - 125	
Chromium	L0106016-01-MSD	0.5	0.551	98	75 - 125	0.6
Lead	L6016I-LCS	1	1.03	103	85 - 115	
Lead	L0106016-01-MS	1	1.65	104	75 - 125	
Lead	L0106016-01-MSD	1	1.67	106	75 - 125	1.9
Selenium	L6016I-LCS	0.5	0.553	111	85 - 115	
Selenium	L0106016-01-MS	0.5	0.463	93	75 - 125	
Selenium	L0106016-01-MSD	0.5	0.417	83	75 - 125	10.5

6/11 10106023

Bechtel	Nevada

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORL

Page ___of ___

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	PROJECTI CLIENT INFOR				_		-			DRMAT						Τ	SAMPLE INFORMATION
Proje Cha	rge No.: C7JWEII	BN Org#	:2/52	ک ا	-61	69		Fax:	-7	761		M/S:	NJ.	576	· 6	The	mpling Site:
	ect Manager: WAYNE JOH ne: Fax: 5-776	1MSON)	Turnarou	ind: ()	Standa Rush	rd - 30 Prelimir	days N nary by:	on-rad	, 60 Da	ys Rad, کریا	Other: Final b	y:			coi	ntamination. If known, attach a brief narrative summary entifying contaminants. This information will ensure
Pho	5-0573 Fax: 5-771	1 1	VS: アブンンご <u>/</u>	Final rep	ort form	at: 🙀	Standa	rd () t	NTS-W	/AC ()	Other:_						mpliance with applicable regulations and allow for the safe ndling of the sample materials.
	LAB USE OF	VLY	— VII	 HD	5	1	2		ANA	LYSES	& ME	THOD		1			SAMPLE RECEIPT INFORMATION Are all sample containers received intact (XYes () No Comments:
Rad	Packet: Non-Ra	d Packet:			W.5/Q.		141,320	601E,									Comments.
Clier	nt Services Representative:			<u> </u>	خ س	1.	1		7	ē		ň					Do the labels agree with this form? (X) Yes () No Comments:
If so If no	these analyses be performed under a sig , do analyses entered here agree with the it, identify the variation t initials indicating review and approval:	SOW7	() YES (Fucsca	5082	1 - W	METIBLS	1010	101 1 10 101 1 10 101 1 101 101 101 101	TOH SVOC - 7	TETALS- Q					Was a Material Clearance Tag submitted? ()4 Yes () No Comments:
T E M	ID / DESCRIPTION	SAM DATE	PLING TIME	MATRIX	707	PCBS	RUSE	756	封	PAY ITO	1 2 E	HANA					COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
	252517-1-1	3/2/101	1312	Seyl	X	스											40c 20 250ml stass ich
2 1	252577-2-1	\perp	1777		X	X	<u> </u>			1				<u> </u>			per sample
73/2	252517-3-1		6 5.77	1	X	X	<u> </u>			<u> </u>	<u> </u>		L				
79 3	252502-1-1	1-	1402	 }_	X	X	X	ム	<u> </u>		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		28250ml, 18500ml jor per sample
3 4	252502 -2-1 mg	11.	1420		X	X	X	X		<u> </u>			<u> </u>	<u> </u>	L		Majors DOW SEME NOUNTIES
5	252502-3-1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1420	V	X	X	X	X		 		<u> </u>		<u> </u>			0 80
6		1-	14		<u> </u>					↓	<u> </u>		Ŀ	<u> </u>		`	
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9				j	<u> </u>	L	L		<u> </u>	1	<u> </u>		<u></u>		<u> </u>		
_	isfer of samples submitted for analyses inded/Relinquished (Signature/Organization)	n) DAT	E/TIME	Received by	/Signat	ura/Oa		200)								Sub	contract Laboratory N.C.Z.
3011	elste BNIFA			CD Can				(1)		elinquis				ve Sign	ature)		DATE / TIME Received (Courier & Tracking Info.) 6/4/6/13/0 BAI CULIZIER
	H -/10- UNITED	100/1							R	elinquis	hed (Co	urier &	Tracki	ng Info.)	<u> </u>		DATE / TIME Received (1st tier Subcontractor Rep)
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-				 				-	R	elinquis	hed (1s	tier Su	bcontr	actor Re	ep)		DATE / TIME Received (2nd tier Subcontractor Rep)
Distrit	oution: Original - To be retained by labora	itory perform	ning final a	nalysis													BN 0723 (020)

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1169

. . . .

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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GENERAL NARRATIVE



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow

CASE NARRATIVE for Bechtel Nevada Clark County, Nevada SDG# V1169

July 21, 2001

Laboratory Identification:

General Engineering Laboratories, Inc. (GEL)

Mailing Address:

P.O. Box 30712 Charleston, SC 29414

Express Mail Delivery and Shipping Address:

2040 Savage Road Charleston, SC 29414

Telephone Number:

(843) 556-8171

Summary:

Sample Receipt

The sample for SDG# V1169 arrived at GEL located in Charleston, South Carolina on June 22, 2001 for environmental analyses.

The sample containers arrived without any visible signs of tampering or breakage. The samples were delivered with chain of custody documentation and signatures.

The laboratory received the following samples:

Laboratory	Sample
<u>Identification</u>	<u>Description</u>
44601001	252507-1-0
44601002	252507-2-0
44601003	252507-3-0
44601004	252508-1-0
44601005	252508-2-0



Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Standard Operating Procedures. Any technical or administrative problems during analysis, data review and reduction are listed by analytical parameter in the applicable case narrative.

Internal Chain of Custody:

Custody was maintained for all samples.

Items of Note:

There are no items of note.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Review Definition Sheet, and Radiological parameters.

This data package, to the best of my knowledge, is in compliance with technical and administrative requirements.

Project Manager

CHAIN OF CUSTODY

Bechtel Nevada

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page / of /

3L	NVIOLO NE QUEUT GIO	TAIN OF COSTODY RECORD	1 age01		
PROJECTI CLIENT INFORMATION		INFORMATION	SAMPLE INFORMATION		
Project: CAU 398 BN Org#: 2/56	Send Report to: DAN TOCI	ASO.S	Sampling Site: CRU 308		
Project: CAU 398 Charge No.: C7535E11 BN Org#: 2/5C ASL Prog.:	Phone: 5-6/67 Fax: 5	A30・) - 776 M/S: - 776 M/	The samples submitted contain (check); () Hazardous () Radioactive Unknown		
	Turnaround: () Standard - 30 days No	n-rad, 60 Days Rad, Other:	contamination. If known, attach a brief narrative summary		
Project Manager WAYNE JOHNSON	60 Rush Preliminary by:	14 1423 Final by:	identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe		
Project Manager: WANE JOHNSON Phone: Fax: 5-776; M/S: N75306	Final report format: > Standard () N	TS-WAC () Other:	handling of the sample materials.		
LAB USE ONLY		ANALYSES & METHOD	SAMPLE RECEIPT INFORMATION		
Rad SGD: V1169 Non-Rad SDG:	<u> </u>		Are all sample containers received intact Y Yes () No Comments:		
Rad Packet: Non-Rad Packet:	90/.1 03				
Client Services Representative:	4-4-		Do the labels agree with this form? () Yes () No Comments:		
Will these analyses be performed under a signed SOW? () YES (NO ES				
Will these analyses be performed under a signed SOW? () YES () If so, do analyses entered here agree with the SOW? () YES () If not, identify the variation	AM () ON		Was a Material Clearance Tag submitted? () No Comments:		
CSR initials indicating review and approval: Date:	#5/2				
SAMPLING			COMMENTS		
E ID/DESCRIPTION DATE TIME	MATRIX 20 2		(Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)		
0 252507-1-0 (Jules 0905)	Soil X		per Sample		
	SOIL X		non Sunde		
2 252507-3-0 / 0920					
3 252503-1-0 0945					
			+ 1		
	SO/L X	- 			
5		- - - - - - - - -			
6 CAST TEN					
7					
8					
9					
Transfer of samples submitted for analyses	······································	Complete for samples shipped to an OFF-SITE	Subcontract Laboratory (1EL		
Sampled/Relinquished (Signature/Organization) DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME Received (Courier & Tracking Info.)		
1 SEL- WIEL Class, 498	Eldeth Kuns	CD Contracada for EB	06/21/01/1300 FEDEX 827714154561		
6/22/01 10350	Office Kandow	Relinquished (Courier & Tracking Info.)	DATE / TIME Received (1st tier Subcontractor Rep)		
		Relinquished (1st tier Subcontractor Rep)	DATE / TIME Received (2nd tier Subcontractor Rep)		
Distribution, Original. To be retained by laboratory performing final an					

COOLER RECEIPT CHECKLIST

Σ	SAMPLE RECEIPT REVIEW	V			
-	lient Bechtel Nev				
F	eceived by M (
5	RMPLE REVIEW CRIYERIA	YES 1	NO	N/A	COMMENTS/QUALIFIERS
	Vere shipping containers received intact and sealed? If no, notify the Project Manager	77	_		
2 1	Vere chain of custody documents included?	1			
3 8	Shipping container temperature(s) checked:		7		60
4 1	s temperature documented on Chain of Custody		U	4 E	
5	Nas shipping container temperature within specifications (4 +/- 2 C) If no, notify Project Manager		-	Π	
6	Are any of the samples identified by the client as radioactive? If yes, complete radioactive receipt form			₹	
1	Any samples not indentified by the client as radioactive must be screened for radioactivity.	1	70)	observed background GPM
1	f screening results indicate > x2 background inform the RSO.		1/2		obsreved semple CPM
7	Were chain of custody documents completed correctly? (lnk, signed, match containers)		F	李	
8	Were sample containers received intact and sealed? If no, notify the Project Manager		F		
9	Were all sample containers properly labeled?	L	F	- 1	
10	Were correct sample containers received?		T		
11	Preserved samples checked for pH?		\top	1	sals
12	Were samples preserved correctly? If no, notify Project Manager	1.	T		
13	Were samples received within holding time? If No, notify Project Manager		7	75.	
14	Were VOA vials free of headspace?		T		
15	ARCOC#		1		
16	SDG#		1	1	
	PM(A) Review:				
	Date Reviewed:				
	Additional Comments:				
	·				

DATA REVIEW QUALIFIER FLAG DEFINITION SHEET

General Engineering Laboratories, Inc.

DATA QUALIFIERS FOR INORGANIC ANALYSES

Data Qualifiers used on Form 1s or Certificates of Analysis (C 0f A) follow the specifications set forth in the technical specifications of the most current CLP Statement of Work and are defined as follows.

Section	Explanation	Location
Ε	The qualifier that is used when the percent difference between the	Form 1.
	parent sample and its serial dilution's concentrations exceeds	and EDD
	10%. The sample's concentration must be greater than 50 times	
	the IDL/MDL for ICP (6010B/ILMO 3.0) or 100 times the	
	absolute value of the preparation blank's concentration (6020).	
	However, if analyzing ILMO 4.0 (ICP-MS), the parent sample's	
	concentration must be 20 times the CRDL before the "E" flag is	
	applied.	
#	The qualifier that is used to indicate that the duplicate sample	Form I.
	analysis for an analyte is out of control.	and EDD
÷	Correlation coefficient the Method of Standard Addition (MSA)	Form 2,
	is less than 0.095.	and EDD
В	The qualifier is used to indicate that the reported result fell above	Form 1.
	the IDL/MDL but below the CRDL.	and EDD
M	The qualifier is used to indicate that the replicate injection	Form 1.
	readings of the GFAA sample analysis do not agree within 20%	and EDD
	relative standard deviation (RSD) or coefficient of variation (CV).	
N	This qualifier is used to indicate that the matrix or pre-digested	Form 1,
	spike sample recovery for an analyte is not within the specified control limit.	and EDD
S	The reported value was determined by the Method of Standard	Form 1,
	Addition (MSA).	and EDD
U	The analyte's result was less than the IDL/MDL.	C of A. Form 1.
		and EDD
W	Post-digestion spike for GFAA analysis is out of control limits	EDD, and
.	(85%-115%), while sample results are less than 50% of the spike	Form 5, part 2
	absorbance.	
X	Other reporting flag as defined in report narrative.	Form !,
		and EDD_
	Thus qualifier is used to indicate that the Laboratory Control	QC Summary
	Sample (LCS) recovery for an analyte is outside of the specified	Report
	limits.	

All surrogate recoveries and acceptance ranges are reported at the bottom of Form 2 or C of A.

Any recoveries falling outside the acceptance range will be flagged with a **.

All flags do not apply to QC Summary and Certificate of Analysis packages.

RADIOLOGICAL ANALYSIS

CASE NARRATIVE

Radiochemistry Case Narrative Bechtel Nevada (NEVA) SDG V1169

Method/Analysis Information

Batch Number: 862

Procedure: Determination of Gamma Isotopes in Water and Soil

Analytical Method: DOE EML HASL 300

Sample ID	Client ID
44601001	252507-1-0
44601002	252507-2-0
44601003	252507-3-0
44601004	252508-1-0
44601005	252508-2-0
1200027924	MB for batch 86288
1200027925	044403-0-1(44379001DUP)
1200027926	LCS for batch 86288

SOP Reference

Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, Inc. as Standard Operating Procedures (SOP). The data discussed in this narrative has been prepared and analyzed in accordance with GL-RAD-A-013.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume(s) in this batch.

Designated OC

The following sample(s) was used for QC: 44379001.

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation

No NCR were generated for the preparation or analysis of this sample set.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The following data was rejected due to low abundance:

Sample 1200027924; U-238.

The following data was rejected due to no valid peak:

Sample 1200027924; U-235, Sample 44601003; U-235.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package. The following data validator verified the information presented in this case narrative:

Reviewer:



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow

Certificate of Analysis

Company: Bechtel Nevada 2621 Losee Road

Address:

Contact:

North Las Vegas, Nevada 89030-4129

Theodore Redding

Project:

Environmental Rad Analysis

Report Date: July 20, 2001

Page 1 of 1

Client Sample ID: Sample ID: Matrix:

Proiect: Client ID:

NEVA00101 NEVA002

Collect Date: Receive Date: Collector:

Soil 20-JUN-01 22-JUN-01 Client

252507-1-0

44601001

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec											
Gammaspec, Gamma	, solid										
Americium-241	บ	-0.0144	+/-0.135	0.243	0.135	0.200	pCi/g		CRB 06/29/01	1222	86288 1
Cesium-137	U	0.023	+/-0.0192	0.0462	0.0192	0.050	pCi/g				
Potassium-40		27.9	+/-3.26	0.332	3.26		pCi/g				
Uranium-235	υ	0.054	+/-0.130	0.237	0.130	0.200	pCi/g				
Uranium-238		2.20	+/-1.89	1.92	1.89	1.00	pCi/g				

The following Pren Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021, A-021B, A-026	WEO	06/25/01	1110	85627

The following Analytical Methods were performed

Method Description

DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- ** Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy Griffin.



Contact:

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada 2621 Losee Road Address:

North Las Vegas, Nevada 89030-4129

Theodore Redding

Project: Environmental Rad Analysis

Client Sample ID: Sample ID:

Matrix: Collect Date: Receive Date:

22-JUN-01 Client Collector:

Report Date: July 20, 2001

Page 1 of 1

NEVA00101 NEVA002

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec											
Gammaspec, Gamma	, solid										
Americium-241	U	0.0515	+/-0.040	0.0675	0.040	0.200	pC1/g		CRB 06/28/0	2352	86288 1
Cesium-137	U	0.0144	+/-0.0265	0.0423	0.0265	0.050	pCi/g				
Potassium-40		26.0	+/-1.07	0.370	1.09		pCi/g				
Uranium-235	U	0.0143	+/-0.186	0.212	0.186	0.200	pCi/g				
Uranium-238		1.26	+/-0.814	0.641	0.814	1.00	pCi/g				

252507-2-0 44601002 Soil

20-JUN-01

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	WEO	06/25/01	1110	85627

The following Analytical Methods were performed

Method Description

DOE EML HASL 300

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy Griffin.



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada Address:

2621 Losee Road

North Las Vegas, Nevada 89030-4129

Report Date: July 20, 2001

Contact: Project:

Theodore Redding

Environmental Rad Analysis

Page 1 of 1

Client Sample ID: Sample ID:

252507-3-0 44601003

Project: Client ID:

NEVA00101 NEVA002

Matrix: Collect Date: Receive Date: Soil 20-JUN-01 22-JUN-01

Collector:

Chent

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec											
Gammaspec, Gamma	, solid										
Americium-241	U	0.000859	+/-0.0298	0.0502	0.0298	0.200	pCi/g		CRB 06/28/01	2349	86288 1
Cesium-137	Ü	0.0282	+/-0.0267	0.0388	0.0267	0.050	pCi/g				
Potassium-40		18.7	+/-2.09	0.384	2.09		pCi/g				
Uranium-235	U	0.00	+/-0.272	0.170	0.272	0.200	pCi/g				
Uranium-238		1.20	+/-0.638	0.488	0.638	1.00	pCi/g				

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	WEO	06/25/01	1110	85627

The following Analytical Methods were performed Method Description

DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy Griffin.



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Company: Bechtel Nevada 2621 Losee Road Address:

North Las Vegas, Nevada 89030-4129

Result

0.0159

21.1

0.182

1.76

-0.00148

+/-1.12

Report Date: July 20, 2001

Contact:

Parameter

Rad Gamma Spec

Cesium-137

Potassium-40

Uranium-235

Uranium-238

Americium-241

Gammaspec, Gamma, solid

Theodore Redding

Project:

Environmental Rad Analysis

Page 1 of 1

Client Sample ID: Sample ID: Matrix:

252508-1-0 44601004 Soil

NEVA00101 NEVA002

Collect Date: Receive Date:

20-JUN-01 22-JUN-01 Client

Collector: Qualifier

	DL	TPU	RL	Units	nits DF AnalystDate 7		AnalystDate		Batch Mtd.
+/-0.0898	0.169	0.0898	0.200	pCi/g		CRB	07/01/01	2202	86288 1
+/-0.0181	0.0278	0.0181	0.050	pCi/g		CIW	0,,01,01	2202	00200 1
+/-2.4 1	0.252	2.41		pCi/g					
+/-0.173	0.164	0 .1 7 3	0.200	pCi/g					

pCi/g

1.00

The following	Prep Methods were performed					
Method	Description	Analyst	Date	Time	Prep Batch	
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	WEO	06/25/01	1110	85627	

1.12

1.28

The followin	g Analytical Methods	were	performed
Method	Description		

DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager. Stacy Griffin.



Contact:

GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Certificate of Analysis

Bechtel Nevada Company:

2621 Losee Road Address:

North Las Vegas, Nevada 89030-4129

Theodore Redding

Environmental Rad Analysis Project:

Client Sample ID:

Sample ID: Matrix: Collect Date: Receive Date:

Collector:

252508-2-0

44601005 Soil 20-JUN-01 22-JUN-01

Client

NEVA00101 NEVA002 Project: Client ID:

Report Date: July 20, 2001

Page 1 of 1

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec											
Gammaspec, Gamm	a, solid										
Americium-241	U	0.0551	+/-0.0962	0.176	0.0962	0.200	pCi/g		CRB 07/07/01	1718	86288 1
Cesium-137	Ū	-0.00905	+/-0.021	0.0305	0.021	0.050	pCi/g				
Potassium-40		21.2	+/-2.67	0.233	2.67		pCi/g				
Uranium-235	υ	0.0477	+/-0.0998	0.175	0.0998	0.200	pCi/g				
Uranium-238	U	1.19	+/-1.27	1.34	1.27	1.00	pCi/g				

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep RAD A-021,A-021B,A-026	WEO	06/25/01	1110	85627
The following	Analytical Methods were performed				
Method	Description				

ī DOE EML HASL 300

Notes:

The Qualifiers in this report are defined as follows:

- Indicates the analyte is a surrogate compound.
- Actual result is less than amount reported
- Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- Indicates the compound was analyzed for but not detected above the detection limit

The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, Inc. standard operating procedures. Please direct any questions to your Project Manager, Stacy Griffin.

Reviewed by

P O Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407 (843) 556-817) • Fax (843) 766-1178



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

QC Summary

Report Date: July 20, 2001

Page 1 of 2

Client:

Bechtel Nevada

2621 Losee Road

North Las Vegas, Nevada

Contact:

Theodore Redding

Workorder: 44601

Parmname	NOM	Sample (Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 86288										
QC1200027925 44379001 DUP										
Americium-241	Ū	0.0157	U	0.0548	pCi/g	I11 ^		(+/-0.200)	CRB	06/30/01 14:49
	Uncert:	+/-0.105		+/-0.0717	. •					
	TPU:	0.105		0.0717						
Cesium-137	U	0.0266	U	0.0133	pCi/g	67 ^		(+/-0.050)		
	Uncert:	+/-0.0243		+/-0.0237						
	TPU:	0.0243		0.0237						
Potassium-40		14.7		16.0	pCi/g	8				
	Uncert:	+/-1.85		+/-1.93						
	TPU:	1,85		1.93						
Uranium-235	Ŭ	-0.0239	U	0.008	pCi/g	N/A		(+/-0.200)		
	Uncert	+/-0.106		+/-0.114						
	TPU:	0.106		0.114						
Uranium-238	U	1.04	υ	0.286	pCi/g	114 ^		(+/-1.00)		
	Uncert:	+/-1.26		+/-0.905						
	TPU:	1.26		0.905						
QC1200027926 LCS										
Americium-241				1260	pCi∕g					07/03/01 08:52
	Uncert:			+/-135						
C1 137	TPU:			135	•					
Cesium-137	441			485	pCi/g		110	(75%-125%)		
	Uncert			+/-61.0						
Determine 40	TPU:			61.0						
Potassium-40	**		U	1.12	pCi/g					
	Uncert:			+/-2.00						
Uranium-235	TPU;		U	2.00						
Oranium-233	******		U	0.254	pCi/g					
	Uncert:			+/-1.46						
Nan-ium 220	TPU:		U	1.46	-0:1-					
Uranium-238	T1		U	-0.20	pCi/g					
	Uncert:			+/-5.32						
QC1200027924 MB	TPU:			5.32						
QC1200027924 MB Americium-241			U	0.0164	pCi/g					06/30/01 14:48
1 steed to forth. P.47	Uncert:		•	+/-0.0224	yes.					003001 14.40
	TPU:			0.0224						
Cesium-137	110.		U	0.0296	pCi/g					
	Uncert:		_	+/-0.0234	, 6					
	TPU:			0.0234						
Potassium-40	44 0.		U	0.0829	pCi/g					
- Transmiss IV	Uncert:		_	+/-0.305	r6					
	TPU:			0.305						
	IFQ.									
Uranium-235			U	0.00	pCi∕g					

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GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

QC Summary

Workorder: 44601									
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anist	Date Time
Rad Gamma Spec Batch 86288									
	Uncert		+/-0.0975						
Uranium-238	TPU:	U	0.0975 0. 0 0	pCi/g					
	Uncert:		+/-0.907						
	TPU:		0.907						

Notes:

The Qualifiers in this report are defined as follows:

- ** Indicates the analyte is a surrogate compound.
- < Actual result is less than amount reported
- > Actual result is greater than amount reported
- Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the compound was analyzed for but not detected above the detection limit

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP V1170

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: I Date: April 2003

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Reno • Las Vegas • Boise Phoenix • Sacramento

Las Vegas Division 4208 Arcata Way. Suite A • Las Vegas. Nevada 89030 702-657-1010 • Fax: 702-657-1577 1-888-368-3282



CLIENT:

Bechtel Nevada

P.O. Box 98521, M/S NTS273 Las Vegas, NV 89193-8521

ATTN:

Ted Redding

PROJECT NAME:

V1170

NEL ORDER ID: L0106266

PROJECT NUMBER: 23081

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 6/21/01.

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:

- This concentration may be biased because the continuing calibration verification (CCV) standard did not meet QC requirements for this analyte. However, overall CCV standard recoveries meet method requirements and analytical results are in control.

Some surrogate results have been flagged as follows:

- Sample required dilution. Sample QC results were diluted outside the calibrated range.

Laboratory Manager

CERTIFICATIONS:

Las Vegas S. California Reno AZ0520 AZ0518

California 1707 US Army Corps

Certified Certified

2002

AZ0605 2264

Idaho Montana Nevada

Reno NV033

Certified Certified

Certified

Certified NV052

Las Vegas S. California

CA084 10228

of Engineers

Arizona

L.A.C.S.D.

CLIENT: Bechtel Nevada

CLIENT ID:

252507-1-0

PROJECT ID: PROJECT #:

V1170

DATE SAMPLED: 6/20/01 NEL SAMPLE ID: L0106266-01

TEST:

23081

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

DILUTION:

1

ANALYZED:

6/22/01 6/25/01

		Reporting	
PARAMETER	Result	Limit	
Aroclor-1016	ND	20. μg/kg	
Aroclor-1221	ND	20. μg/kg	
Aroclor-1232	ND	20. μg/kg	
Aroclor-1242	ND	20. μg/kg	
Aroclor-1248	ND	20. μg/kg	
Aroclor-1254	ND	20. μg/kg	
Arocior-1260	ND Jc	20. ug/kg	

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	68	46 - 155
Tetrachloro-m-xylene	87	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

CLIENT ID: 252507-2-0 PROJECT ID: V1170 DATE SAMPLED: 6/20/01 23081 NEL SAMPLE ID: L0106266-02 PROJECT #:

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

EPA 8082 METHOD: ANALYST: JRW - Las Vegas Division

Solid MATRIX: EXTRACTED: 6/22/01 DILUTION: 6/25/01 1 ANALYZED:

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

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	65	46 - 155
Tetrachloro-m-xylene	85	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

CLIENT ID: 252507-3-0 PROJECT ID: V1170 DATE SAMPLED: 6/20/01

23081 NEL SAMPLE ID: L0106266-03 PROJECT #:

PCB's (Polychlorinated Biphenyls) by EPA 8082. Dec. 1996 TEST:

EPA 8082 JRW - Las Vegas Division METHOD: ANALYST:

Solid EXTRACTED: 6/22/01 MATRIX: 6/25/01 DILUTION: ANALYZED: 1

	······································	Reporting	
PARAMETER	Result	Limit	
Aroclor-1016	ND	20. μg/kg	
Aroclor-1221	ND	20. μg/kg	
Aroclor-1232	ND	20. μg/kg	
Aroclor-1242	ND	20. μg/kg	
Aroclor-1248	ND	20. μ g/kg	
Aroclor-1254	ND	20. μg/kg	
Aroclor-1260	ND Jc	20. μg/kg	

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	73	46 - 155
Tetrachloro-m-xylene	102	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

V1170

CLIENT ID:

252508-1-0

PROJECT ID: 23081 DATE SAMPLED: 6/20/01

NEL SAMPLE ID: L0106266-04

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082. Dec. 1996

METHOD:

PROJECT #:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX:

EXTRACTED:

6.'22/01

DILUTION:

Solid 1

ANALYZED:

6/25/01

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

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	49	46 - 155
Tetrachloro-m-xylene	65	49 - 140

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

252508-2-0

PROJECT ID:

V1170

DATE SAMPLED: 6/20/01

PROJECT #:

23081

NEL SAMPLE ID: L0106266-05

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

6/22/01

DILUTION: 1

ANALYZED:

6/25/01

PARAMETER	Result	ReportingLimit
Aroclor-1016	ND	20. μg/kg
Aroclor-1221	ND	20. μg/kg
Aroclor-1232	ND	20. μg/kg
Aroclor-1242	ND	20. μg/kg
Aroclor-1248	ND	20. μg/kg
Aroclor-1254	ND	20. μg/kg
Aroclor-1260	ND Jc	20. μg/kg

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Decachlorobiphenyl	64	46 - 155
Tetrachloro-m-xylene	72	49 - 140

ND - Not Detected

CLIENT: Bechtel Nevada

PROJECT ID: V1170

23081

CLIENT ID:

252507-1-0

DATE SAMPLED: 6/20/01

PROJECT #:

NEL SAMPLE ID: L0106266-01

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

METHOD:

EPA 8015M

ANALYST:

CCS - Las Vegas Division

MATRIX:

EXTRACTED:

DILUTION:

Solid 50

ANALYZED:

6/22/01 6/27/01

PARAMETER	Resul	t	Reporting MDL Limit
Gasoline Range (C8-C12)	ND		500. mg/kg
Diesel Range (C12-C22)	1300	mg/kg	500. mg/kg
Oil Range (C22-C34)	34000	mg/kg	2500. mg/kg
Total	35300	mg/kg	500. mg/kg

QUALITY CONTROL DATA:

Surrogate % Recovery Acceptable Range Octacosane 54 - 130 D

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID: V1170 23081 PROJECT #:

CLIENT ID:

252507-2-0

DATE SAMPLED: 6/20/01

NEL SAMPLE ID: L0106266-02

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

EXTRACTED:

6/22/01

DILUTION:

50

ANALYZED:

6/27/01

PARAMETER	Result	Reporting MDLLimit
Gasoline Range (C8-C12)	ND	500. mg/kg
Diesel Range (C12-C22)	1500 mg/I	kg 500. mg/kg
Oil Range (C22-C34)	30000 mg/l	kg 2500. mg/kg
Total	31500 mg/l	kg 500. mg/kg

QUALITY CONTROL DATA:

% Recovery Acceptable Range Surrogate 54 - 130 D Octacosane

ND - Not Detected

Bechtel Nevada CLIENT:

PROJECT ID: V1170 23081 PROJECT #:

CLIENT ID: DATE SAMPLED: 6/20/01 NEL SAMPLE ID: L0106266-03

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

METHOD:

EPA 8015M

ANALYST:

CCS - Las Vegas Division

MATRIX: DILUTION: Solid 100

EXTRACTED: ANALYZED:

6/22/01 6/27/01

252507-3-0

PARAMETER	Result	Reporting MDL Limit
Gasoline Range (C8-C12)	ND	1000. mg/kg
Diesel Range (C12-C22)	5000 mg/kg	1000. mg/kg
Oil Range (C22-C34)	100000 mg/kg	5000. mg/kg
Total	105000 mg/kg	1000. mg/kg

QUALITY CONTROL DATA:

Surrogate % Recovery Acceptable Range 54 - 130 Octacosane D

ND - Not Detected

CLIENT:

Bechtel Nevada

PROJECT ID:

V1170

23081

CLIENT ID:

252508-1-0

DATE SAMPLED: 6/20/01

NEL SAMPLE ID: L0106266-04

TEST:

PROJECT #:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

EXTRACTED:

MDL

MATRIX: DILUTION: Solid 100

ANALYZED:

6/22/01 6/27/01

PARAMETER	
Gasoline Range (C8-C1:	2

2) Diesel Range (C12-C22) Oil Range (C22-C34)

Result ND 9500 mg/kg

mg/kg mg/kg

Limit 1000. mg/kg 1000. mg/kg 5000. mg/kg

1000. mg/kg

Reporting

119500

110000

QUALITY CONTROL DATA:

Surrogate Octacosane

Total

% Recovery D

Acceptable Range

54 - 130

ND - Not Detected

CLIENT:

PROJECT ID:

PROJECT #:

Bechtel Nevada

V1170 23081

CLIENT ID:

252508-2-0

DATE SAMPLED: 6'20'01

NEL SAMPLE ID: L0106266-05

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

EXTRACTED:

MATRIX: DILUTION: Solid 100

ANALYZED:

6/22/01 6.27/01

PARAMETER	Resul	Result					
Gasoline Range (C8-C12)	ND		<u> </u>	1000. mg/kg			
Diesel Range (C12-C22)	10000	mg/kg		1000. mg/kg			
Oil Range (C22-C34)	130000	mg/kg		5000. mg/kg			
Total	140000	mg/kg		1000. mg/kg			

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery D

Acceptable Range

54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

254402-1-0

PROJECT ID: PROJECT #:

V1170

DATE SAMPLED: 6/20/01

TEST:

23081

NEL SAMPLE ID: L0106266-06

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992 EPA 8015M

ANALYST:

CCS - Las Vegas Division

METHOD: MATRIX:

Solid

EXTRACTED:

6/22/01

DILUTION:

1

ANALYZED:

6/27/01

		Reporting
PARAMETER	Result	MDL Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	1300 mg/kg	10. mg/kg
Oil Range (C22-C34)	690 mg/kg	50. mg/kg
Total	1990 mg/kg	10. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery 104

Acceptable Range

54 - 130

ND - Not Detected

CLIENT: Bechtel Nevada

PROJECT ID: V1170 PROJECT #:

23081

CLIENT ID:

254401-4-0

DATE SAMPLED: 6/20/01

NEL SAMPLE ID: L0106266-07

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

1

EXTRACTED:

6/22/01

DILUTION:

ANALYZED:

6′27/01

PARAMETER	Result	Reporting MDL Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C22-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate % Recovery Acceptable Range 54 - 130 Octacosane 86

ND - Not Detected

CLIENT: PROJECT ID:

Bechtel Nevada

V1170

CLIENT ID:

254401-5-0

DATE SAMPLED: 6/20/01

23081 PROJECT #:

NEL SAMPLE ID: L0106266-08

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992

ANALYST:

CCS - Las Vegas Division

METHOD:

EPA 8015M

MATRIX:

Solid

1

EXTRACTED:

6/22/01

DILUTION:

ANALYZED:

6/27/01

		Reporting
PARAMETER	Result	MDL Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C22-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery 80

Acceptable Range

54 - 130

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

254401-6-0

PROJECT ID:

V1170

DATE SAMPLED: 6/20/01

PROJECT #:

23081

NEL SAMPLE ID: L0106266-09

TEST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M. July 1992

ANALYST:

CCS - Las Vegas Division

METHOD: MATRIX:

EPA 8015M

EXTRACTED:

DILUTION:

Solid

1

ANALYZED:

6/22/01 6 27/01

PARAMETER	Result	Reporting MDLLimit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Oil Range (C22-C34)	ND	50. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Acceptable Range Surrogate % Recovery 54 - 130 Octacosane

ND - Not Detected

CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID: PROJECT #:

V1170 23081

DATE SAMPLED: NA

NEL SAMPLE ID: 010622PCBS-BLK

TEST:

PCB's (Polychlorinated Biphenyls) by EPA 8082, Dec. 1996

METHOD:

EPA 8082

ANALYST:

JRW - Las Vegas Division

MATRIX:

Solid

EXTRACTED:

6/22/01

ANALYZED:

6/25/01

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

QUALITY CONTROL DATA:

Surrogate Decachlorobiphenyl Tetrachloro-m-xylene % Recovery 112 109

Acceptable Range 46 - 155

49 - 140

ND - Not Detected

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

CLIENT:

Bechtel Nevada

CLIENT ID:

Method Blank

PROJECT ID: PROJECT #:

V1170 23081

DATE SAMPLED: NA

NEL SAMPLE ID: 010622TPHS-FP-BLK

TEST:

ANALYST:

Total Extractable Petroleum Hydrocarbons Fuel Finger Print by EPA Method 8015M, July 1992 CCS - Las Vegas Division

METHOD: MATRIX:

EPA 8015M Solid

EXTRACTED:

6/22/01

ANALYZED:

6/27/01

		Reporting
PARAMETER	Result	MDL Limit
Gasoline Range (C8-C12)	ND	10. mg/kg
Diesel Range (C12-C22)	ND	10. mg/kg
Total	ND	10. mg/kg

QUALITY CONTROL DATA:

Surrogate Octacosane % Recovery

Acceptable Range 54 - 130

ND - Not Detected

10:18 R15

Cillich of

Bechtel	Nevada

ANALYTICAL SERVICÉS LABORATORY

			SE	RVICE	SKE	:UU	F21	& CH	AIN C	ir G	J210	יץטי	KEU	ノベレ	Page 7_or 7_
	PROJECT/ CLIENT INFORMAT	ION		7			RE	PORT IN	FORMAT	ION					SAMPLE INFORMATION
Proje	ect: CAU398 1	BN Org#:	2156	Send Rep	ort to:	DA	NI	PRIM	ليهاد						ampling Site: COM 3? P
Cha	rge No: C7733EI/	ASL Prog	:	Phone:	6/6	<u>?</u>	Fa	ax:	761		M/S:	320	7 .		he samples submitted contain (check);) Hazardous () Radioactive 🚫 Unknown
	ect Manager: WAYNE SOM	ر دد.		Turnarous	nd: ()	Standar Rush F	rd - 30 da Prelimina	ays Non-r	rad, 60 Da / />21	ys Rad,	Other: Final by:				ontamination. If known, attach a brief narrative summary lentifying contaminants. This information will ensure
															ompliance with applicable regulations and allow for the safe and and an annual sample materials.
}_	5-0573 5-7761 LAB USE ONLY		١١٥٥٤	1 ,,,,,,,,,					ALYSE						SAMPLE RECEIPT INFORMATION
Pad	SGD: Non-Rad S		/1130	,	3 4	Ι	П		1	1			T	T	Are all sample containers received intact (X) Yes () No Comments:
	Packet: Non-Rad P		7.70		4(0.0)	8.1						ł		1	ourmens.
Clier	nt Services Representative:				64	item		1					90		Do the labels agree with this form? (4) Yes () No Comments:
1		20110			63	120	1 1	- (ĺ	i	1 1	į		4	
if so	these analyses be performed under a signed o, do analyses entered here agree with the SC ot, identify the variation	OW?	() YES () NO () N/A	361	500]						12		Was a Material Clearance Tag submitted? (Yes () No Comments:
	R initials indicating review and approval:		Date: _		= 3					1	} }	ŀ	_	, d	
T E	ID / DESCRIPTION	SAME	PLING	MATRIX	27.2	32								۵	COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
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4 8	254401-6-0	V	1125	SOIL	X]	- 7		1 6
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	npled/Relinquished (Signature/Organization)	+		Received by	(Signa	ture/Or	ganizatio	n)					Signatu	re)	DATE / TIME Received (Courier & Tracking Info.)
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CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1565

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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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



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

TEL: 702-295-7220

RE Project: V1565

Order No.: L0204394

Dear Ted Redding:

NEL Laboratories, Las Vegas received 5 samples on 4/25/02 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Wagenen Laboratory Manager

Certifications:

Reno

Las Vegas

Arizona

AZ0520 AZ0518

California

2002 1707

Idaho

Certified Certified

Montana

Certified Certified

Nevada

NV033 NV052

New Mexico

Certified Certified

US Army Corps of Engineers

Certified

CLIENT:

Bechtel Nevada

PROJECT ID:

V1565

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252503-1

DATE SAMPLED: 4/24/02

NEL SAMPLE ID: L0204394-001A

Parameter	Result	<u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Total TPH	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Surr: n-Octacosane	60.1	%REC	55-130	1	SW8015Ext	04/25/02	04/30/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

CLIENT:

Bechtel Nevada

PROJECT ID:

V1565

PROJECT #: MATRIX:

30033

SOLID

CLIENT ID:

252503-2

DATE SAMPLED: 4 24 02

NEL SAMPLE ID: L0204394-002A

Parameter	Resul	t <u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ex1	04/25/02	04/30/02	PXC-LV
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Total TPH	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Surr: n-Octacosane	68.1	%REC	55-130	1	SW8015Ext	04/25/02	04/30/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1565

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252503-3

DATE SAMPLED: 4 24 02

NEL SAMPLE ID: L0204394-003A

Parameter	Result	<u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ex1	04/25/02	04/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Total TPH	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Surr: n-Octacosane	62.1	%REC	55-130	1	SW8015Ext	04/25/02	04/30/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1565

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252503-4

DATE SAMPLED: 4 24 02

NEL SAMPLE ID: 10204394-004A

Parameter	Result	<u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Total TPH	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Surr: n-Octacosane	71.1	%REC	55-130	1	SW8015Ext	04/25/02	04/30/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

CLIENT:

Bechtel Nevada

PROJECT ID:

V1565

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252503-5

DATE SAMPLED: 4/24/02

NEL SAMPLE ID: L0204394-005A

Parameter	Result	<u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Diesel Range Organics (C12-C22)	57	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Oil Range Organics (C22-C34)	530	mg/Kg	50	1	SW/8015Ext	04/25/02	04/30/02	PXC-LV
Total TPH	590	mg/Kg	10	1	SW8015Ext	04/25/02	04/30/02	PXC-LV
Surr: n-Octacosane	66.1	%REC	55-130	1	SW8015Ext	04/25/02	04/30/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

CLIENT:

Bechtel Nevada

Work Order:

L0204394

Project: V1565

ANALYTICAL QC SUMMARY REPORT

8015FFP_S Test Method: SW8015Ext

Sample ID: LCS-324	SampType: LCS	TestCod	e: 8015FFP_S	Units: mg/Kg		Prep Date	: 4/25/02		Run ID: L_F	TD-1_020430A
	Batch ID: 324	TestN	o: SW8015M			Analysis Date	4/30/02		SeqNo: 2358	R7
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit 1	lighl.imit	RPD Ref Val	%RPD	RPDI imit Qual
Diesel Range Organies (C12-C22)	157.8	10	166.6	0	94.7	54	91	0	()	S
Surr: n-Octacosane	2.066	0.010	3.329	0	62.1	55	130	0	0	
Sample ID: LCS-324	SampType: LCS	TestCod	e: 8015ffp_s	Units: mg/Kg		Prep Date	4/25/02		Run ID: L_F	1D-1_020430B
	Batch ID: 324	TestN	o: SW8015M			Analysis Date	4/30/02		SeqNo: 2414	44
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	Low! imit 1	HighLimit	RPD Ref Val	%RPD	RPDI imit Qual
Diesel Range Organics (C12-C22)	157.8	10	166.6	0	94.7	.54	91	0	()	S
Surr: n-Octacosane	2.066	0.010	3.329	0	62.1	55	130	0	0	
Sample ID: LCSD-324	SampType: LCSD	TestCod	e: 8015FFP_S	Units: mg/Kg		Prep Date	4/25/02		Run ID: L_F	TD-1_020430A
	Batch ID: 324	TestN	o: SW8015M			Analysis Date	4/30/02		SeqNo: 2358	89
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit 1	HighLimit	RPD Ref Val	%RPD	RPDLimit Qual
Diesel Range Organics (C12-C22)	119.1	10	166.6	0	71.5	54	91	157.8	28 ()	25 R
Surr: n-Octacosane	3.965	0.010	3.329	0	119	55	130	0	()	0
Sample ID: LCSD-324	SampType: LCSD	TestCod	le: 8015FFP_S	Units: mg/Kg		Prep Date	4/25/02		Run ID. L_F	1D-1 020430B
	Batch 1D: 324	TestN	o: SW8015M			Analysis Date	4/30/02		SeqNo: 241-	46
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit 1	HighLimit	RPD Ref Val	"åRPD	RPDI imit Qual
Analyte Diesel Range Organics (C12-C22)	Result	PQL 10	SPK value	SPK Ref Val	%REC	LowLimit 1	HighLimit 91	RPD Ref Val	"6RPD 6.18	RPDI imit Qual

Qualifiers:

ND - Not Detected at the Reporting Limit

C - Unspiked sample >5 times the amount spiked

B - Analyte detected in the associated Method Blank

JI - MS or MSD outside accepance limits. LCS acceptable.

R - RPD outside accepted recovery limits

Page Lof L

J - This concentration is considered an estimate due to LCS failure.

Date: 03 May-02

Bechtel	Nevada

ANALYTICAL SERVICES LABORATORY

1	_=			SI	ERVICE	S REC	QUEST	& CH	IAIN	OF	CL	STO	DDY	RE	COR	D	Page _/_ of _/_
ı		PROJECT/ CLIENT INFORMA					_	REPORT			N						SAMPLE INFORMATION
	Projec	*CAU 398	BN Org#:	A 435	Send Rep	port to:	aniel	D. K	(irle	V						Sai	mpling Site: <u>25 - 35 - 6 - 3</u>
	Charg	6 No.: 5BO9HZ11	ASL Prog	i.:	Division	5571	,	295	-776	5 <i> </i>		MVS: NT	s :	30 E	÷	The	e samples submitted contain (check);) Hazardous () Radioactive (X) Unknown
	Projec	t Manager: Teff Smi	th.		Turnarou	nd Sta Ru	ndard - 30 sh Prelimin	days Non- ary by: M	iad, 60	Days 200	Rad, (Other:_ inal by	:			cor	ntamination. If known, attach a brief narrative summary ntifying contaminants. This information will ensure
	2	15.7775 FAX: 275-716	1 W	rs 78 30	Final rep	ort format:	() Standa	rd () NT:	S-WAC	()0	ther:_						npliance with applicable regulations and allow for the safe ndling of the sample materials.
		LAB USE ONL						A	NALYS	SES 8	ME	THOD					SAMPLE RECEIPT INFORMATION
	Rad S	GD: Non-Rad	SDG: V	156)	1	1		- 1		i						Are all sample containers received intact Yes () No Comments:
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	Client	Services Representative:				17.5			l								Do the labels agree with this form? (XYes () No Comments:
	If so, If not,	nese analyses be performed under a signe do analyses entered here agree with the S identify the variation initials indicating review and approval:	d SOW? OW?	() YES (() YES (Date:) NO) NO () N/A	801 F											Was a Material Clearance Tag submitted? Yes () No Comments:
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CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1580

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CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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Bechtel	Nevada

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

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SERVICES REQUEST & CHAIN OF COSTODY RECORD Fage							
PROJECT/ CLIENT INFORMATION	REPORT IN	FORMATION	SAMPLE INFORMATION				
Project: CAV 398 BN Org#: A 435	Send Report to: Dan tel V Phone: 55 27 Fax: 2005	Kirker	ampling Site: 25-25-16 + 25-44-03				
Charge No.: 5130914721 ASL Prog.:	1245-22/// 1 245	//6. 1.3 300 ()	samples submitted contain (check); Hazardous () Radioactive () Unknown				
Project Manager: Tiff Saith	Turnaround: () Standard - 30 days Non-ro Rush Preliminary by: 7	dou Final by: iden	lamination. If known, attach a brief narrative summary htifying contaminants. This information will ensure				
Phone: 295-7775 Fax: 295-7761 M/S: N/3 3 0	Final report format: () Standard () NTS	-WAC () Other: han	npliance with applicable regulations and allow for the safe dling of the sample materials.				
LAB USE ONLY	AN	ALYSES & METHOD	SAMPLE RECEIPT INFORMATION				
Rad SGD: Non-Rad SDG: V1580	R44 N		Are all sample containers received intact (VYes () No Comments:				
Rad Packet: Non-Rad Packet:	4 4 10						
Client Services Representative:	7 7		Do the labels agree with this form? (XYes () No Comments:				
Visa i							
Will these analyses be performed under a signed SOW? MYES () If so, do analyses entered here agree with the SOW? () YES M If not, identify the variation MAY ITEM SHOULD RE 10.53	NO () N/A () N/A ()		Was a Material Clearance Tag submitted? (XYes () No Comments:				
CSR initials indicating review and approval: Date:							
SAMPLING	——————————————————————————————————————		COMMENTS				
T ID / DESCRIPTION DATE TIME	MATRIX # ST		(Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)				
	Soil		2st al				
1 252516-2 11:16							
2 2525/6-3 11:17			no				
3 252516-4 11:19			Suspected				
4 252516-5 11:19			RAD				
5 254403-1 3:00							
6 254403 -2 3:01							
7 254403 - 3 1 3:03	<u> </u>		<u> </u>				
8							
9							
Transfer of samples submitted for analyses		Complete for samples shipped to an OFF-SITE Subo					
	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME Received (Courier & Tracking Info.)				
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Bechte	<i>Nevada</i>

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

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	SERVICES REQUEST & CHAIN OF COSTODY RECORD Page A DI																
	PROJECT/ CLIENT INFORM		REPORT INFORMATION								SAMPLE INFORMATION						
Projec	*CAV 398	Send Rep	Send Report to: Daniel N. Kirker										Sampling Site: 25 - 44 - 0 - 3 The samples submitted contain (check); () Hazardous () Radloactive () Unknown				
Charg	*CAV 398 **NO::5B09HZ21	Phone:	Phone: 795-5577 Fax: 95-7761 MINTS 306								, [
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						nal report format () Standard () NTS-WAC () Other:										ompliance with applica andling of the sample	ble regulations and allow for the safe
27	LAB USE ON	IK & ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION					
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GAS RANGE ORGANICS

Report Date: 05/23/02 15:06 RFW Batch Number: 0205L638 Client: BECHTEL NEVADA V1580 Work Order: 60052001001 Page: 1 9 Cust ID: 252516-1 252516-2 252516-3 252516-4 252516-5 254403-1 Sample RFW#: 001 002 003 004 005 006 Information Matrix: SOIL SOIL SOIL SOIL SOIL SOIL D.F.: 1.00 1.00 1.00 1.00 1.00 1.00 Units: UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG 80 % 99 % 2,5-Dibromotoluene 141 % 122 % 73 % 91 % Gasoline Range Organics (GRO) 30 U 30 U 30 U 33 U 33 U 33 U Cust ID: 254403-2 254403-3 254403-4 254403-5 254403-6 254403-7 Sample 007 009 010 RFW#: 00B 011 012 Information Matrix: SOIL SOIL SOIL SOIL SOIL SOIL D.F.: 1.00 1.00 1.00 1.00 1.00 1.00 Units: UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG 2,5-Dibromotoluene 96 % 122 % 126 % 90 % 88 % 113 % Gasoline Range Organics (GRO)_____ 33 U 30 U 29 U 29 U 28 U 33 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP OC

GAS RANGE ORGANICS

Report Date: 05/23/02 15:06 RFW Batch Number: 0205L638 Client: BECHTEL NEVADA V1580 Work Order: 60052001001 Page: 2 254403-7 TBLKEG Cust ID: 254403-7 TBLKEG BS TBLKEG BSD TBLKDY RFW#: 012 MS 012 MSD 02LVJ520-MB1 02LVJ520-MB1 Sample 02LVJ520-MB1 02LVJ516-MB1 Information Matrix: SOIL SOIL SOIL SOIL SOIL SOIL 1.00 D.F.: 1.00 1.00 1.00 1.00 1.00 Units: UG/KG UG/KG UG/KG UG/KG UG/KG UG/KG 2,5-Dibromotoluene 122 ¥ 92 ક્ષ 121 કૃ 116 ક્ર 109 8 ş 127 86 % 30 U 99 % 99 % Gasoline Range Organics (GRO)__ 84 웋 30 U Cust ID: TBLKDY BS Sample RFW#: 02LVJ516-MB1 Information Matrix: SOIL D.F.: 1.00 Units: UG/KG 2,5-Dibromotoluene 124 103 % Gasoline Range Organics (GRO)____ U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

DIESEL RANGE ORGANICS BY GC Report Date: 05/23/02 15:52

RFW Batch Number: 020	5L638	Client: BECH	TEL NEVADA V15	80 Work 0	rder: 60052001001 Page: 1				
	Cust ID:	252516-1	252516-2	252516-3	252516-4	252516-5	254403-1 006		
Sample	RFW#:	001	002	003	004	005			
Information	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00 mg/kg		
	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
	p-Terphenyl	90 %	85 %	72 %	85 %	80 %	88 %		
					======f1=		=======f1		
Diesel Range Organics		12.6 U	12.6 U	17	16	12.5 U	12.1 U		
Motor Oil		12.6 U	12.6 U	12.4 U	12.6 U	14	12.1 U		
	Cust ID:	254403-2	254403-3	254403-4	254403-5	254403-6	254403-7		
Sample	RFW#:	007	008	009	010	011	012		
Information	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00		
	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
	p-Terphenyl	81 %	90 %	90 %	98 %	90 %	90 %		
*****			======fl=	======f1=	======f1=	=======f1=	===== f l		
Diesel Range Organics		12.3 U	12.3 U	12.2 U	12.2 U	12.4 U			
Motor Oil		12.1 U	12.3 U	12.3 U	12.2 U	12.2 U	12.4 U		

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Mapala

RFW Batch Number:	Client:		IESEL RANG TEL NEVAD		Report Date: 05/23/02 15:52 01001 Page: 2					
	Cust ID:	254403-1	7	254403-	7	BLK		BLK BS		9
Sample Information	RFW#: Matrix: D.F.: Units:	012 MS SOIL 1.00 mg/kg		012 MSD SOIL 1.00 mg/kg		02LE0542-M SOIL 1.0 mg/k	0	02LE0542-MB1 SOIL 1.00 mg/kg		
	p-Terphenyl	85	* ==fl=	92	* f1	79	¥ f ነ	80 %	l=======fl=======fl	
Diesel Range Orga Motor Oil	anics	61 12.4	*	62 12.4	11 % U	12.0 12.0	U	55 % 12.0 U		

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

CLOSURE REPORT - CAU 398

Section: Appendix B
Revision: 1
Date: April 2003

SAMPLE DELIVERY GROUP

V1581

CLOSURE REPORT - CAU 398

Section: Appendix B
Revision: 1
Date: April 2003

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Corporate Headquarters / Reno Laboratory

4750 Longley Lane. Suite 106 Reno. NV 89502 Phone: 775.348.2522 Fax: 775.348.2546

Las Vegas Laboratory 4208 Arcata Way, Suite A Las Vegas. NV 89030 Phone: 702.657.1010 Fax: 702.657.1577

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

TEL: 702-295-7220

RE Project: V1581

Order No.: L0205125

Dear Ted Redding:

NEL Laboratories, Las Vegas received 20 samples on 5/9/02 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Laboratory Manager

Certifications:

Las Vegas Reno

Arizona

AZ0520 AZ0518

California

1707 2002

Certified Certified

Idaho

Certified Certified

Montana Nevada

NV033 NV052

New Mexico

Certified Certified

US Army Corps of Engineers

Certified

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #: MATRIX:

30033

SOLID

CLIENT ID:

25-2505-1

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-001A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 15 02	PXC-LV
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	l	SW8015Ext	05/13/02	05:15/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50]	SW8015Ext	05/13/02	05/15/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Surr: n-Octacosane	80.1	%REC	55-130	l	SW8015Ext	05/13/02	05/15/02	PXC-LV

CLIENT: PROJECT ID: Bechtel Nevada

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-2

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-002A

Parameter	Result	<u>Unit</u>	Reporting <u>Limi</u> t	<u>DF</u>	Method	Prep Date	Analyzed	Analyst	
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	I	SW8015Ext	05/13/02	05 14 02	PXC-LV	
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV	
Oil Range Organics (C22-C34)	68	mg/Kg	50	1	SW8015Ext	05/13/02	05/14/02	PXC-LV	
Total Petroleum Hydrocarbons	68	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV	
Surr: n-Octacosane	94.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV	

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-3

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-003A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15:02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05-15/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Surr: n-Octacosane	86.1	%REC	55-130	1	SW8015Ext	05/13/02	05/15/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-4

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-004A

Parameter	Result	<u>Unit</u>	Reporting Li <u>mit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05'14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Surr: n-Octacosane	75.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-5

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-005A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	46	mg/Kg	10	1	SW8015Ext	05/13/02	05 14 02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05:14:02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05.13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	46	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Surr: n-Octacosane	83.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252505-5

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-005B

Reporting

Parameter

Result Unit

Limit

DF Method

Prep Date

Analyzed

Analyst

Cadmium

ND mg/L

0.0050

SW 6010B-To

05/14/02

05.14/02

FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-6

DATE SAMPLED: 5 7/02

NEL SAMPLE ID: L0205125-006A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/15/02	PXC-UV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 15 02	PXC-LV
Surr: n-Octacosane	83.1	%REC	55-130	1	SW8015Ext	05/13/02	05/15/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252505-6

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-006B

Reporting

Parameter Cadmium

Result Unit ND mg/L

Limit 0.0050 <u>DF</u> Method SW 6010B-To

Prep Date 05/14/02

<u>Analyzed</u> 05 14/02

Analyst FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-7

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-007A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PNC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05:13:02	05 14 02	PNC-LV
Oil Range Organics (C22-C34)	ND	mg·Kg	50	1	SW8015Ext	05 13 02	05 14 02	PNC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 14/02	PXC-LV
Surr: n-Octacosane	57.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

SOLID (TCLP)

PROJECT ID:

V1581

PROJECT #:

MATRIX:

30033

CLIENT ID:

252505-7

DATE SAMPLED: 5.7.02

NEL SAMPLE ID: L0205125-007B

Reporting

Parameter Cadmium

Result Unit ND mg/L

Limit 0.0050 DF Method SW 6010B-To

Prep Date 05/14/02

Analyzed 05/14/02

Analyst FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Page 10 of 46

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-8

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-008A

Parameter	Result	<u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	ì	SW8015Ext	05/13/02	05 14 02	PNC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05 13/02	05 14 02	PNC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Surr: n-Octacosane	77.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PNC-LV

CLIENT:

Bechtel Nevada

PROJECT ID: PROJECT #:

V1581

MATRIX:

30033

SOLID (TCLP)

CLIENT ID:

252505-8

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-008B

Reporting

Parameter

Result Unit

Limit

DF Method

Prep Date

Analyzed

Analyst

Cadmium

ND mg/L

0.0050

SW 6010B-To

05/14/02

05/14/02

FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Page 12 of 46

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-9

DATE SAMPLED: 5 ~ 02

NEL SAMPLE ID: L0205125-009A

Parameter	Result	<u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/K.g	10	I	SW8015Ext	05/13/02	05 14/02	PNC-LV
Gasoline Range Organics (C8-C12)	ND	mg/K.g	10	1	SW8015Ext	05/13/02	05:14/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg:′Kg	50	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Surr: n-Octacosane	85.1	%REC	55-130	l	SW8015Ext	05/13/02	05/14/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252505-9

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-009B

Reporting

Parameter Cadmium

Result Unit ND mg/L

Limit 0.0050

DF Method SW 6010B-To Prep Date 05/14/02

Analyzed 05 14:02

Analyst FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

Page 14 of 46

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252505-10

DATE SAMPLED: 5 7 02

NEL SAMPLE ID: L0205125-010A

Parameter	Result	Unit	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ex1	05/13/02	05 14/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 14 02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW/8015Ext	05/13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ex1	05/13/02	05/14/02	PXC-LV
Surr: n-Octacosane	78.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

MATRIX:

30033 SOLID (TCLP) CLIENT ID:

252505-10

DATE SAMPLED: 5 T 02

NEL SAMPLE ID: L0205125-010B

Reporting

Parameter Cadmium

Result Unit

Limit

Method DF

Prep Date

Analyzed

Analyst

ND mg/L

0.0050

SW 6010B-To

05'14'02

05 14 02

FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-1W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-011A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	l	SW8015Ext	05/13/02	05-14/02	PNC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	ì	SW8015Ext	05/13/02	05 14/02	PXC-LV
Surr: n-Octacosane	92.1	%REC	55-130	l	SW8015Ext	05/13/02	05/14/02	PXC-LV

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-1W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-011B

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	µ g/Қg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1221	ND	μ g/Κg	20	l	SW8082	05/13/02	05/14/02	JRW-LV
Ai or 1232	ND	μg/Kg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Arocior 1242	ND	με/Κε	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1248	ND	µg/Кg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Arocior 1260	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	109	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachloro-m-xylene	102	%REC	48-136	Į.	SW8082	05/13/02	05/14/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252504-1W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-011C

-		
ке	porting	

Parameter	Result Unit	Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Cadmium	ND mg/L	0.0050	1	SW 6010B-To	05/14/02	05 14 02	FIF-Reno
Lead	ND mg/L	0.050	1	SW 6010B-To	05/14/02	05/14/02	FIF-Reno

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-2W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-012A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst	
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05 13 02	05 14-02	PNC-LV	
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV	
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/14/02	PXC-LV	
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 14 02	PXC-LV	
Surr: n-Octacosane	83.1	%REC	55-130	1	SW8015Ext	05 13/02	05 14/02	PXC-LV	

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #: MATRIX:

30033

SOLID

CLIENT ID:

252504-2W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-012B

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	µg/Kg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	l	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1232	ND	μ g /Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1242	ND	μg/Κg	20	1	SW8082	05/13/02	05'14/02	JRW-LV
Arocior 1248	ND	µg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1254	ND	μ g /Kg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1260	ND	μ g /Κg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	111	%REC	45-149	ì	SW8082	05/13/02	05-14/02	JRW-LV
Surr: Tetrachloro-m-xylene	107	%REC	48-136	1	SW8082	05/13/02	05/14/02	JRW-LV

CLIENT:

Bechtel Nevada

ND

mg/L

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

Lead

SOLID (TCLP)

CLIENT ID:

252504-2W

DATE SAMPLED: 5 2 02

SW 6010B-To

NEL SAMPLE ID: L0205125-012C

05/14/02

Analyst

FIF-Reno

FIF-Reno

05/14/02

Parameter	Result Unit	<u>Li</u> mit	$\underline{\mathbf{DF}}$	Method	Prep Date	Analyzed
Cadmium	ND mg/L	0.0050	ı	SW 6010B-To	05/14/02	05 14 02

0.050

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

SOLID

MATRIX:

30033

CLIENT ID:

252504-3W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-013A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 14 02	PNC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ex1	05/13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg Kg	10	1	SW8015Ext	05/13/02	05 14/02	PXC-LV
Surr: n-Octacosane	92.1	%REC	55-130	1	SW8015Ext	05/13/02	05 14 02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-3W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-013B

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/ Kg	20	1	SW8082	05/13/02	05 14 02	JRW-LV
Aroclor [22]	ND	μg/Kg	20	1	SW8082	05'13 02	05 14 02	JRW-LV
Aroclor 1232	ND	μg/Κg	20	1	SW'8082	05/13/02	05 14/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1260	45	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	116	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachloro-m-xylene	120	%REC	48-136	1	SW8082	05/13/02	05/14/02	JRW-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252504-3W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-013C

			Reporting					
Parameter	Result	<u>Unit</u>	Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	05/14/02	05 14/02	FIF-Reno
Lead	ND	mg/L	0.050	1	SW 6010B-To	05/14/02	05/14/02	FIF-Reno

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-4W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-014A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 14/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PNC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	ì	SW8015Ext	05/13/02	05-14/02	PNC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05.14/02	PXC-LV
Surr: n-Octacosane	72.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV

CLIENT:

Bechtel Nevada

CLIENT ID:

252504-4W

PROJECT ID:

V1581

PROJECT #:

30033

DATE SAMPLED: 5 2 02

MATRIX:

SOLID

NEL SAMPLE ID: L0205125-014B

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1221	ND	µ⊈/Кg	20	1	SW8082	05/13/02	05 14 02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1242	ND	μg′Kg	20	1	SW8082	05/13/02	05/14/02	JRW-I V
Aroclor 1248	ND	μg/Kg	20	1	SW8082	05/13/02	05.14/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	1	SW/8082	05/13/02	05.14/02	JRW-LV
Arocior 1260	ND	µg/Кg	20	1	SW/8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	95.5	%REC	45-149	ì	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachioro-m-xylene	96.0	%REC	48-136	}	SW8082	05/13/02	05/14/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252504-4W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-014C

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Cadmium	ND	mg/L	0.0050	l	SW 6010B-To	05/14/02	05/14/02	FIF-Reno
Lead	ND	mg/L	0.050	i	SW 6010B-To	05/14/02	05-14/02	FIF-Reno

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-5W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-015A

Parameter	Result	<u>Unit</u>	Reporting <u>Limi</u> t	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 14/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05114.02	PXC-LV
Surr: n-Octacosane	94.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-5W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-015B

			Reporting					
Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	ì	SW8082	05/13/02	05 14.02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	1	SW8082	05/13/02	05'14/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	05:13/02	05/14/02	JRW-LV
Aroclor 1248	ND	μg/Κg	20]	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1254	ND	μg/Κg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1260	ND	μg/Kg	20	1	SW'8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	105	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachioro-m-xylene	103	%REC	48-136	1	SW8082	05/13/02	05/14/02	JRW-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252504-5W

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-015C

Parameter	Result	<u>Unit</u>	Reporting <u>Limi</u> t	DF	Method	Prep Date	Analyzed	Analyst
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	05 14/02	05 14/02	FIF-Reno
Lead	ND	mg/L	0.050	1	SW 6010B-To	05/14-02	05/14/02	FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #: MATRIX:

30033 SOLID CLIENT ID:

252504-1E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-016A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/14/02	PXC-LV
Surr: n-Octacosane	80.1	%REC	55-130	1	SW8015Ext	05/13/02	05/14/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-1E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-016B

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Κg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1232	ND	μg′Kg	20	1	SW8082	05:13/02	05/14/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1248	ND	µg∕Кg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1254	ND	με/Κε	20	}	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1260	ND	μg/Kg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Surr: Decachlorobiphenyl	117	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachloro-m-xylene	116	%REC	48-136	1	SW8082	05 13/02	05/14/02	JRW-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252504-1E

DATE SAMPLED: 5/2/02

NEL SAMPLE ID: L0205125-016C

Re	port	ing

<u>Parameter</u>	Result Unit	Limit	$\underline{\mathbf{DF}}$	Method	Prep Date	Analyzed	<u>Analyst</u>
Cadmium	0.012 mg/L	0.0050	1	SW 6010B-To	05.14/02	05-14/02	FIF-Reno
Lead	ND mg/L	0.050	1	SW 6010B-To	05/14/02	05 14/02	FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-2E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-017A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 15/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 15/02	PNC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/15/02	PNC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	i	SW8015Ext	05.13/02	05 15:02	PNC-LV
Surr: n-Octacosane	88.1	%REC	55-130	1	SW8015Ext	05/13/02	05/15/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #: MATRIX:

30033

SOLID

CLIENT ID:

252504-2E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-017B

Parameter	Result	<u>Unit</u>	Reporting <u>Limi</u> t	DF	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	ı	SW8082	05/13/02	05 14 02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Araciar 1242	29	μg/Kg	20	ì	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1248	ND	με/Κε	20	ł	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1260	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	105	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachioro-m-xylene	101	%REC	48-136	1	SW8082	05/13/02	05/14/02	JRW-LV

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252504-2E

DATE SAMPLED: 5/2/02

NEL SAMPLE ID: L0205125-017C

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Cadmium	ND	mg/L	0.0050	1	SW 6010B-To	05/14/02	05 14:02	FIF-Reno
Lead	ND	mg/L	0.050	1	SW 6010B-To	05/14/02	05 14/02	FIF-Reno

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #: MATRIX:

30033

SOLID

CLIENT ID:

252504-3E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-018A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Surr: n-Octaçosane	75.1	%REC	55-130	ŀ	SW8015Ext	05/13/02	05/15/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-3E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-018B

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	1	SW8082	05/13/02	05 14:02	JRW-LV
Aroclor 1221	ND	μg/Κg	20	1	SW8082	05/13/02	05 14 02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	05/13/02	05 14:02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	1	SW8082	05/13/02	05 14:02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1260	ND	μg/Kg	20	ì	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	104	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachloro-m-xylene	110	%REC	48-136	1	SW8082	05/13/02	05/14/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

ND mg/L

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

Lead

SOLID (TCLP)

CLIENT ID:

252504-3E

05/14/02

05/14/02

FIF-Reno

DATE SAMPLED: 5 2 02

SW 6010B-To

NEL SAMPLE ID: L0205125-018C

		Reporting					
Parameter	Result Unit	Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Cadmium	0.012 mg/L	0.0050	1	SW 6010B-To	05/14/02	05/14/02	FIF-Reno

0.050

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-4E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-019A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 15/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	01	1	SW8015Ext	05/13/02	05/15/02	PNC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Surr: n-Octacosane	89.1	%REC	55-130	1	SW8015Ext	05/13/02	05/15/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #: MATEIX:

30033

SOLID

CLIENT ID:

252504-4E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-019B

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	1	SW8082	05'13/02	05 14/02	JRW-LV
Aroclor 1221	ND	μg/Κg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	05/13/02	05 14/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1254	ND	μ g /Κ g	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1260	ND	μ g/Κg	20	l	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	95.5	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachloro-m-xylene	99.0	%REC	48-136	1	SW8082	05/13/02	05/14/02	JRW-LV

CLIENT:

Bechtel Nevada

SOLID (TCLP)

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

CLIENT ID:

252504-4E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-019C

Donorting

Parameter	Result Un	it Limit	DF	Method	Prep Date	Analyzed	Analyst
Cadmium	ND mg/	L 0.0050	1	SW 6010B-To	05/14/02	05 14/02	FIF-Reno
Lead	ND mg/	L 0.050	1	SW 6010B-To	05/14/02	05/14/02	FIF-Reno

CLIENT:

Bechtel Nevada

V1581

PROJECT ID: PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-5E

DATE SAMPLED: 5 2 02

NEL SAMPLE ID: L0205125-020A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 15/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05'13'02	05/15/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/13/02	05/15/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/13/02	05 15/02	PXC-LN
Surr: n-Octacosane	79.1	%REC	55-130	1	SW8015Ext	05/13/02	05/15/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252504-5E

DATE SAMPLED: 5/2/02

NEL SAMPLE ID: L0205125-020B

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Κg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroctor 1248	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	l	SW8082	05/13/02	05/14/02	JRW-LV
Aroclor 1260	ND	μg/Kg	20	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Decachlorobiphenyl	95.0	%REC	45-149	1	SW8082	05/13/02	05/14/02	JRW-LV
Surr: Tetrachloro-m-xylene	94.0	%REC	48-136	1	SW8082	05/13/02	05/14/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1581

PROJECT #:

30033

MATRIX:

SOLID (TCLP)

CLIENT ID:

252504-5E

DATE SAMPLED: 5/2/02

NEL SAMPLE ID: L0205125-020C

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Cadmium	ND	mg/L	0.0050	l	SW 6010B-To	05/14/02	05/14/02	FIF-Reno
Lead	ND	mg/L	0.050	1.	SW 6010B-To	05/14/02	05/14/02	FIF-Reno

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 16-May-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

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NEL Laboratories, Las Vegas

CLIENT: Work Order: Bechtel Nevada

Project:

L0205125 V1581 Date: 16-May-02

ANALYTICAL QC SUMMARY REPORT

BatchID: 383

Sample ID: 020513PCB-MB	SampType: MBLK	TestCoc	le: 8082_S	Units: µg/Kg		Prep Date	e: 5/13/02		Run ID: L_I	ECD-1, 02051	14B
	Batch ID: 383	TestN	o: SW8082			Analysis Dat	e: 5/14/02		SeqNot 292	14	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	"aRPD	RPDI imit	Qual
Aroclor 1016	ND	20	0	0	0	0	0	0	0		
Aroclor 1221	ND	20	0	0	0	0	0	0	0		
Aroclor 1232	ND	20	0	0	0	0	0	0	0		
Aroclor 1242	ND	20	0	0	0	0	0	0	t)		
Aroclor 1248	ND	20	0	0	0	0	0	0	0		
Aroclor 1254	ND	20	0	0	0	0	0	0	0		
Aroclor 1260	ND	20	0	0	0	0	0	0	0		
Surr: Tetrachloro-m-xylene	71,67	0.10	66.7	0	107	48	136	0	0		
Surr: Decachlorobiphenyl	73	0.10	66.7	0	109	45	149	0	0		
Sample ID: 020513PCB-LCS	SampType: LCS	TestCoc	le: 8082_S	Units: µg/Kg		Prep Dat	e: 5/13/02		Run ID: L_I	ECD-1_02051	14B
	Batch ID: 383	TestN	o: SW8082			Analysis Dat	c: 5/14/02		SeqNo: 292	16	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	"GRPD	RPDI imit	Qual
Aroclor 1016	302.7	20	333.3	0	90.8	60	140	0	0	·	
Aroclor 1260	277.3	20	333.3	0	83.2	60	140	0	0		
Surr: Tetrachloro-m-xylene	67.67	0.10	66.77	0	101	48	136	0	0		
Surr: Decachlorobiphenyl	69.33	0.10	66.77	0	104	45	149	0	0		
Sample ID: 020513PCB-LCSD	SampType: LCSD	TestCoo	le: 8082_S	Units: µg/Kg		Prep Dat	e: 5/13/02		Run ID: L_1	ECD-1_02051	1413
	Batch ID: 383	TestN	o: SW8082			Analysis Dat	e: 5/14/02		SeqNo: 292	15	
Analyte	Result	PQI.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	Cl4Non	RPDI imit	Qual
Aroclor 1016	305	20	333.1	0	91.6	60	140	302.7	0.768	25	
Aroclor 1260	280.7	20	333.1	0	84.3	60	140	277.3	1.19	28	
Surr: Tetrachloro-m-xylene	66.67	0.10	66.72	0	99. 9	48	136	0	0	()	
Surr: Decachlorobiphenyl	66.67	0.10	66.72	0	99. 9	45	149	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 1 of 5

CLIENT:

Bechtel Nevada

Work Order:

L0205125

Project:

V1581

ANALYTICAL QC SUMMARY REPORT

BatchID: 383

Sample ID: L0205125-018BMS	SampType: MS	TestCoo	de: 8082_S	Units: µg/Kg		Prep Da	te: 5/13/02		Run ID: 1. 1	ECD-1_02051	48
	Batch ID: 383	TestN	lo: SW8082			Analysis Da	te: 5/14/02		SeqNo: 298	148	
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDI imit	Qual
Aroclor 1016	325.5	20	333.6	0	97.6	60	140	0	0		
Aroclor 1260	289.1	20	333.6	. 0	86.7	60	140	0	0		
Suit: Tetrachloro-m-xylene	68.45	0.10	66.81	0	102	48	136	0	0		
Surr: Decachlorobiphenyl	67.45	0.10	66.81	0	101	45	149	0	0		
Sample ID:	SampType: MSD	TestCod	de: 8082_S	Units: µg/Kg		Prep Da	te: 5/13/02		Run ID: L_1	ECD-1_02051	4B
	Batch ID: 383	TestN	lo: SW8082			Analysis Da	te: 5/14/02		SeqNo: 298	:49	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDI imit	Qual
Aroclor 1016	308.5	20	333.6	0	92.5	60	140	325.5	5.37	25	
Aroclor 1260	271.1	20	333.6	0	81.3	60	140	289.1	6.44	25	
Surr: Tetrachloro-m-xylene	69.78	0.10	66.81	0	104	48	136	0	0	0	
Surr: Decachlorobiphenyl	64.11	0.10	66.81	0	96	45	149	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

Page 2 of 5

CLIENT:

Bechtel Nevada

Work Order:

L0205125

Project:

V1581

ANALYTICAL QC SUMMARY REPORT

BatchID: 385

Sample ID: 020513TPHS-MB	SampType: MBLK Batch ID: 385		e: 8015FFP_S o: SW8015M	Units: mg/Kg		Prep Date Analysis Date	5/13/02 5/14/02		Run ID: 1_FID- SeqNo: 29570	1_020514B	
Analyte	Result	PQI.	SPK value	SPK Ref Val	%REC	LowLimit I	lighLimit	RPD Ref Val	"%RPD RI	DE imit — Qu	ual
Gasoline Range Organics (C8-C12)	ND	10									
Diesel Range Organics (C12-C22)	ND	10									
Oil Range Organics (C22-C34)	ND	50									
Total Petroleum Hydrocarbons	ND	10									
Surr: n-Octacosane	2.734	0.010	3.331	0	82.1	55	130	0	0		
Sample ID: 020513TPHS-LCS	SampType: LCS	TestCode	:: 8015FFP_S	Units: mg/Kg		Prep Date	5/13/02		Run ID: 1FID-	1_020514B	
	Batch ID: 385	TestNo	o: SW8015M			Analysis Date	5/14/02		SeqNo: 29594		
Analyte	Result	PQI.	SPK value	SPK Ref Val	%REC	LowLimit 1	lighLimit	RPD Ref Val	%RPD RI	PDLimit Qu	Dual
Diesel Range Organics (C12-C22)	127.8	10	166.8	0	76.6	54	91	0	0		
Surr: n-Octacosane	2.668	0.010	3.331	0	80.1	55	130	0	0		
Sample ID: 020513TPHS-LCSD	SampType: LCSD	TestCod	:: 8015FFP_S	Units: mg/Kg		Prep Date	5/13/02		Run ID: L_FID-	1 020514B	
	Batch ID: 385	TestNo	s: SW8015M			Analysis Date	5/14/02		SeqNo: 29623		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit 1	lighLimit	RPD Ref Val	%RPD RI	2DLimit Qu)ual
Diesel Range Organics (C12-C22)	129.6	10	166.9	0	77.6	54	91	127 8	1 40	25	
Surr: n-Octacosane	2.704	0.010	3.334	0	81.1	55	130	0	0	0	
Sample ID: 1.0205125-002A	SampType: MS	TestCod	e: 8015FFP_S	Units: mg/Kg		Prep Date	5/13/02		Run ID: 1 FID -	1 020514B	
	Batch ID: 385	TestNo	n: SW8015M			Analysis Date	5/14/02		SeqNo: 29831		
Analyte	Result	PQI.	SPK value	SPK Ref Val	%REC	LowLimit 1	lighl.imit	RPD Ref Val	"SRPD RI	DLimit Qi	hal
Diesel Range Organics (C12-C22)	125.1	10	166.9	0	74.9	54	91	()	0		
Surr: n-Octacosane	3.071	0.010	3,334	0	92.1	55	130	0	0		

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

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Bechtel Nevada CLIENT:

L0205125 V1581 Work Order: **Project:**

BatchID: 385

ANALYTICAL QC SUMMARY REPORT

Sample 1D:	Sample ID: 1.0205125-002AMSID	SampType: MSD	MSD	TestCod	e: 8015FFP_S	TestCode: 8015FFP_S Units: mg/Kg		Prep Da	Prep Date: 5/13/02		Run ID: L	Rum ID: 1_FID-1_020514B	_
		Batch ID: 385	385	TestNo	TestNo: SW8015N1			Analysis Dal	Analysis Date: 5/14/02		ScqNo: 29619	61	
Analyte			Result	PQI.	SPK value	SPK value SPK Ref Val	%RFC	LowLimit	Highl imit	%REC LowLimit HighLimit RPD Rel Val	OSRPD	"aRPD RPDI imit Qual	Qual
Diesel Range	Diesel Range Organics (C12-C22)		611	01	166.6	0	71.4	54	16	c	=	25	
Surr: n-Octacosane	stacosane		2.966	0.010	3.329	0	1.68	55	130	0	=	0	

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

B - Analyte detected in the associated Method Blank

CLIENT:

Bechtel Nevada

Work Order:

1.0205125

Project:

V1581

ANALYTICAL QC SUMMARY REPORT

BatchID: R_986

Sample ID: MB-986	SampType: MBLK	TestCode: 6010W_T	Units: mg/L		Prep Date: 5	5/14/02		Run ID: SUB-2314	
	Batch ID: R_986	TestNo: SW6010B			Analysis Date: 5	5/14/02		SeqNo: 29660	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit High	ıLimit R	RPD Ref Val	%RPD RPDLimit	Qual
Cadmium	ND	0.0050							
Lead	ND	0.050							
Sample ID: LCS-986	SampType: LCS	TestCode: 6010W_T	Units: mg/l.		Prep Date: 5	5/14/02		Run ID: SUB-2314	
	Batch ID: R_986	TestNo: SW6010B			Analysis Date: 5	5/14/02		SeqNo: 29659	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit High	ıLimit R	PD Ref Val	%RPD RPDLimit	Qual
Cadmium	0.5239	0.0050 0.5	0	105	85	115	0	()	
Lead	1/024	0.050 1	0	102	85	115	0	0	
Sample ID: 1.0205145-001B	SampType MS	lesit ode 6010W T	Units mg/L	<u>-</u>	Prep Date: 5	5/14/02		Run ID: SUB-2314	
Sample ID: 1.0205145-001B	SampType MS Batch ID: R_986	TestNo SW6010B	Units mg/L		Prep Date: 5 Analysis Date: 5			Run ID: SUB-2314 SeqNo: 29661	
Sample ID: 1.0205145-001B Analyte			Units mg/L. SPK Ref Val	%REC		5/14/02	IPD Ref Val		Qual
	Batch ID. R_986	TestNo SW6010B		%REC	Analysis Date: 5	5/14/02	PD Rcf Val	SeqNo: 29661	Qual
Analyte	Batch II). R_986 Result	PQL SPK value	SPK Ref Val		Analysis Date: 5	5/14/02 nLimit R		SeqNo: 29661 %RPD RPDI imit	Qual
Analyte	Batch ID. R_986 Result 0.5172	TestNo SW6010B PQL SPK value 0.0050 0.5	SPK Ref Val	103	Analysis Date: 5 LowLimit High	5/14/02 nLimit R 125 125	0	SeqNo: 29661 %RPD RPDLimit 0	Qual
Analyte Cadmium Lead	Batch ID. R_986 Result 0.5172 1.005	PQL SPK value 0.0050 0.5 0.050 1	SPK Ref Val 0 0	103	Analysis Date: 5 LowLimit High 75 75	5/14/02 nLimit R 125 125 125	0	SeqNo: 29661 %RPD RPDFimit 0	Qual
Analyte Cadmium Lead	Batch ID. R_986 Result 0.5172 1.005 SampType: MSD	TestNo SW6010B PQL SPK value 0.0050 0.5 0.050 1 TestCode: 6010W_T	SPK Ref Val 0 0	103	Analysis Date: 5 LowLimit High 75 75 Prep Date: 5	5/14/02 nLimit R 125 125 5/14/02 5/14/02	0	SeqNo: 29661 %RPD RPDI imit 0 0 Run H): SUB-2314	Qual
Analyte Cadmium Lead Sample ID: L0205145-001B	Batch ID: R_986 Result 0.5172 1.005 SampType: MSD Batch ID: R_986	PQI. SPK value 0.0050 0.5 0.050 1 TestCode: 6010W_T TestNo: SW6010B	SPK Ref Val 0 0 Units: mg/L	103	Analysis Date: 5 LowLimit High 75 75 Prep Date: 5 Analysis Date: 5	5/14/02 nLimit R 125 125 5/14/02 5/14/02	0	SeqNo: 29661 %RPD RPDI imit 0 0 Run H): SUB-2314 SeqNo: 29662	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 5 of 5

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160 lost/-5.

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Bechtel Nevada

ANALYTICAL SERVICES LABORATORY ERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 1 of 3

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			4	_ [7		REPORT										E INFORMATION	
Project: CAU34	8	BN Org# ASL Prog	A435		port to:	$D_{\underline{I}}$	any	e	<i>)</i>	Ki	rk	14				Sai	mpling Site: 25-	25-05	
Charge No.: 5 BO	7HZ21	AOL 110		Phone: 295-				5295	- 7	776	1		33C	96		ine	e samples submitted Hazardous	() Radioactive	() Unk nown
Project Manager:	ell smith			Turnarou	nd: () (X	Standa Rush	ard - 30 Prelimi	days No nary by:	n-rad, 1	60 Day	s Rad,	Other:_ Final by	r:				ntamination. If know intifying contaminant		
Phone: 295-7775	- Fax: 777 6	/ /	N 7530	Final repo	ort form	at: ()	Standa	ard () N	TS-WA	() O	Other:					cor	mpliance with applicandling of the sample	able regulations an	
	LAB USE ONLY	1					K_	/	ANAL	YSES	& ME	THOD					SAMP	LE RECEIPT INFO	RMATION
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If so, do analyses ent If not, identify the vari	performed under a signed red here agree with the So tion review and approval;	SOW?	XYES (XYES (Date:) NO 3 NO () N/A	801	TCIP Metals										 	Was a Material Cle Comments:	earance Tag submi	tted? ('X/Yes () No
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Bechtel Nevada

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 2 of 21

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Charge No.:	B09422	1	ASL Prog	3.:	Pho	ne:	- 55	フフ	F	3.95	- 77	61		Mys. // T	.6 2	06			e samples submitted contain (check); Hazardous () Radioactive () Unknown
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Phone:	7775 Fax: 29		1 M	vs. Vis Z'e						d () NT		+							npliance with applicable regulations and allow for the safe adding of the sample materials.
£77 - ·		USE ONLY												THOD				I Hal	SAMPLE RECEIPT INFORMATION
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Rad Packet:		Non-Rad P	acket:				37	H &	E	-									
Client Service	s Representative:						71c	78%	215										Do the labels agree with this form? (X) Yes () No Comments:
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	ses entered here agree)W?	PYYES () NO (6. 2 4. 3				I								Was a Material Clearance Tag submitted? Yes () No Comments:
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1200	ANTI			10720							Ref		_	ourjef &					DATE / TIME Received (1st/lier Subcontractor Rep)
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			 		 						Kel	inquish	ea (15	t tier Su	DCONTE	ctor Re	:p)		DATE / TIME Received (2nd tier Subcontractor Rep)
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istribution: Original - To be retain: boratory performing final analysis Copy 1 - To be retained by sampler Copy 3 - To be retained by sampler

BN-0732 (02/98)

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1596

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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Corporate Headquarters / Reno Laboratory

4750 Longley Lane. Suite 106 Reno, NV 89502 Phone: 775.348.2522 Fax: 775.348.2546

Las Vegas Laboratory 4208 Arcata Way, Suite A Las Vegas, NV 89030 Phone: 702.657,1010 Fax: 702.657.1577

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

TEL: 702-295-7220

RE Project: v1596

Order No.: L0205290

Dear Ted Redding:

NEL Laboratories, Las Vegas received 12 samples on 5/22/02 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Laboratory Manager

Certifications:

Arizona

California

Idaho

Montana

Nevada

New Mexico

Reno

Las Vegas

AZ0520

AZ0518

1707

2002

Certified Certified

Certified Certified

NV033

NV052

Certified Certified

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID: 254402-1

DATE SAMPLED: 5/20/02

NEL SAMPLE ID: L0205290-001A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/31/02	05/31/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/31/02	05/31/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/31/02	05/31/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/31/02	05/31/02	PXC-LV
Surr: n-Octacosane	64.1	%REC	55-130	1	SW8015Ext	05/31/02	05/31/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID: v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

254402-2

DATE SAMPLED: 5/20/02

NEL SAMPLE ID: L0205290-002A

<u>Parameter</u>	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	65.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID: v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

254402-3

DATE SAMPLED: 5 20'02

NEL SAMPLE ID: L0205290-003A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/31/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/31/02	PNC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/24/02	05/31/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/31/02	PXC-LV
Surr: n-Octacosane	71.1	%REC	55-130	1	SW8015Ext	05/24/02	05/31/02	PXC-LV

CLIENT:

Bechtel Nevada

CLIENT ID:

254402-4

PROJECT ID:

v1596

DATE SAMPLED: 5./20/02

PROJECT #:

30033

MATRIX:

SOIL

NEL SAMPLE ID: L0205290-004A

Parameter	Result	Unit	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	84.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #: MATRIX:

30033

SOIL

CLIENT ID:

254402-5

DATE SAMPLED: 5.20.02

NEL SAMPLE ID: L0205290-005A

Parameter	Result	Unit	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ex1	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	75.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #: MATRIX:

30033

SOIL

CLIENT ID:

254402-6

DATE SAMPLED: 5/20/02

NEL SAMPLE ID: L0205290-006A

Parameter	Result	<u>Unit</u>	Reporting <u>Limi</u> t	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/24/02	05/30/02	PNC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	80.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

CLIENT:

Bechtel Nevada

67.1

%REC

PROJECT ID:

v1596

PROJECT #:

30033

MATRIX:

Parameter

Surr: n-Octacosane

SOIL

CLIENT ID:

252503-1

05/31/02

06/01/02

PXC-LV

DATE SAMPLED: 5.20.02

NEL SAMPLE ID: L0205290-007A

SW8015Ext

Reporting Result Unit Limit **Prep Date** DF Method Analyzed Analyst Diesel Range Organics (C12-C22) ND mg/Kg SW8015Ext 05/31/02 06/01/02 PXC-LV Gasoline Range Organics (C8-C12) ND 10 SW8015Ext 05/31/02 06/01/02 PXC-LV mg/Kg1 50 05/31/02 06/01/02 PXC-LV Oil Range Organics (C22-C34) ND mg/Kg SW8015Ext 1 Total Petroleum Hydrocarbons ND 10 SW8015Ext 05/31/02 06/01/02 PXC-LV $mg/K \underline{\text{g}}$ 1

55-130

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #:
MATRIX:

30033

SOIL

CLIENT ID:

252502-1

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-008A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	l	SW8015Ext	05/24/02	05'30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	ì	SW8015Ext	05/24/02	05/30/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	l	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	66.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

CLIENT:

Bechtel Nevada

CLIENT ID:

252502-1

PROJECT ID:

v1596

DATE SAMPLED: 5/21/02

PROJECT #:

30033

MATRIX:

SOIL

NEL SAMPLE ID: L0205290-008B

e e e e e e e e e e e e e e e e e e e				Reporting					
Parameter	Result	Unit		Limit	$\overline{\mathbf{DF}}$	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Araclor 1221	ND	μg/Kg		20	l	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1232	ND	μg/Kg		20	l	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1242	ND	μg/Kg		20	ì	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1248	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1254	870	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Arocior 1260	630	μg/Kg		20	l	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Decachlorobiphenyl	150	%REC	S	45-149	l	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Tetrachloro-m-xylene	125	%REC		48-136	1	SW8082	05/28/02	05/31/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT: PROJECT ID:

Bechtel Nevada

v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252502-2

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-009A

<u>Parameter</u>	Result	Unit	Reporting <u>Limit</u>	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ex1	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ex1	05/24/02	05/30/02	PXC-EV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	65.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

CLIENT:

Bechtel Nevada

CLIENT ID:

252502-2

PROJECT ID:

v1596

DATE SAMPLED: 5/21/02

PROJECT #:

30033

NEL SAMPLE ID: L0205290-009B

MATRIX:

SOIL

				Reporting					
Parameter	Result	Unit		<u>Limi</u> t	$\overline{\mathbf{DF}}$	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1221	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1232	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1242	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1248	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Araclar 1254	2600	μg/Kg		100	5	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1260	ND	μg/Kg		20	1	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Decachlorobiphenyl	161	%REC	S	45-149	1	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Tetrachloro-m-xylene	130	%REC		48-136	1	SW8082	05/28/02	05/31/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252502-3

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-010A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	<u>Analyst</u>
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	ì	SW8015Ext	05/24/02	05/30/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	75.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252502-3

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-010B

				Reporting					
Parameter	Result	Unit		Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg		2000	100	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1221	ND	μg/Kg		2000	100	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1232	ND	μ g /Kg		2000	100	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1242	ND	μ g/K g		2000	100	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1248	ND	μg/Kg		2000	100	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1254	54000	μg/Kg		2000	100	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1260	ND	μ g /Kg		2000	100	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Decachlorobiphenyl	0	%REC	D	45-149	100	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Tetrachloro-m-xylene	0	%REC	D	48-136	100	SW8082	05/28/02	05/31/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252502-4

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-011A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	81.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252502-4

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-011B

_			Reporting					
Parameter	Result	<u>Unit</u>	Limit	$\underline{\mathbf{DF}}$	Method	Prep Date	Analyzed	Analyst
Arocior 1016	ND	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Arocior 1221	ND	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1232	ND	μg/Κg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1254	190	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1260	140	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Decachlorobiphenyl	148	%REC	45-149	1	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Tetrachioro-m-xylene	125	%REC	48-136	1	SW8082	05/28/02	05/31/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252502-5

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-012A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	<u>Analyst</u>
Diesel Range Organics (C12-C22)	ND	mg/Kg	20	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	20	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	100	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	20	1	SW8015Ext	05/24/02	05/30/02	PXC-LV
Surr: n-Octacosane	83.1	%REC	55-130	1	SW8015Ext	05/24/02	05/30/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 03-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

v1596

PROJECT #: MATRIX:

30033

SOIL

CLIENT ID:

252502-5

DATE SAMPLED: 5/21/02

NEL SAMPLE ID: L0205290-012B

			Reporting					
Parameter	Result	Unit	Limit	$\overline{\mathbf{DF}}$	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	ì	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1221	ND	μ g/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	ì	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	ı	SW8082	05/28/02	05/31/02	JRW-LV
Aroclor 1254	120	μg/Kg	20	1	SW8082	05/28/02	05/31/02	JRW-LV
Aroclar 1260	240	μg/Kg	20	I	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Decachlorobiphenyl	124	%REC	45-149	1	SW8082	05/28/02	05/31/02	JRW-LV
Surr: Tetrachloro-m-xylene	103	%REC	48-136	i	SW8082	05/28/02	05/31/02	JRW-LV

NEL Laboratories, Las Vegas

CLIENT:

Bechtel Nevada

Work Order:

Project:

L0205290

v1596

Date: 03-Jun-02

ANALYTICAL QC SUMMARY REPORT

BatchID: 430

Sample ID: 020528PCBS-MB	SampType: MBLK	TestCoo	ie: 8082_S	Units: µg/Kg		Prep Date:	5/28/02		Run ID: L_I	ECD-1_0205:	31A
	Batch ID: 430	TestN	lo: SW8082			Analysis Date:	5/31/02		SeqNo: 340	19	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	light.imit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	20									
Aroclor 1221	ND	20									
Aroclor 1232	ND	20									
Aroclor 1242	ND	20									
Aroclor 1248	ND	20									
Aroclor 1254	ND	20									
Aroclor 1260	ND	20									
Surr: Tetrachtoro-m-xylene	74.98	0.10	66.68	0	112	48	136	0	0		
Surr: Decachlorobiphenyl	94.3	0.10	66.68	0	141	4.5	149	0	0		
Sample ID: 020528PCBS-LCS	SampType: LCS	TestCoo	ie: 8082_S	Units: µg/Kg		Prep Date:	5/28/02		Run ID: L_I	CD-1_0205.	31A
	Batch ID: 430	TestN	lo: SW8082			Analysis Date:	5/31/02		SeqNo: 340	21	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	341.6	20	332.9	0	103	60	140	0	0		
Aroclor 1260	356.9	20	332.9	0	107	60	140	0	0		
Surr: Tetrachloro-m-xylene	7 5.97	0.10	66.68	0	114	48	136	0	0		
Surr: Decachlorobiphenyl	96.63	0.10	66.68	0	145	45	149	0	0		
Sample ID: 020528PCBS-LCSD	SampType: LCSD	TestCoo	le: 8082_S	Units: µg/Kg		Prep Date:	5/28/02		Run ID: L_I	CD-1_0205.	BIA
	Batch ID: 430	TestN	lo: SW8082			Analysis Date:	5/31/02		SeqNo: 340	20	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit 1	lighLimit	RPD Ref Val	%RPD	RPDI imit	Qual
Aroclor 1016	313.2	20	332.9	0	94.1	60	140	341.6	8.65	25	
Aroclor 1260	324.9	20	332.9	0	97.6	60	140	356.9	9,18	28	
	42.31	0.10	44.40	0	0.5	40			4.		
Surr: Tetrachloro-m-xylene	63.31	0.10	66.68	0	95	48	136	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page Lof 5

Bechtel Nevada

Work Order:

L0205290

Project:

v1596

ANALYTICAL QC SUMMARY REPORT

BatchID: 430

Sample ID: 1.0205290-011BMS	SampType: MS	TestCo	de: 8082_ S	Units: µg/Kg		Prep Da	te: 5/28/02		Run ID: L_F	CD-1_02053	1A
	Batch 1D: 430	Test	lo: SW8082			Analysis Da	te: 5/31/02		SeqNo: 340	28	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	305.3	20	333	0	91.7	60	140	0	0		
Aroclor 1260	448.3	20	333	135.3	94	60	140	0	0		
Surr: Tetrachloro-m-xylene	77.33	0.10	66.7	0	116	48	136	0	0		
Surr: Decachlorobiphenyl	100.7	0.10	66.7	0	151	45	149	0	0		S
Sample ID: L0205290-011BMS	SampType: MSD	TestCo	de: 8082_S	Units: µg/Kg		Prep Da	te: 5/28/02		Run ID: L_F	CD-1_02053	14
	Batch 1D: 430	Test	lo: SW8082			Analysis Da	te: 5/31/02		SeqNo: 340	29	
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
	Result	PQI.	SPK value	SPK Ref Val	%REC 94.7	LowLimit 60	HighLimit 140	RPD Ref Val	%RPD 3 22	RPDLimit 25	Qual
Aroclor 1016											Qual SR
Analyte Aroclor 1016 Aroclor 1260 Surr: Tetrachloro-m-xylene	315.3	20	333	0	94.7	60	140	305.3	3 22	25	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 2 of 5

Bechtel Nevada

Work Order:

L0205290

Project:

v1596

ANALYTICAL QC SUMMARY REPORT

BatchID: 440

Sample ID: 020524TPHS-MB	SampType: MBLK Batch ID: 440		e: 8015FFP_S o: SW8015M	Units: mg/Kg		•	te: 5/24/02 te: 5/30/02		Run ID: L_F SeqNo: 3403		OB
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (C8-C12)	ND	10									
Diesel Range Organics (C12-C22)	ND	10									
Oil Range Organics (C22-C34)	ND	50									
Total Petroleum Hydrocarbons	ND	10									
Surr: n-Octacosane	2.003	0.010	3.336	0	60.1	55	130	0	0		
Sample ID: 020524TPHS-LCSD	SampType: LCSD	TestCod	e: 8015FFP_S	Units: mg/Kg		Prep Da	te: 5/24/02		Run ID: L_F	ID-1_020530	OB
	Batch ID: 440	TestNo	o: SW8015M			Analysis Da	te: 5/30/02		SeqNo: 3403	33	
Analyte	Result	PQI.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDI imit	Qual
Diesel Range Organics (C12-C22)	128.6	10	166-6	0	77.2	54	91	0	0		
Surr: n-Octacosane	2.698	0.010	3.328	0	81.1	55	130	0	0		

Bechtel Nevada

Work Order:

L0205290

Project: v1596

ANALYTICAL QC SUMMARY REPORT

BatchID: 441

Sample ID: 020531TPHS-MB	SampType: MBLK	TestCod	e: 8015FFP_ S	Units: mg/Kg		Prep Date	5/31/02		Run ID: L_F	ID-1_020531	IA .
	Batch ID: 441	TestN	o: SW8015M			Analysis Date	: 5/31/02		SeqNo: 3398	80	-
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	lighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (C8-C12)	ND	10									
Diesel Range Organics (C12-C22)	ND	10									
Oil Range Organics (C22-C34)	ND	50									
Total Petroleum Hydrocarbons	ND	10									
Surr: n-Octacosane	2.067	0.010	3.33	0	62.1	55	130	0	0		
Sample ID: 020531TPHS-LCS	SampType: LCS	TestCod	e: 8015FFP_ S	Units: mg/Kg		Prep Date	5/31/02		Run ID: L_F	ID-1_020531	I A
	Batch ID: 441	TestN	o: SW8015M			Analysis Date	: 6/1/02		SeqNo 3397	8	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C12-C22)	120.5	10	166.6	0	72.3	54	91	0	0		
Surr: n-Octacosane .	2.6	0.010	3.329	0	78.1	55	130	0	.0		
Sample ID: 020531TPHS-LCSD	SampType: LCSD	TestCod	e: 8015 FFP_S	Units: mg/Kg		Prep Date	5/31/02		Run ID: L_F	ID-1_020531	IA
	Batch ID: 441	TestN	o: SW8015M			Analysis Date	5/31/02		SeqNo: 3397	79	
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit 1	lighLimit	RPD Ref Val	%RPD	RPDI imit	Qual
Diesel Range Organics (C12-C22)	96.43	10	166.6	0	57.9	54	91	120.5	22.2	25	
Surr: n-Octacosane	2.6	0.010	3.329	0	78.1	55	130	0	0	0	
Sample ID: L0205290-001A	SampType: MS	TestCod	e: 80 15FFP_S	Units: mg/Kg		Prep Date	5/31/02		Run ID. L_F.	ID-1_02053()B
	Batch ID: 441	TestN	o: SW8015M			Analysis Date	5/30/02		SeqNo: 3404	15	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit 1	lighl.imit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C12-C22)	112.4	10	166.5	0	67.5	54	91	0	0		
Surr: n-Octacosane	2.164	0.010	3.326	0	65.1	55	130	O	0		

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 4 of 5

Bechtel Nevada

Work Order:

L0205290

Project:

v1596

ANALYTICAL QC SUMMARY REPORT

BatchID: 441

Sample ID: L0205290-001A	SampType:	MSD	TestCoo	ie: 8015FFP_S	Units: mg/Kg		Prep Da	te: 5/31/02		Run ID: L_I	FID-1_020530)B
	Batch 1D:	441	TestN	lo: SW8015M		Analysis Date: 5/30/02				SeqNo: 34044		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPI) Ref Val	%RPD	RPDI imit	Qual
Diesel Range Organics (C12-C22)		116.7	10	166.5	0	70.1	54	91	112.4	3.81	25	
Suit: n-Octacosane		2.197	0.010	3.326	0	66.1	55	130	0	0	0	

LTV.ZL'y

L0205290

	Bechtel Nevada SEI		ICES LABORATORY AIN OF CUSTODY RECORD	Page /_ of _2
	Project: CHU 3 9 8 BN Org#443 5 Charge Ng.: BO 9 W Z 21 Project Manager: J. S. S. S. S. S. S. S. S. S. S. S. S. S.	Send Report to: Danie Phone: 295-5577 Fax: 595- Turnaround: Standard - 30 days Non- () Rush Preliminary by:	776/ MS: 306 () rad, 60 Days Rad, Other: comider Final by: com	sample Information Inpling Site: 25-44-02, 25-25-03 Is samples submitted contain (check); Hazardous () Radioactive () Unknown tamination. If known, attach a brief narrative summary hittping contaminants. This information will ensure upliance with applicable regulations and allow for the safe dling of the sample materials.
	Rad SGD: Non-Rad SDG: VIS9 (Rad Packet: Non-Rad Packet: Client Services Representative:	2 2 3	IALYSES & METHOD	SAMPLE RECEIPT INFORMATION Are all sample containers received intact Yes () No Comments: On the tabels agree with this form? (XYes () No Comments:
	Will these analyses be performed under a signed SOW? () YES () If so, do analyses entered here agree with the SOW? () YES () If not, identify the variation CSR initials indicating review and approval:	14 80 0 NA 11 80 1 MART: 10.19, 11		Was a Material Clearance Tag submitted? (XYes () No Comments:
02	1 254402 - 2 1:21	MATRIX F		(Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.) 250 ml cuntainers
03:	2 25 4402 - 3 1:22 3 25 4402 - 4 5-20 1:23 4 25 4402 - 5 5:15			
06 -	5 25-4407-6 [:24] 6 252503-1 4:45 7 LAST (TEM) 8	Custody Seal	intact Y N None Temp.	Suspected
	9 Transfer of samples submitted for analyses Sampled/Relinquished (Signature/Organization) DATE / TIME F	Received by (Signature/Organization)	Complete for samples shipped to an OFF-SITE Subcreelinguished (BN Representative Signature)	DATE / TIME Received (Courier & Tracking Info.)
į	× 200 1. 11. pm 5/2/00000	CD Carauda	Relinquished (Courier & Tracking Info.) V. V. (OUR 1 F.) Relinquished (1st lier Subcontractor Rep)	5/23/1) 6/30 BLI (TVR 1/47) DATE / TIME Received (1st tier Subcontractor Rep) DATE / TIME Received (2nd tier Subcontractor Rep)

LEYRL, Y

11

(5/31 / L0205290

Project: CAU 3 98 BN Org#: AU35 Send Report to: Daylet Charge No: 9 H Z 21 Project Manager: CAC Smith Turnaround: Standard - 30 days N Project Manager: Total Standard - 30 days N Project Manager: Total Standard - 30 days N Project Manager: Total Standard - 30 days N Project Manager: Total Standard - 30 days N Turnaround: Standard - 30 days N Turnaround: Naush Preliminary by: Phone: 295-7775 Fax: 95-7761 M/S: 306 Final report format: () Standard () II LAB USE ONLY Rad SGD: Non-Rad SDG: VI596 Rad Packet: Non-Rad Packet: Client Services Representative: Will these analyses be performed under a signed SOW? () YES () NO If so, do analyses entered here agree with the SOW? () YES () NO () N/A If not, identify the variation CSR initials indicating review and approval:	SAMPLE INFORMATION Sampling Site: 25-25-02 The samples submitted contain (check); () Hazardous () Radioactive () Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials. ANALYSES & METHOD SAMPLE RECEIPT INFORMATION Are all sample containers received intact (LYes () Comments: Do the labels agree with this form? (Yes () Comments: Was a Material Clearance Tag submitted? (Yes () Comments: Was a Material Clearance Tag submitted? (Yes () Comments: COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
Rad SGD: Rad Packet: Non-Rad SDG: Vis 1596 Rad Packet: Non-Rad Packet: Client Services Representative: Will these analyses be performed under a signed SOW? () YES () NO If so, do analyses entered here agree with the SOW? () YES () NO () N/A If not, identify the variation CSR initials indicating review and approval: Date: I D / DESCRIPTION DATE TIME MATRIX 0 252502 - 1 52122 /2:33 5011 252502 - 3 /2:39 1 252502 - 9 /2:40	Are all sample containers received intact (LYes () Comments: Do the labels agree with this form? (LYes () Comments: Was a Material Clearance Tag submitted? (LYes () Comments: COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.
Will these analyses be performed under a signed SOW? () YES () NO If so, do analyses entered here agree with the SOW? () YES () NO () N/A If not, identify the variation CSR initials indicating review and approval:	Was a Material Clearance Tag submitted? (Ves (Comments: COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.
DIDIDESCRIPTION DATE TIME MATRIX DATE DATE TIME MATRIX DATE DATE TIME MATRIX DATE DATE TIME MATRIX DATE (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.	
1 252502 - 2 12:38 2 252502 - 3 12:39 3 252502 - 4 12:40	250 mL convainers
2 2525 02 - 3 /2:39 3 2525 02 - 4 /2:40	
. 3 252502 - 4 12:40	
Custoo	
5 LAST ITEM DUSING	y Seal Intact? Y N None Temp 10"
6	Condition when received good
7	THE PROPERTY OF THE PROPERTY O
8	Copeded
9	39
Transfer of samples submitted for analyses	Complete for samples shipped to an OFF-SITE Subcontract Laboratory
Sampled/Relinquished (Signature/Organization) DATE / TIME Received by (Signature/Organization)	Relinquished (BN Representative Signature) DATE / TIME Received (Courier & Tracking Info.)
4-on I'll Kuhu 5/22/02000 (1) Carotace de	Relinguished (Courter & Tracking Info.) Received ust tier Subcontractor Re
	1/14 OURIAN Str. 101
	Relinquished (1st tier Subcontractor Rep) DATE / TIME Creceived (2nd tier Subcontractor R
Distribution: Original - To be retained by laboratory performing final analysis Copy 1 - To be retained by laboratory performing intermediate analysis Copy 2 - To be retained by Analytical Services Laboratory Copy 3 - To be retained by Sampler	BN-0732 (0.

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1609

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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Corporate Headquarters / Reno Laboratory

4750 Longley Lane, Suite 106 Reno, NV 89502 Phone: 775.348.2522 Fax: 775.348.2546

Las Vegas Laboratory 4208 Arcata Way. Suite A Las Vegas. NV 89030 Phone: 702.657.1010 Fax: 702.657.1577

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

TEL: 702-295-7220

RE Project: V1609

Order No.: L0206022

Dear Ted Redding:

NEL Laboratories, Las Vegas received 12 samples on 6/4/02 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Stan Van Wagenen

Laboratory Manager

Certifications:

Reno

Las Vegas

Arizona

AZ0520

California

AZ0518

1707

2002

Idaho

Certified Certified

Montana Nevada

Certified Certified

New Mexico

NV033

NV052

Certified Certified

CLIENT:

Bechtel Nevada

PROJECT ID: V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-1

DATE SAMPLED: 6 3 02

NEL SAMPLE ID: L0206022-001A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	l	SW8015Ext	06/05/02	06/06/02	PXC-LV
Surr: n-Octacosane	79.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID: V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-2

DATE SAMPLED: 63 02

NEL SAMPLE ID: L0206022-002A

Reporting Parameter Result Unit Limit DF Method Prep Date Analyzed Analyst Diesel Range Organics (C12-C22) SW8015Ext 06/05/02 06-06/02 PXC-LV ND mg/Kg10 PXC-LV Gasoline Range Organics (C8-C12) ND mg/Kg10 ì SW8015Ext 06/05/02 06:06/02 06/05/02 06/06/02 PXC-LV Oil Range Organics (C22-C34) ND mg/Kg50 1 SW8015Ext PXC-LV 06/05/02 06/06/02 Total Petroleum Hydrocarbons ND mg/Kg 10 1 SW8015Ext PXC-LV Surr: n-Octacosane 89.1 %REC 55-130 SW8015Ext 06/05/02 06/06/02

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 11-Jun-02

 \boldsymbol{B} - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1609

30033

PROJECT #: MATRIX:

SOIL

CLIENT ID:

252504-3

DATE SAMPLED: 6 3 02

NEL SAMPLE ID: L0206022-003A

Parameter	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06 06 02	PNC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06-06-02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06'06'02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Surr: n-Octacosane	102	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 11-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

CLIENT ID:

252504-4

PROJECT ID:

V1609

DATE SAMPLED: 6/3/02

PROJECT #:

30033

MATRIX:

SOIL

NEL SAMPLE ID: L0206022-004A

<u>Parameter</u>	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst	
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06:06:02	PXC-LV	
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	l	SW8015Ext	06/05/02	06/06/02	PXC-LV	
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06/06/02	PXC-LV	
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV	
Surr: n-Octacosane	125	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV	

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 11-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

CLIENT ID:

252504-5

PROJECT ID:

V1609

DATE SAMPLED: 6 3 02

PROJECT #:

30033

ALE DAME LED. 0:02

MATRIX:

SOIL

NEL SAMPLE ID: L0206022-005A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Surr: n-Octacosane	99.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-6

DATE SAMPLED: 6 3/02

NEL SAMPLE ID: L0206022-006A

<u>Parameter</u>	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst	
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV	
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	I	SW8015Ext	06/05/02	06/06/02	PXC-LV	
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06/06/02	PXC-LV	
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV	
Surr: n-Octacosane	98.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-1 V	_

CLIENT:

Bechtel Nevada

PROJECT ID:

V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-7

DATE SAMPLED: 6 3 02

NEL SAMPLE ID: L0206022-007A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-('22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06-06-02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06'06'02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	l	SW8015Ext	06/05/02	06/06/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	l	SW8015Ext	06/05/02	06:06/02	PXC-LV
Surr: n-Octacosane	85.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-8

DATE SAMPLED: 6.3 02

NEL SAMPLE ID: L0206022-008A

Parameter	Result	<u>Unit</u>	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst	
Diesel Range Organics (C12-C22)	ND	m g/K g	10	1	SW8015Ext	06/05/02	06/06/02	PNC-LV	
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	()6/06-02	PXC-LV	
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06'06'02	PNC-LV	
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PNC-LV	
Surr: n-Octacosane	97.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV	

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 11-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1609

PROJECT #:

30033

MATRIX: SOIL CLIENT ID:

252504-9

DATE SAMPLED: 6 3:02

NEL SAMPLE ID: L0206022-009A

<u>Parameter</u>	Result	Unit	Reporting Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	ı	SW8015Ext	06/05/02	06/06/02	PXC-LV
Total Petroleum Hydrocarhons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Surr: n-Octacosane	70.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-10

DATE SAMPLED: 6 3:02

NEL SAMPLE ID: L0206022-010A

Parameter	Result	<u>Unit</u>	Reporting <u>Limi</u> t	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Surr: n-Octacosane	73.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 11-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID:

V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-11

DATE SAMPLED: 6'3/02

NEL SAMPLE ID: L0206022-011A

Parameter	Result	<u>Unit</u>	Reporting Limit	DF	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05:02	06-06-02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	ı	SW8015Ext	06/05/02	06/06/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Surr: n-Octacosane	81.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: //-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT: PROJECT ID: Bechtel Nevada

V1609

PROJECT #:

30033

MATRIX:

SOIL

CLIENT ID:

252504-12

DATE SAMPLED: 6 3 02

NEL SAMPLE ID: L0206022-012A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Diesel Range Organics (C12-C22)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Gasoline Range Organics (C8-C12)	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Oil Range Organics (C22-C34)	ND	mg/Kg	50	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Total Petroleum Hydrocarbons	ND	mg/Kg	10	1	SW8015Ext	06/05/02	06/06/02	PXC-LV
Surr: n-Octacosane	74.1	%REC	55-130	1	SW8015Ext	06/05/02	06/06/02	PXC-LV

NEL Laboratories, Las Vegas

CLIENT:

Bechtel Nevada

Work Order:

L0206022

Project:

V1609

ANALYTICAL QC SUMMARY REPORT

Date: 11-Jun-02

BatchID: 454

Sample ID: 020605TPHS-MB	SampType: MBLK	TestCod	e: 8015FFP_S	Units: mg/Kg		Prep Da	te: 6/5/02		Run ID: L. F	TD-1 02060:	5B
	Batch ID: 454	TestN	o: SW8015M			Analysis Da	te: 6/6/02		SeqNo: 3560	02	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	Highl imit	RPD Ref Val	"6RPD	RPDLimit	Qual
Gasoline Range Organics (C8-C12)	ND	10	-								
Diesel Range Organics (C12-C22)	ND	10									
Oil Range Organics (C22-C34)	ND	50									
Total Petroleum Hydrocarbons	ND	10									
Surr: n-Octacosane	2,601	0.010	3.331	0	78.1	55	130	0			
Sample ID: 020605TPHS-LCS	SampType: LCS	TestCod	e: 8015FFP_S	Units: mg/Kg		Prep Da	te: 6/5/02		Run ID: L_F	TD-1_02060:	5B
	Batch ID: 454	TestN	o: SW8015M			Analysis Da	ite: 6/6/02		SeqNo: 3560	00	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	Highl.imit	RPD Ref Val	**RPD	RPDI imit	Qual
Diesel Range Organics (C12-C22)	124.1	10	166.4	0	74.6	54	91	0	()		
Surr: n-Octacosane	2.762	0.010	3.324	0	83.1	55	130	0	()		
Sample ID: 020605TPHS-LCSD	SampType: LCSD	TestCod	e: 8015FFP_ S	Units: mg/Kg		Prep Da	te: 6/5/02		Run ID: L_F	11)-1_02060	5B
	Batch ID: 454	TestN	o: SW8015M			Analysis Da	ite: 6/6/02		SeqNo: 3560	91	
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowI imit	HighLimit	RPD Ref Val	"aRPD	RPDI imit	Qual
Diesel Range Organics (C12-C22)	122.7	10	166.5	0	73.7	. 54	91	124.1	1.13	25	
Surr: n-Octacosane	2.73	0.010	3.326	0	82.1	55	130	0	()	0	
Sample ID: 1.0206022-001A	SampType: MS	TestCod	e: 8015FFP_S	Units: mg/Kg		Prep Da	te: 6/5/02		Row ID: L_F	11)-1_02060:	513
	Batch ID: 454	TestN	o: SW8015M			Analysis Da	nte: 6/6/02		SegNo: 363	89	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowI imit	HighLimit	RPD Ref Val	"oRPD	RPDI mit	Qual
Diesel Range Organics (C12-C22)	119	10	166.8	0	71.4	54	91	()	()		
Surr: n-Octacosane	2.434	0.010	3.331	0	73.1	55	130	g	a		

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 1 of 2

Project:

Bechtel Nevada

Work Order:

L0206022 V1609

BatchID: 454

ANALYTICAL QC SUMMARY REPORT

Sample ID: 1.0206022-001A	SampType: MSD Batch ID: 454		de: 8015FFP_S lo: SW8015M	Units: mg/Kg		Prep Da Analysis Da	ite: 6/5/02		Run ID: L_I SeqNo: 363	FID-1_020605B 888	1
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDt imit	Qual
Diesel Range Organics (C12-C22)	124.2	10	166.8	0	74.5	54	91	119	4.28	25	
Surr: n-Octacosane	2.568	0.010	3.331	0	77.1	55	130	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 2 of 2

LEYEL 4

(00060d)

Bechtel Nevada se	ANALYTICAL SERVIC RVICES REQUEST & CHA	CES LABORATORY NIN OF CUSTODY RECORD	Page				
PROJECT/ CLIENT INFORMATION	REPORT INF	ORMATION	SAMPLE INFORMATION				
Project CAU398 BN Org#:A435	Send Report to: Danie D.	Kirk4r sar	npling Site: 25-25-04				
Charge No.: ASL Prog.:	Phone: 295-5577 295-7	761 WTS 306	e samples submitted contain (check);				
Project Manager: Teff Smith	Turnaround: () Standard - 30 days Non-rac	d, 60 Days Rad, Other: con ider	ntamination. If known, attach a brief narrative summary ntifying contaminants. This information will ensure				
Phone: 295-7761 MS 306	Final report format: () Standard () NTS-V		npliance with applicable regulations and allow for the safe adding of the sample materials.				
LAB USE ONLY		LYSES & METHOD	SAMPLE RECEIPT INFORMATION				
Rad SGD: Non-Rad SDG: VILO	9		Are all sample containers received intact (') Yes () No Comments:				
Rad Packet: Non-Rad Packet:							
Client Services Representative:	8		Do the labels agree with this form? (Yes () No Comments:				
Will these analyses be performed under a signed SOW? () YES () If so, do analyses entered here agree with the SOW? () YES () If not, identify the variation CSR initials indicating review and approval:			Was a Material Clearance Tag submitted? Yes () No Comments:				
SAMPLING DATE TIME	MATRIX T		COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)				
0 252504-1 6302 1:15	Soil V	1 V 40.250 mL					
1 252504-2	1 1	A line of Y N None Ten					
2 252504 - 3 1:17	Custody Se	an Intact? Y N None Ten					
3 252504 - 4 1:18		Condition					
4 252504-5							
5 252504-6 /1:20			4/0				
 		+	The state of the s				
6 252504-7 [1:21]		┦┈╎┈┼┈┼┈┼┈┼┈	Sugrecies				
7 25 2504 - 8 1:22	++++	╂┈╂┈╂┈╂┈┼┈┼┈	-KHD				
8 252504 - 9 1:23							
9 252504-10 1:24		<u> </u>					
Transfer of samples submitted for analyses		Complete for samples shipped to an OFF-SITE Sub-					
		Relinquished (BN Representative Signature)	DATE / TIME Received (Courier & Tracking Info.)				
Xxx 640/922	CD Cantourder	(A) (astoriz da Reli j quished (Gourier & Tracking Info.)	DATE / TIME Received (15t tier Subcontractor Rep)				
<u> </u>		1/14 Counter	4-9-04/63 / 1 NIEC-1				
	Relinquished (1st fier Subconfractor Rep) DATE TIME Received (2nd fier Subconfractor Rep)						

(FUFIL 4 6/11

L0206022

Bechtel Nevada s			CES LABORATORY AIN OF CUSTODY RE	CORD Page 2 of 2
Project: CAV 398 Charge No.: Project Manager: Jef SM; JM Phone: 295-7761 PROJECT/ CLIENT INFORMATION BN Org# 19435 ASL Prog.: M/S: 295-7761 M/S: WT5 30	Turnaround: () Star	Daniel 1 7 1295-	FORMATION LIVELY 7261 MS: 75 3 06 ad, 60 Days Rad, Other: 1-11-03 Final by: WAC () Other:	SAMPLE INFORMATION Sampling Site: 25 - 26 - 0 4 The samples submitted contain (check); () Hazardous () Radioactive () Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.
Rad SGD: Non-Rad SDG: \/(\(\begin{array}{c}\)/\(\begin{array}{c}\)/\(\begin{array}{c}\)\(\begin{array}{c}\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	79	AN	ALYSES & METHOD	SAMPLE RECEIPT INFORMATION Are all sample containers received intact Y Yes () No Comments:
Client Services Representative: Will these analyses be performed under a signed SOW? () YES If so, do analyses entered here agree with the SOW? () YES If not, identify the variation CSR initials indicating review and approval:				Do the labels agree with this form? Comments: Was a Material Clearance Tag submitted? (VYes () No Comments:
	MATRIX &			COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
1 252504 - 12 6-3-02 1:26 2 LAST ITEL	Soil V			one temp. 4E:
3 4 5		Custod	y Seal Intact 7 Y N N Condition when rece	
6 7 8				Suspection RAD
9 Transfer of samples submitted for analyses			Complete for samples shipped to an Ol	
Sampled/Relinquished (Signature/Organization) DATE / TIME 5-4-02/7:25	Received by (Signature)		Relinquished (BN Representative Signature) Relinquished (Georier & Tracking Info.) Relinquished (1st tier Subcontractor Re	DATE / TIME Received y/st tier Subcontractor Rep)

Distribution: Original - To be retained by laboratory performing final analysis
Copy 1 - To be relained by laboratory performing intermediate analysis
Copy 2 - To be relained by Analytical Services Laboratory
Copy 3 - To be retained by sampler

BN-0732 (02/98)

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP

V1627

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

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Corporate Headquarters / Reno Laboratory

4750 Longley Lane. Suite 106 Reno, NV 89502 Phone: 775.348.2522 Fax: 775.348.2546 Las Vegas Laboratory 4208 Arcata Way. Suite A Las Vegas. NV 89030 Phone: 702.657.1010 Fax: 702.657.1577

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

TEL: 702-295-7220

RE Project: V1627

Order No.: L0206284

Dear Ted Redding:

NEL Laboratories, Las Vegas received 5 samples on 6/18/02 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications unless noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Stan Van Wagenerl Laboratory Manager

Certifications:

Reno Las Vegas

Arizona

AZ0520 AZ0518

California

1707 2002

Idaho

Certified Certified

Montana

Certified Certified

Nevada New Mexico NV033 NV052

Certified Certified

CLIENT:

Bechtel Nevada

PROJECT ID: V1627

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252502-1

DATE SAMPLED: 6.17/02

NEL SAMPLE ID: L0206284-001A

			Reporting					
Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1254	960	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1260	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Decachlorobiphenyl	131	%REC	45-149	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Tetrachioro-m-xylene	126	%REC	48-136	1	SW8082	06/20/02	06/24/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 26-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

PROJECT ID: V1627

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252502-2

DATE SAMPLED: 6/17/02

NEL SAMPLE ID: L0206284-002A

			Reporting					
Parameter	Result	<u>Unit</u>	Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/ Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor [22]	ND	$\mu g/Kg$	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	i	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	l	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	l	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1254	430	μg/Kg	20	i	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1260	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Decachlorobiphenyl	134	%REC	45-149	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Tetrachloro-m-xylene	120	%REC	48-136	l	SW8082	06/20/02	06/24/02	JRW-LV

CLIENT:

Bechtel Nevada

PROJECT ID:

V1627

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252502-3

DATE SAMPLED: 6/17/02

NEL SAMPLE ID: L0206284-003A

Parameter	Result	<u>Unit</u>	Reporting <u>Limit</u>	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	ı	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1232	ND	μg/Κg	20	l	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1242	ND	μ g ⋅Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1248	ND	μg/Kg	20	ì	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	l	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1260	64	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Decachlorobiphenyl	126	%REC	45-149	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Tetrachloro-m-xylene	124	%REC	48-136	l	SW8082	06/20/02	06/24/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 26-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

CLIENT:

Bechtel Nevada

V1627

PROJECT ID: PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252502-4

DATE SAMPLED: 6/17/02

NEL SAMPLE ID: L0206284-004A

			Reporting					
<u>Parameter</u>	Result	<u>Unit</u>	Limit	<u>DF</u>	Method	Prep Date	Analyzed	Analyst
Aroclor 1016	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Arocior 1221	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1232	ND	μg/Kg	2 0	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1248	ND	µg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1260	590	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Decachlorobiphenyl	127	%REC	45-149	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Tetrachioro-m-xylene	113	%REC	48-136	1	SW8082	06/20/02	06/24/02	JRW-LV

NEL LABORATORIES

CLIENT: PROJECT ID: Bechtel Nevada

V1627

PROJECT #:

30033

MATRIX:

SOLID

CLIENT ID:

252502-5

DATE SAMPLED: 6/17/02

NEL SAMPLE ID: L0206284-005A

			Reporting					
Parameter	Result	Unit	Limit	DF	Method	Prep Date	Analyzed	Analyst
Arocior 1016	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1221	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1232	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1242	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Araclar 1248	ND	μg/Kg	20	l	SW8082	06/20/02	06/24/02	JRW-LV
Aroclor 1254	ND	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Arocior 1260	480	μg/Kg	20	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Decachlorobiphenyl	126	%REC	45-149	1	SW8082	06/20/02	06/24/02	JRW-LV
Surr: Tetrachloro-m-xylene	113	%REC	48-136	1	SW8082	06/20/02	06/24/02	JRW-LV

ND - Not Detected at the Reporting Limit

DF - Dilution Factor

Date: 26-Jun-02

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

NEL Laboratories, Las Vegas

CLIENT:

Bechtel Nevada

Work Order: Project: L0206284 V1627

ANALYTICAL QC SUMMARY REPORT

Date: 26-Jun-02

BatchID: 494

Completion 030430DCDC NED	CT MDLE	T+C	1 0003 C	11. 14			4/20/22				
Sample ID: 020620PCBS-MB	SampType: MBLK		ie: 8082_S	Units: µg/Kg		•	te: 6/20/02			ECD-1_02062	IA.
	Batch ID: 494	TestN	o: SW8082			Analysis Da	te: 6/21/02		SeqNo: 407	761	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	Highl imit	RPD Ref Vat	%RPD	RPDI imit	Qual
Aroclor 1016	ND	20									
Aroclor 1221	ND	20									
Aroclor 1232	ND	20									
Aroclor 1242	ND	20									
Aroclor 1248	ND	20									
Aroclor 1254	ND	20									
Aroclor 1260	ND	20									
Surr: Tetrachloro-m-xylene	67	0.10	66.74	0	100	48	136	0	0		
Surr: Decachlorobiphenyl	68.67	0.10	66.74	0	103	45	149	0	0		
Sample ID: 020620PCBS-LCS	SampType: LCS	TestCod	le: 8082_S	Units: µg/Kg	· · · · · · · · · · · · · · · · · · ·	Prep Da	te: 6/20/02		Run 1D: L_	ECD-1_02062	21A
	Batch ID: 494	TestN	fo: SW8082			Analysis Da	te: 6/21/02		SeqNo: 407	762	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	370.5	20	333.1	0	111	60	140	0	0		··· - ····
Aroclor 1260	370.1	20	333.1	0	111	60	140	0	0		
Surr: Tetrachloro-m-xylene	72.36	0.10	66.72	0	108	48	136	0	0		
Surr: Decachlorobiphenyl	77.69	0.10	66.72	0	116	45	149	0	0		
Sample ID: L0206245-010AMS	SampType: MS	TestCod	ie: 8082_S	Units: µg/Kg		Prep Da	te: 6/20/02		Run ID: L_I	EC'D-1_02062	21A
	Batch ID: 494	TestN	o: SW8082			Analysis Da	te: 6/21/02		SeqNo: 407	74	
Analyte	Result	PQI.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	348.9	20	333.2	0	105	60	140	0	()		
Aroclor 1260	335.2	20	333.2	0	101	60	140	0	()		
Surr: Tetrachloro-m-xylene	68.71	0.10	66.74	0	103	48	136	0	a		
Surr: Decachlorobiphenyl	71.71	0.10	66.74	0	107	45	149	0	0		

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 1 of 2

CLIENT:

Bechtel Nevada

Work Order:

L0206284

Project:

V1627

ANALYTICAL QC SUMMARY REPORT

BatchID: 494

Sample ID: L0206245-010AMSD	SampType: MSD Batch ID: 494		de: 8082_S lo: SW8082	Units: µg/Kg		•	te: 6/20/02 te: 6/21/02		Run ID: L_1 SeqNo: 40 7	ECD-1_02062 75	1A
Analyte	Result	PQI.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	°6RPD	RPDI imit	Qual
Aroclor 1016	322.9	20	333.2	0	96.9	60	140	348.9	7.75	25	
Aroclor 1260	309.9	20	333.2	0	93	60	140	335.2	7.86	25	
Surr: Tetrachloro-m-xylene	62 04	0.10	66.74	0	93	48	136	0	O	0	
Surr: Decachlorobiphenyl	65.04	0.10	66.74	0	97.5	45	149	0	O	0	

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Bechtel Nevada	SER	RVICES REQ		ST & C					ORD	1				Page	of	
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CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

SAMPLE DELIVERY GROUP V1815

CLOSURE REPORT - CAU 398 Section: Appendix B Revision: 1 Date: April 2003

<u>Bechtel</u>	<i>Vevada</i>		SE	RVICES	S RE						ATOR F CU	RY ISTODY RE O	CORE)				Page	of_
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SERVICES REQUEST AND CHAIN OF CUSTODY RECORD

Page 2 of 2

PROJECT/CL	IENT INFOR	<u>MATION</u>			<u>R</u>	EPOF	RT &	TUR	VARO	UND I	NFORMATIO!	Y					ORMATIC	<u>N</u>	
Project: CAU 398		BN Or	e#: B502	Send Rep	ort to:	Br	ad.	J.	cks	sen						<u>U 348</u> I contain (c	heck)		
Charge Number: 5809 H &	30			Phone: 7	02-299	-03	3(Fax:	702	-245	-7761 M/S:	NTS30		Hazardo	ous - (list,)			
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INORGANICS DATA SUMMARY REPORT 12/30/02

CLIENT: BECHTEL NEVADA V1815

LVL LOT #: 02121358

					REPORTING	DILUTION
SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	LIMIT	FACTOR
		*******		*****		*******
-001	2\$2504-V1	Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Lead, Total	5.1	MG/KG	0.24	1.0
-002	252504-V11	Cadmium, Total	0.05	MG/KG	0.04	1.0
		Lead, Total	5.8	MG/KG	0.24	1.0
~003	252504-V2	Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Lead, Total	3.6	MG/KG	0.24	1.0
-004	252504-V3	Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Lead, Total	4.0	MG/KG	0.23	1.0
-005	252504-V4	Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Lead, Total	1.7	MG/KG	0.24	1.0
-006	252504-V5	Cadmium, Total	0.D4 u	MG/KG	0.04	1.0
		Lead, Total	4.1	MG/KG	0.24	1.0
-007	252504-V6	Cadmium, Total	D. 04 LL	MG/KG	0.04	1.0
		Lead, Total	4.8	MG/KG	0.23	1.0
-008	252504-V7	Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Lead, Total	3.5	MG/KG	0.24	1.0
-009	252504~V8	Cadmium, Total	0.04 u	MG/KG	D.04	1.0
		Lead, Total	4.5	MG/KG	0.24	1.0
-010	252504-V9	Cadmium, Total	0.04 u	NG/KG	0.04	1.0
		Lead, Total	4.1	MG/KG	0.22	1.0

INORGANICS DATA SUMMARY REPORT 12/30/02

CLIENT: BECHTEL NEVADA V1815 WORK ORDER: 60052-001-001-00 LVL LOT #: 0212L358

WORK ORDE	R: 60052-001-001-001	••			REPORTING	DILUTION
SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	LIMIT	FACTOR
******	李色 医鱼名 化二氯苯基苯基 医 医 经 四 龙 海雪	医医性神经性 医医性神经 医乳腺性 医电阻性 化二甲基苯甲甲基甲基甲甲基甲甲基甲甲基甲甲基甲甲基甲甲基甲甲基甲甲基甲甲基甲甲基甲甲	****	======	********	*======
-011	252504-V10	Cadmium, Total	0.04	MG/KG	0.04	1.0
		Lead, Total	4.6	MG/KG	0.23	1.0
-012	252505-V1	Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Lead, Total	4.6	MG/KG	0.24	1.0
-013	252505-V2	Cadmium, Total	0.05	MG/KG	0.04	1.0
		Lead, Total	5.3	MG/KG	0.23	1.0
-014	252505-V3	Cadmium, Total	0.04	MG/KG	0.04	1.0
		Lead, Total	4.6	MG/KG	0.21	1.0
-015	252505-V4	Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Lead, Total	4.3	MG/KG	0.22	1.0
-016	252505-V5	Cadmium, Total	0.04	MG/KG	0.04	1.0
		Lead, Total	5.1	MG/KG	0.23	1.0
-017	252505-V6	Cadmium, Total	0.09	MG/KG	0.04	1.0
		Lead, Total	4.8	MG/KG	0.25	1.0

INORGANICS METHOD BLANK DATA SUMMARY PAGE 12/30/02

CLIENT: BECHTEL NEVADA V1815

LVL LOT #: 02121358

WORK ORDER: 60052-001-001-0001-00

					REPORTING	DILUTION
SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	LIMIT	FACTOR
3 * * * * * *		************	****	24555		E2722##E
BLANK1	0210749-MB1	Cadmium, Total	0.04 U	MG/KG	0.04	1.0
		Lead, Total	D.24 u	MG/KG	0.24	1.0

.

INORGANICS ACCURACY REPORT 12/30/02

CLIENT: BECHTEL NEVADA V1815

LV1 LOT # 0212L358

			SPIKED	INITIAL	SPIKED		DILUTION
SAMPLE	SITE ID	ANALYTE	Sample	RESULT	AMOUNT	*RECOV	PACTOR (SPK)
			*****			*****	========
-001	252504-V1	Cadmium, Total	4.9	0.04u	5.1	96.1	1.0
		Cadmium, Total MSD	4.7	0.04u	5.1	92.2	1.0
		Lead, Total	57.4	5.1	50.7	103.2	1.0
		Lead, Total MSD	53.0	5.1	51.3	93.4	1.0

INORGANICS DUPLICATE SPIKE REPORT 12/30/02

CLIENT: BECHTEL NEVADA V1815

LVL LOT #: 0212L358

			SPIKE#:	SPIKE#:	2
SAMPLE	SITE ID	ANALYTE	*RECOV	*RECOV	*DIFF
	医沙耳氏性蛋白蛋白蛋白蛋白蛋白 医皮肤		206227	EFCERE	
-001	252504-V1	Cadmium, Total	96.1	92.2	4.2
		Lead, Total	103.2	93.4	10

INORGANICS PRECISION REPORT 12/30/02

CLIENT: BECHTEL NEVADA V1815

LVL LOT #: 0212L358

			INITIAL			DILUTION
SAMPLE	SITE ID	ANALYTE	RESULT	REPLICATE	RPD	FACTOR (REP)
5227465	\$P\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	*************		*******	*****	********
-001REP	252504-V1	Cadmium, Total	0. 04 u	0.04u	NC	1.0
		Lead, Total	5.1	5.0	2.0	1.0

INORGANICS LABORATORY CONTROL STANDARDS REPORT 12/30/02

CLIENT: BECHTEL NEVADA V1815

LVL LCT #: 0212L358

			211.02	D. 11,20		
SAMPLE	SITE ID	ANALYTE	SAMPLE	TAUDMA	UNITS	*RECOV
	***********	化化学 医自由性 医内心 化 化 化 电 	e=====			255555
LCS1	02L0749-LC1	Cadmium, LCS	24.1	25.0	MG/KG	96.4
		Lead, LCS	242	250	MG/KG	96.8

CLOSURE REPORT - CAU 398 Section: Appendix C Revision: 1 Date: April 2003

APPENDIX C USE RESTRICTION INFORMATION

CLOSURE REPORT - CAU 398 Section: Appendix C Revision: 1 Date: April 2003

CAU Use Restriction Information

CAU Number/Description: CAU 398: Area 25 Spill Sites, Nevada Test Site, Nevada

Applicable CAS Numbers/Descriptions: CAS 25-25-07, Hydraulic Oil Spill(s); CAS 25-25-08, Hydraulic Oil Spill(s) / Oil spill sites located inside X and Y Tunnels in area 25.

Contact (organization/project): NNSA/NV Industrial Sites Project Manager

Surveyed Area (UTM coordinates, Zone 11, NDA 27):

CAS 25-25-07, Hydraulic Oil Spill(s)

 NW corner:
 4,064,605.16 m N
 560,087.66 m E

 NE corner:
 4,064,611.77 m N
 560,108.00 m E

 SW corner:
 4,064,595.76 m N
 560,091.00 m E

 SE corner:
 4,064,603.28 m N
 560,109.85 m E

CAS 25-25-08, Hydraulic Oil Spill(s)

 NW corner:
 4,064,454.75 m N,
 560,310.32 m E

 NE corner:
 4,064,449.82 m N
 560,320.18 m E

 SW corner:
 4,064,428.24 m N
 560,301.13 m E

 SE corner:
 4,064,425.16 m N
 560,310.24 m E

Survey Date 8/15/2002 Survey Method GPS Datum NAD 1927 Zone UTM Zone 11

Site Monitoring Requirements: NONE

Monitoring Frequency (quarterly, annually?): N/A

Use Restrictions

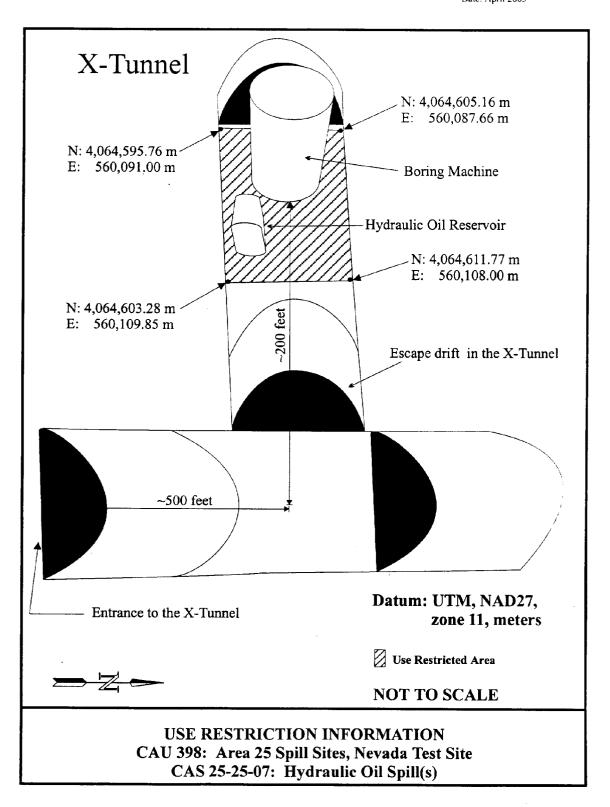
The future use of any land related to this Corrective Action Unit (CAU), as described by the above surveyed location, is restricted from any DOE or Air Force activity that may alter or modify the containment control as approved by the state and identified in the CAU Closure Report or other CAU documentation unless appropriate concurrence is obtained in advance.

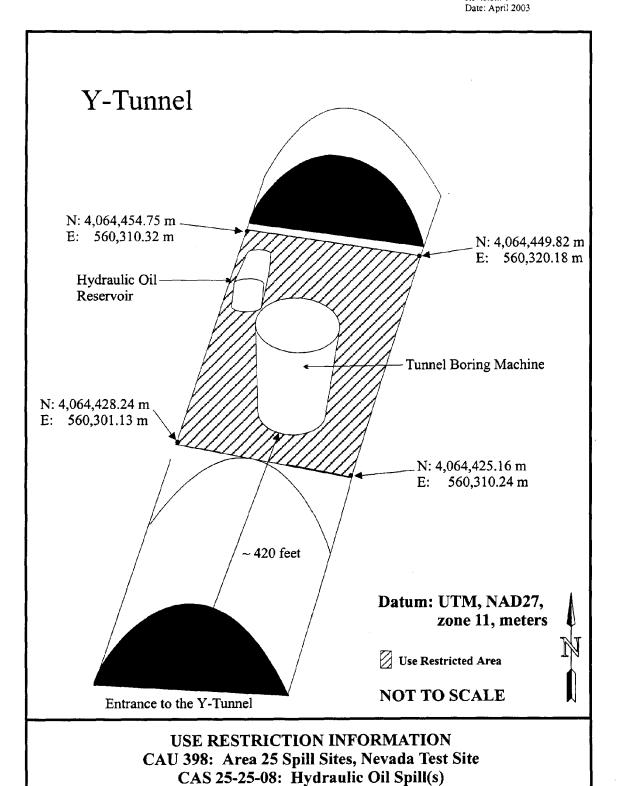
Comments: See the CAU 398 Closure Report (Document number DOE/NV-873, 2003) for additional information on the condition of the site and any monitoring and/or inspection requirements. Note, the spill sites are within the X and Y Tunnels. Use restrictions apply to the areas inside the tunnels only, not on the surface area above the tunnels.

Submitted By: Salari Curtis Date: 1/23/03

Attachments: Site Figures showing survey locations and coordinates for the X and Y Tunnel use restrictions (CAS252507 UR.cdr and CAS252508 UR.cdr).

CLOSURE REPORT - CAU 398 Section: Appendix C Revision: 1 Date: April 2003





CAU Use Restriction Information

CAU Number/Description: CAU 398: Area 25 Spill Sites, Nevada Test Site, Nevada

Applicable CAS Numbers/Descriptions: CAS 25-25-17, Subsurface Hydraulic Oil Spill

Contact (organization/project): NNSA/NV Industrial Sites Project Manager

Surveyed Area (UTM coordinates, Zone 11, NAD 27):

CAS 25-25-17, Subsurface Hydraulic Oil Spill

 NW corner:
 4,073,416.13 m N
 562,107.74 m E

 NE corner:
 4,073,415.73 m N
 562,110.74 m E

 SE corner:
 4,073,412.73 m N
 562,110.14 m E

 SW corner:
 4,073,413.13 m N
 562,107.14 m E

Survey Date 12/16/2002 Survey Method Transit Datum NAD 1927 Zone UTM Zone 11

Site Monitoring Requirements: NONE

Monitoring Frequency (quarterly, annually?): N/A

Use Restrictions

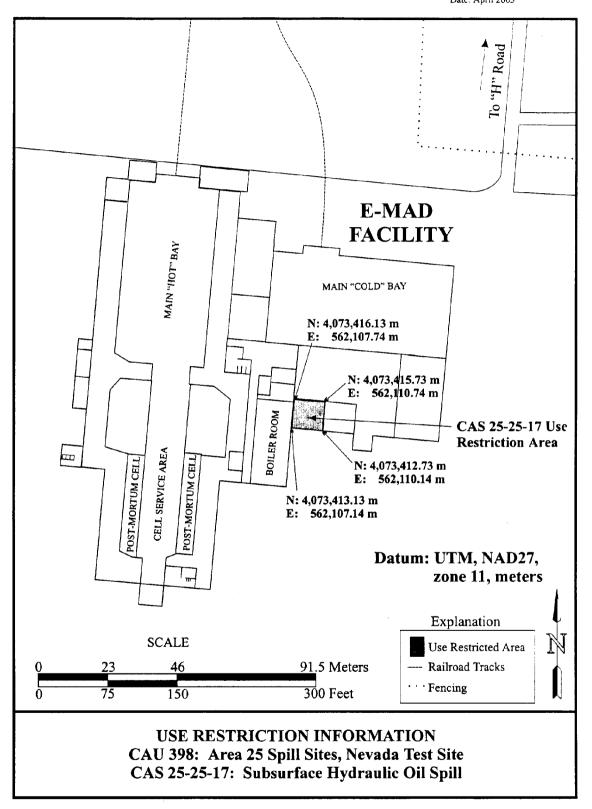
The future use of any land related to this Corrective Action Unit (CAU), as described by the above surveyed location, is restricted from any DOE or Air Force activity that may alter or modify the containment control as approved by the state and identified in the CAU Closure Report or other CAU documentation unless appropriate concurrence is obtained in advance.

Comments: See the CAU 398 Closure Report (Document number DOE/NV- 873, 2003) for additional information on the condition of the site and any monitoring and/or inspection requirements. Note, the spill site is within the Utility Corridor at E-MAD. Use restrictions apply to the area within the utility corridor.

Submitted By: Sasing Certi Date: 1/23/03

Attachments: Site Figure showing survey locations and coordinates (CAS252517_UR.cdr).

CLOSURE REPORT - CAU 398 Section: Appendix C Revision: 1 Date: April 2003



CLOSURE REPORT - CAU 398 Section: Appendix C Revision: I

Revision: 1 Date: April 2003

CLOSURE REPORT - CAU 398 Section: Appendix D Revision: 1 Date: April 2003

APPENDIX D WASTE DISPOSITION DOCUMENTATION

CLOSURE REPORT - CAU 398 Section: Appendix D Revision: 1 Date: April 2003

Environmental Operations/ Hazardous Wasta Operations

Request for Service

8008 - HOMO Project #: CAU 398

FAX to 5-4815 or send to M/S NTS110

	•			
Date of Request:	6-20-02	Date Needed:		Charge # : 5B09HZ21
	Brad Jackson	Phone Number:_		Org. Name/No.: <u>A435</u>
Secondary Contact:	Brian Konrad	Phone Number: _		Mail Stop: NTS306
EP Number:		Facility Owner or	Designee:	Jeff Smith
Section A - Serv				<u> </u>
Check one:	Used Oil Y Hazardous	Unknown		
Check Applicable:	Sampling Characterization			
	Delivery (i.e., empty packages) Indicate SAA#, 90-Day#, or UV/Ct	SAA 90-Day	Storage UW	CC Activate Deactivate
	indicate SAA#, 90-Day#, or OVICE	C #, if applicable:	-4 10 1 > 10	
Location of Pickup (Are	ea, Bldg., exact directions are riec	essary, attach map if neo	cessary):	
Area 25, E-MAD Facili	ty			
Section B - Gene	eral Waste Information (Jse continuation sheet if necess	агу)	
	e: 6/3/02 to 6/5/02 🗶 One Time			CAU/CAS If applicable: AS 25-25-0;
Radiological Clearance	e provided: UBN-0121, Clearing None	e Sticker LEU BIN-0488, Gi	teeu (36 🗖 RM-	0002, Hazardous Waste Certification
Waste Amount (Gallon	is): Type of Contain	ner (ie., can, drum, carbo	v, tanker, etc.): 5:	5 Metal
Number of Containers:	4			3
Detailed Description/P	rocess Knowledge (ie., Liquid, Sc	olid, Gas; Name of materi	al; Physical descr	iption; How waste was generated,
Suspected contaminan	its, etc.): (Attach applicable MSDS	Se.)		
	In soil. All waste is containerized	in 55 gallon drums. Was	te was generated	when removing hydrocarbon
impacted soil from CAI	3 23-23-02.			
				,
			al information ro	autrad to available as indicated
The material request	ed for pickup has only those m	aterials described on ti	his form. Conte	quired is available as indicated. hts will be verified by process
		-		
·· -/ -/.	tor Facility Owner	Project Manager		
Signature:			# * * * * * * * *	
Section C - Work	Location Information			
Facility Point of Contac	t (Name, Phone, Pager):	Who will sign	the Work Packag	e Traveler? (Name, Phone, Pager):
Jeff Smith, 5-7775, 4	4-5690	Dan Kirker, 5	-5577, 4-6075	
Facility Access Require	ements:			<u>.</u>
EM-5 Key to enter E-M	IAD facility			
Known hazards in the	requested service area:			
	to conduct requested services:			
Hours (AM/PM): <u>7</u>	100 AM to 4:00 PM	Day(s): Mon- Thur		
Section D - Servi	ices Completed			
Waste characterized b	by: Process knowledge	MSDS Sampling &	Analysis C	Other:
Remarks (scheduling,	pickup, disposition, etc.): Assi	ir džum nes. Bri-1	VT5-02-034	14 thm - 0347.
Package	e. were shipped offer t	(m 702. 1 +	F126/6	
, , , , , ,	- 11 - 11-	- reconstant		
	•	•		
_		·		
Receiving Facility: <u></u>		·	,	
Receiving Facility:	Ch. Kleen, Phoenix	·	Date: 6/3	



2003-40035 Project #: _ CAU 398 Environmental Operations / Hazardous Waste Operations FAX to EO/HWO at 5-06-02 late of Request: Request for Service 702-295-4815 or send 5-23-02 Date Needed: to M/S NTS110 Requester Name: Brad Jackson Phone Number: 5-0331 Secondary Contact: Phone Number: Brian Konrad 5-1240 Organization Name: Environmental Restoration Organization Number A435 Charge Number: 5B09HZ21 Mail Stop: NTS306 An additional fee will be assessed for time expended when charge numbers are incorrect or are not open to Environmental Operations Org. numbers 2150 and above, if sampling is required the charge # must be open. Section A - Services Requested (Seo instructions on page 2 or request assistance from EO/HWO personnel)
Use continuation sheet if needed, page 3 Services required: Used Oil Check one: X Hazardous Unknown ☐ Characterization X Pickup (Check all that apply, put # needed) Sampling ☐ Delivery ☐ Deactivate Recycling Transportation only Disposal (Indicate removal date or if regular or new service in comments): Activate SAA 90 Day Universal Waste Indicate SAA, 90 Day, or UCC #, if applicable: Location of Pickup; (Area, Bidg., spill cass Area 25, E-MAD facility 25-25-04 exact directions are necessary, 25-25-05. attach map if necessary): Pick-up of 18 55 gallon drums containing TPH. PCB, Lead, and Cadmium impacted soil, for Comments shipment off-site for disposal (Note any personnel hazards also): Section B - General Waste Pickup Information (To be entered by waste generator, as applicable. See instructions for applicability.) Waste Generation Date: 4/23 to 5/2 Radiological data provided, (see instructions on page 2)? Tyes No Exempt ER or historic cleanup?: Yes No If "Yes." describe (include CAU #): CAU 398 Area 25 Spill Sites Waste Amount (Gallons): Type of Container: 55 metal Number of Containers: Description of Waste: (Liquid, Solid, Gas, Mix) Attach sheet as necessary. Indicate hazardous or non-hazardous, use one form BN-0766 for each type. Waste contains TPH, PCBs, Lead and Cadmium In soll. All waste is containerized in 55 gallon drums Waste origin statement (Use the continuation sheet, page 3, if necessary, and attach applicable Information such as MSDS, analytical results, or SAA revisions.) Print, sign and deliver this request to EO/HWO. Waste is from spills associated with CAU 398. All soil was excavated from the E-MAD facility in Area 25. Spills are from equipment leaking, and also from wastes being dumped in draining ditch after they finished using them. Drum nos. BN-NTS-CO-0207 Draw nes. BN-NTS-02-6203 thru BN-NTS-02-0220 are 55.60ms of so! contaminated with ACBS, DOCS, + DOOS. thru BIV. 155 02-0206 are 55-6 Dons opesal contaminated with I certify under penalty of law, the above information is correct and additional information required is available as indicated. The container requested for pickup has only those materials allowed by the acceptance criteria detailed on the instructions to this form. Contents will be verified by process or origin knowledge or sampling and analysis. Generator Signature: <u></u> Section C - HWO USE ONLY Completed by (EO/HWO personnel initials): Date Completed: Receiving Facility: Safety-Kleen, Phaenix, EO/HWO Remarks (scheduling, pickup, container, exceptions, labels). Drims was finally agrossed for whan it del page. were shighed offer to be Missing to 62010 and a 62011.



1. Wark F	Package No.	: HWO-HWS	SU-01-3S, Re	v3 2. Work Package Type: 1 2 (check one)	2 🗷 3 🗀
3. Organ	ization: <u>Haz</u>	ardous Waste	Operations	- (check one)	
SECTIO	N I - DES	CRIPTION	OF WOR	K (Prepared by work planner)	
4. Descrip	otion of work	/activity to be	e performed:	(circle applicable)	
		-		s Waste/Universal Waste;	
				e/Universal Waste. 4-77~-Do Re	= 1= t=1 2 3=
		(-		and the second of the second o	
5. Area/B	uilding: <u>25/ E</u>	E-MAD		Specific Location: #NTS9009	
6. Reques	sted Start Da	ate: 3/11/2	2002 Fo	recast End Date: 9/7/2002	
7. Do othe	er employee:	s in this facili	ity need prot	ection from the hazards of this work? $\;$	Yes 🗷 No
If "YES	S," identify: _				
8. Permits	Required?	Yes	X No	LO/TO Required? Yes X No)
9. Permit	Types:			None.	
10 . Other	Requiremen	nts:		Notify prior to arrival.	
11. Work	Supervisor (Print Name/S	Sign): <u>(</u>	autos Genzales / (+x)	(+2 V V
Phone	e/Pager:	5	5-6757/ 4-178	84	03
SECTIO	N II - WC	RK AUTH	IORIZATIO	ON (Completed by facility owner or design	gnee)
12 Point	of Contact: (Name/Phone	e/Pager No.)	DAN KIRKER 5-5577	/4-6075
				Eir wysicz	
13. Acces	s requireme	nts have bee	en met? انظا	Ýes □ NA: 10 Processor	
14. Pertin	ent hazards	and controls	for this work	k have been communicated to co-located we	ork groups. 🔲 Yes 🖾 N/A
				Nork is within facility safety envelope and fa facility is ready to accept work, and work is	
Start Date	Start Time	End Date	End Time	Print Facility Owner or Designee/Phone No.	Signature ,
6/27/02	0800	6/27/02	1000	Dan Kirker 5-5577/4-6075	V V/517/1
0/21/02	COCO		7000		The Market Marke
			<u> </u>		
	 		<u> </u>		
	<u> </u>			100000000000000000000000000000000000000	
16. Comn		iova Hazaro	lous & PCB	Maste drume (22 each): to be shinned of	ffsite via Manifest ##02010 i
		ieve Hazaic	1000 W 1 OB	Waste drums (22 each); to be shipped of	HORO TIGHTIGOT WINDED TO
<u>& 020</u>		ieve i lazaro	.000 0.1 00		TO TO THE MICE WIND TO
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\$ 020 SECTIO 17. Worl	ON III - FI	NAL STAT	TUS/END (OF WORK	
SECTIO 17. World (i) Name (wo	ON III - FI	NAL STAT eted. Area or designee)	TUS/END (OF WORK nd safe Post work verification is con Signature	mpleted. (/27/2)
SECTIO 17. World (i) Name (wo	ON III - FI	NAL STAT eted. Area or designee)	TUS/END (OF WORK nd safe Post work verification is con	mpleted. (/27/2)
SECTION 17. World (i) (i) Name (wo	ON III - FI	NAL STAT eted. Area or designee) vity/work i	TUS/END (OF WORK nd safe Post work verification is con Signature	mpleted. (/27/2)

Ple	ase	print or type. (Form designed for use on elite (12-p	itch) typewriter.)					Form Approx	ed OMB No. 20	050-0C:19		
A		UNIFORM HAZARDOUS 1 WASTE MANIFEST	. Generator's U N V 3 8 9 0 0			fest Iment No. 2 0 1 0	2. Pa			the shaded areas by Federal law.		
	3.	F	Bechtel Nevada P.O. Box 98521 as Vegas, NV	1				ate Manife	st Documen	Number -		
	4.	Generator's Phone ()	02 295-0311	Attn: Troy Beika N	/S NTS1	10				-		
	5.	Transporter 1 Company Name		6. US EPA I			C. Sta	ate Transp	orter's ID			
		Safety-Kleen (TG), Inc.		.SCR00007	A 5.91			ansporter's		2-258-8155		
	7.	Transporter 2 Company Name		8. US EPA I	D Numbe	er		te Transp				
П	_			L				insporter's		·		
	9.	Designated Facility Name and Site Address		10. US EPA I	D Numbe	er	G. Sta	ate Facility		1-323-8100		
		Safety-Kleen (Aragonite) 11800 North Aptus Road Aragonite, Utah 84029		UTD 98155	2177		H. Fa	H. Facility's Phone				
GE		. US DOT Description (Including Proper Ship)	oing Name, Ha	zard Class and ID Nu	mber)	12. Conta No.	iners Type	13. Total Quantit	14. Unit y Wt/Vol	I. Waste No.		
N E A	a.	RQ Hazardous waste, solid, n.o.s. (D00	6, D008), 9, N/	43077, III		14	DM	4155	κ	D006 D008		
CTOR-	b.	Non-DOT Regulated PCB Soils			•	4	DM	1045	ĸ	NONE		
	C.				, ,							
	d.											
	.1	Additional Descriptions for Materials Listed	Ahove				K. Han	dling Cod	es for Waste	s Listed Above		
		A: ERG171; BN-NTS-02-0207 thru 02: B: BN-NTS-02-0344 thru 0347; AP301:	20; AP3013446 3451; Out of S	ervice date 06/05/0	te: See a 2	ittached in	ventory	,]		
	15.	Special Handling Instructions and Addition 24-hour emergency contact # (702) 2: Use Proper PPE when handling conta Certificate of Destruction is required	al information 95-0311 Collec iners	et .			•					
	16	ii. GENERATOR'S CERTIFICATION: I hereby declare the proper shipping name and are classified, packed, may according to applicable international and national governing to applicable international and national governing that a large quantity generator, I certify that economically practicable and that I have selected future threat to human health and the environmenthe best waste management method that is available.	rked, and labeled, vernment regulation have a program in the practicable of the practicable of the practicable of the practicable of the practicable of the practicable of the practicable of the practicable of the practical of t	, and are in all respects in ins. in place to reduce the v method of treatment, st small quantity generator,	olume and	toxicity of w	nsport by raste gen ently avai	highway erated to this	which minimi	zes the present and		
V		Printed/Typed Name /RAY 5. BELKA		Signature	15	Bu	lla		_	Month Day Year		
R	17	7. Transporter 1 Acknowledgement of Receip	of Materials	Signature		\				Month Day Year		
RAZSP		Printed/Typed Name		Signature		2				062707		
P	18	Transporter 2 Acknowledgement of Receip	ot of Materials							00014715		
OR-HR		Printed/Typed Name		Signature						Month Day Year		
H-40-1-	19). Discrepancy Indication Space										
Ļ	20). Facility Owner or Operator: Certification of	receipt of haz	ardous materials cov	rered by t	his manife	st excep	ot as noted	in Item 19.			
Ť		Printed/Typed Name	,	Signature			•			Month Day Year		

Style CF 17 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.



Please gript or type	(Form designed for use on eli-	te (12-nitch) typewriter)
riease utilit of type.	(i disti desigried for use dit ell	te (124bitch) (ypewiitei.)

Form Approved. OMB No. 2050-0039

		UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's U. N V 3 8 9 0 0		Manii Docu	rest ment No. 2011	2. Pa of			the shaded areas by Federal law.
	3.	Generator's Name and Mailing Address	Bechtel Nevada P.O. Box 98521				A. Sta	te Manifest De	ocument	Number
	4	Generator's Phone (Las Vegas, NV 702 295-0311	89193	a MVS NTS11	0	B. Sta	te Generator's	s.ID	
	_	Transporter 1 Company Name			PA ID Numbe		C. Sta	te Transporte	r's ID	
		Safety-Kleen (TG), Inc.		SCROO	074591			nsporter's Ph		2-258-6155
	7.	Transporter 2 Company Name		8. US E	PA ID Numbe	er	E. Sta	te Transporte	r's ID	
								nsporter's Pho		
	9.	Designated Facility Name and Site Addres Safety-Kleen Phoenix Service Center	SS		PA ID Numbe	er	G. Sta	te Facility's ID		2-258-6155
		1340 West Lincoln St. Phoenix, AZ 85007					H. Fac	cility's Phone		
G	11.	US DOT Description (Including Proper Sha	ipping Name, Haz	ard Class and li	D Number)	12. Conta		13. Total	14. Unit	l. Waste No.
ENE	a.	RQ Hazardous waste, solid, n.o.s. (ca	admium), 9, NA30	077, III (D006)	· · · · · · · · · · · · · · · · · · ·	No	Type DM	Quantity 2230	Wt/Vol	D006
R A T									12	
T 0 A	b.	X Lithium Battery, 9, UN3090, II			•	1	DF	5	P	NONE
	C.	X Batteries, Wet, Non-Spillable, 8, 1	UN2800, III			1	DF	39	Р	NONE
	d.	Universal Waste - Fluorescent Li	amps			49	DF	5478	. Р	NONE
	J.	Additional Descriptions for Materials Liste	d Above				K. Han	dling Codes fo	r Waste:	s Listed Above
		A: ERG171; BN-NTS-02-0203 throu B: ERG132; BN-NTS-02-0244; NVB C: ERG154: BN-NTS-02-0264; NVB D: See attached inventory; NVBNS	INS-0111 INS-3000669	3-3015193						
	15.	Special Handling Instructions and Additions and Additions of the Proper PPE when handling concertificate of Destruction is require	ntainers	rt .			•			
	16	GENERATOR'S CERTIFICATION: I hereby declar proper shipping name and are classified, packed, according to applicable international and national	marked, and labeled,	and are in all respi	re fully and accu ects in proper co	rately descri	bed above ensport by	by highway		
		If I am a large quantity generator, I certify that economically practicable and that I have select future threat to human health and the environm the best waste management method that is availa	I have a program in ted the practicable re nent; OR, if I am a s	n place to reduce nethod of treatme small quantity gene	nt, storage, or c	tisposal curr	ently avai	lable to me whi	ch minimiz	res the present and
		Printed/Typed Name		Signa	ture	-72	//			Month Day Year
Y		TROY S. BELKA			/m -	<u>. 5u</u>	14			062702
Ŧ	17.		eipt of Materials	l Sizza		\rightarrow				Month Day Year
N N		Printed Typed Name SCAR TUIZ		Signa	"/" - <u>-</u>	4				062702
PO	18	. Transporter 2 Acknowledgement of Rec	eipt of Materials	1.		/				
TRAZSPORTER		Printed/Typed Name		Signa	ture				/	Month Day Year
	19	. Discrepancy Indication Space								
F										ļ
ç										
#40-J-F>	20	. Facility Owner or Operator: Certification	of receipt of haza			this manife	st excep	ot as noted in		
Ý		Printed/Typed Name		Signa	ture				ĺ	Month Day Year

Style CF 17 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

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2		JNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator's US EPA ID N V 3 2 9 0 0 9 0 0 0 1		ifest Docume 8 2 0 1 1	ent No.	22. Page 2 o f		ation in s not re			eral
	23	Generator specific Nevada for P.O. Box 98521 Lac Vegas, NV 8919 702-295-0311 Attn:				L	·	lanifest Do ienerator's		Numbe	ır	
	24	Transporter Company Nam	ne I	25. US EP/	ID Number			ransporter				
	26.	Transporter Company Nam	<u></u>	27. US EP/	iD Number			orter's Pho ransporter				
								orter's Pho				
	20	US DOT Description (Including I	Propos Shipping Mama Wassa	ed Clana, and ID Al	29.	. Contair	ners	30. Total	S1.	,,	Fi. 'aste N	
	20.	FM THE THE TENT OF	-1009i Gilipping Name, nazai	ra Glass, alta id iv	iniber)	No.	Гуре (Quantity	31. Unit Wt/Vol			ic.
	â.	Universal Waste - Fluore	escent Lamps		1	3	CF	135	P	NONE		
	b.	Universal Waste - Mercu	iry Lamps		7	,	DF 2	238	P	NONE		
	c.	Universal Waste - NI-Cd	Batteries		3		DF 1	85	P	NONE		
GWZWA	d.	Universal Waste - Crush	ed Fluorescent Lamps		1		DM 1	20	D.	NONE		
2 2	e.	Universal Waste - Crush	ned Fluorescent Lamps		1		DF	60	.O	NONE		
	f.											
	g.											
	h.											
	i.			-								
	S. A	Additional Descriptions for Materi A: See attached inventory; B: See attached inventory; C: BN-NTS-02-0231, 0232, D: BN-NTS-02-0281; NVBN E: BN-NTS-02-0306; NVBN	NVBNS-3000685 0249; NVBNS-3000797 IS-0083			Ţ	. Handling	Codes for	Wastes	Listed	Above	
	32.	Special Handling Instructions and G: H: 1: 24-hour emergency contact	d Additional Information t # (702) 295-0311 Certifica	ate of destruction	is required							
7	33	Transporter Acknowledg	ement of Receipt of Materials	ls					1		Date	-
	.	Printed/Typed Name	- Isosipi of Material	Signature						Month		Year
3	34	Transporter Acknowledge	gement of Receipt of Material	ils							Date	
7		Printed/Typed Name		Signature						Month	Day	Year
FACILIT	35.	Discrepancy Indication Space										

SOLID WASTE TRACKING SYSTEM

							Origin	Of Waste	
Landfii IC	Date Of Receipt	waste Catego		EM or DP	Routine or Clean-up	<u>Weight</u> Pounds	Area No	Building No.	
AREA 6	21-MAY-2002		FFACO-ONSITE	EM	CLEAN-UP	46500	25	CAU 398	Comments
AREA 6	21-MAY-2002	- 	FFACO-ONSITE	EM	CLEAN-UP	48000	25	CAU 398	Comments
AREA 6	21-MAY-2002		FFACO-ONSITE	EM	CLEAN-UP	48000	25	CAU 398	Comments
APEAE	16-MAY-2002		FFACO-ONSITE	EM	CLEAN-UP	4600	25	CAU 398	Comments
AREA 6	07-MAY-2002		FFA/CO-ONSITE	EM	CLEAN-UP	23000	E 5	CAU 398	Comments
AREA 6	02-MAY-2002		FFAÇO-ONSITE	EM	CLEAN-UP	25000	25	CAU 396	Comments
AREA 6	30-APR-2002		FFACO-ONSITE	EM	CLEAN-UP	20000	25	CAU 398	Comments
AREA 6	29-APR-2002		FFACO-ONSITE	EM	CLEAN-UP	18000	25	CAU 398	Comments
AREA 6	24-APR-2002		FFACG-ONSITE	EM	CLEAN-UP	20000	25	CAU 398	Comments
AREA 9	24-APR-2002		FFACO-ONSITE	EM	CLEAN-UP	5000	25	CAU 398	Comments

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Bechtel Nevada	<<	<	>	>>	Query	Save	Exit	Bechte/ Nevada
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Count: *16

Waste Management System - [Sanitation Module]

Action Edit Block Field Record Query Window Help

SOLID WASTE TRACKING SYSTEM

							Origin	Of Waste	
Landfil: ID	Date Of Receipt	Waste Categ		EM o	r Routine or Clean-up	<u>Weight</u> Pounds	Area No.	Building No.	
AREA 6	03-JUN-2002		FFACO-ONSITE	EM	CLEAN-UP	66000	25	CAL 398	Comments
AREA 6	30-MAY-2002		FFACO-ONSITE	EM	CLEAN-UP	80000	25	CAU 398	Comments
AREA 6	29-MAY-2002	T	FFACO-ONSITE	EM	CLEAN-UP	45000	25	CAU 398	Comments
AREA 6	29-MAY-2002	<u> </u>	FFACO-ONSITE	EM	CLEAN-UP	46400	25	CAU 398	Comments
AREA 6	23-MAY-2002		FFACO-ONSITE	EM	CLEAN-UP	40000	25	CAU 398	Comments
AREA 6	22-MAY-2002	1	FFACO-ONSITE	EM	CLEAN-UP	48000	25	CAU 398	Comments
AREA 6	21-MAY-2002		FFACO-ONSITE	EM	CLEAN-UP	46500	25	CAU 39 8	Comments
AREA 6	21-MAY-2002		FFACO-ONSITE	EM	CLEAN-UP	48000	25	CAU 398	Comments
AREA 6	21-MAY-2002	<u> </u>	FFACO-ONSITE	EM	CLEAN-UP	48000	25	CAU 398	Comments
AREA 6	16-MAY-2002	\Box	FFACO-ONSITE	EM	CLEAN-UP	4600	25	CAU 398	Comments

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SOLID VYASTE TRACKING SYSTEM

								Origin	<u>Of Waste</u>	
Landfiil ID	Date Of Receipt	vvaste Categ	_	Of Waste	EM o DP	Routine or Clean-up	<u>Weight</u> Pounds	Area No.	Building No.	
AREA 6	05-JUN-2002	_ [FFACO-ONSITE		EM	CLEAN-UP	36000	25	CAU398	Comments
AREA 6	04-JUN-2002	_	FFACO-ONSITE		EM	CLEAN-UP	45000	25	CAU398	Comments
AREA 6	04-JUN-2002		FFACO-ONSITE		EM	CLEAN-UP	48000	25	CAU398	Comments
AREA 6	04-JUN-2002	_	FFACO-ONSITE		EM	CLEAN-UP	49000	25	CAU398	Comments
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		- [_					emmenta
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Count *4

Bechtel Nevada			Load Ve				•
SWO USE (Circle One A	rea) A	AREA	23		6	(9)	LANDFILL
For waste characterization, ap	proval,	andlor assist	tance, contact	Solid	Waste O	peration (SW	O) at 5-7898.
Waste Generator: Dan KRZC	r rolloffs,					of materials.)	lumber <u>5 -557</u> 7
Waste Category: (check one)		☐ Commerci	ai	N N	Industria		
Waste Type: NTS (check one) Non-Putres	cible	Putrescible	ontaining Materia	Ø	<u> </u>	nsite	WAC Exception Historic DŒ/NV
Pollution Prevention Category: (check			ntal managemen	=	Defense i		
Pollution Prevention Category: (check		Clean-Up			Routine	10,000	
Method of Characterization: (check one		Sampling 8	Analysis			inowledge	Contents
Prohibited Waste Radioactive	waste; R		zardous waste; F	ree liqu			latory levels-, and Medical
Additional Prohibited Waste Sewage Se at the Area 9 U10c Landfill:	udge; Anin	nal carcasses-,	Wet garbage (fo	od wast	e); and Fria	ble asbestos	
NOTE: Waste disposed at the Area 6 Hydroca gasoline (no benzene, lead); jet fuel; d Acceptable waste at any NTS landfill: Asphalt Metal Wire Ca Manufactured items: (swamp coolers, Additional waste accepted at the Area Asbestos: Friable Non-Friat	all allowarbon Lanciesel fuel; ble Lanciesel fuel; ble Lanciesel fuel; cond Lanciesel fuel; ble Lanciesel fuel; cond Lanciesel fuel; cond Lanciesel fuel; cond Lanciesel fuel; cond Lanciesel fuel;	able wastes dill must have controlled the learning of the lear	Rubber (Insulation electronic com Office wast	ined viewith perent as unalter (exclude on (non iponen e Quantit	vithin this troleum hycohaltic petro ed geologi ling tires) -Asbestos ts, PPE, et Food Was y:	load: Irocarbons or conteum hydrocarbo c materials form) te	on; and ethylene glycol. Empty containers Demolition debris Cement & concrete Carcasses
			military vehicle	es L			and/oil/water separators
Light ballasts (contact SWO) Dra Hydrocarbons (contact SWO)	ained fue	l filters (gas &	diesel)	L	_ Deconi ☐ Tanks	ned Undergrou	nd and Above Graund
Additional waste accepted at the Area	6 Hydrod	carbon Landf	7N:	<u>_</u>			
		el filters (gas &		[☐ Crushe	ed non-terne pl	ated oil filters
	udge from	n sand/oil/wate	er separators] PCBs	below 50 parts	per million
Initials: (If initialed, no radiolog The above mentioned waste was general knowledge, does not contain radiological regions)	gical clear rated out	rance is neces: tside of a Coi				rea (CWMA) a	nd to the best of my
To the best of my knowledge, the wast site. I have verified this through the wa prohibited and allowable waste items.	e descrii Iste char	bed above co racterization i	ntains only th method identii	ose m fied ab	aterials th ove and a	at are allowed review of the	i for disposal at this above-mentioned
Print Name: Daniel D.	<u> </u>	rker			l''Rad	pplicable, pl liological Re here. Onsite	ace BN-0646, lease Sticker" use only.
Signature:	But	<u> </u>	Date: <u>4 — 2</u> 5	-02	•		•

Note: Food waste, office trash and/or animal carcasses are considered not to contain added radioactivity, and therefore do not require a radiological clearance.

SWO USE ONLY

Load Weight (net from scale of estimate) 15,000 Signature of Certifier: W/a

•	Bechtel Nevada NTS Landfill Load Ver (Waste definitions are available on		on	
	SWO USE (Circle One Area) AREA 23	6	9	LANDFILL
	For waste characterization, approval, andlor assistance, contact S	Solid Wast	te Operation (S)	VO) at 5-7898.
į	REQUIRED: WASTE GENERATOR II (This form is for rolloffs, dump trucks, and other on. Waste Generator: BN ENTITO NOTATE LESSON Location / Origin: A-25 E-Mad CAU398 (AS 2	NFORMA site dispos (^^	sal of materials. Circle Phone) Number: <u>5 - 5577</u>
	Waste Category: (check one)	⊠ Indu	strial	
•	Waste Type: NTS Putrescible	☐ FFAC	O-onsite	WAC Exception
	(check one) Non-Putrescible Asbestos Containing Material	FFAC	CO-offsite	Historic DOE/NV
	Pollution Prevention Category: (check one)	Defe	nse Projects	
-	Pollution Prevention Category: (check one) 💢 Clean-Up	Rout	ine	
	Method of Characterization: (check one) Sampling & Analysis		ess Knowledge	Contents
	Prohibited Waste Radioactive waste; RCRA waste; Hazardous waste; Fre at all three NTS landfills: wastes (needles, sharps, bloody clothing). Additional Prohibited Waste Sewage Studge; Animal carcasses-, Wet garbage (food at the Area 9 U10c Landfill:	•		gulatory levels-, and Medica!
	REQUIRED: WASTE CONTENTS ALLOV Check all allowable wastes that are contain NOTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact w gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosen	ed within ith petroleum	this load: n hydrocarbons or d	oolants such as: bon; and ethylene glycol.
	Acceptable waste at any NTS landfill: Paper Rocks / ur	naltered ged	ologic materials	Empty containers
	Asphalt Metal Wood Soil Mubber (e.	xcluding tire	es)	Demolition debris
	☐ Plastic ☐ Wire ☐ Cable ☐ Cloth 🕖 ☐ Insulation	(non-Asbe	stosform)	Cement & concrete
	Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic comp			
	Additional waste accepted at the Area 23 Mercury Landfill: Office waste		Waste 🔲 Anima	Carcasses
	Asbestos: Friable Non-Friable (contact SWO if regulated load) Qu	Jantity:		
	Additional waste accepted at the Area 9 U10c Landfill:			
	☐ Non-friable asbestos ☐ Drained automobiles and military vehicles			sand/oil/water separators
٠	Light ballasts (contact SWO) Drained fuel filters (gas & diesel)		_	und and Above Ground
-	Hydrocarbons (contact SWO)	L lar	nks	· · · · · · · · · · · · · · · · · · ·
	Additional waste accepted at the Area 6 Hydrocarbon Landfill:	ш.		
٠	Septic sludge Rags Drained fuel filters (gas & diesel)		ushed non-terne	
	Plants Soi Sludge from sand/oil/water separators		CBs below 50 par	s per million
-	REQUIRED: WASTE GENERATOR : Initials: (If initialed, no radiological clearance is necessary.)			
_	The above mentioned waste was generated outside of a Controlled Waste It knowledge, does not contain radiological materials.	Manageme	nt Area (CWMA)	and to the best of my
_	To the best of my knowledge, the waste described above contains only the site. I have verified this through the waste characterization method identified and allowable waste items.	RCT Initi	ials his container/load is	e for Waste Disposal
_	Print Name: Daniel D. Kir Ker Signature: Date: 1-370)	D P	ontamination. his contaner/load is crocess knowledge an his container/load is ontamination based	free of radioactive
	Note: Food waste, office trash and/or animal carcasses are considered not to c require a radiological clearance.	SIGNATUR	· Commi	DATE: 4/77/6-2 BN-0640 (08/99)
-	SWO USE ONLY			11
	Load Weight (net from scale or estimate): 2000 Signature of	Certifier:_	A de la constante de la consta	BN-0918 (05/00)
			٠	// X /

<i>Bechtel Nevada</i> N	TS Landfill L. (Waste definitions ar			•	-
SWO USE (Circle One A	rea) AREA	23	(6)	9	LANDFILL
For waste characterization, ap	proval, andlor assistal	nce, contact	Solid Waste O	peration (SI	NO) at 5-7898.
RE (This form is for Waste Generator: 上かんだん	QUIRED: WASTE GE rolloffs, dump trucks, LKYYET Mod (* AM	NERATOR I and other or	INFORMATION	i f materials.	
Waste Category: (check one)	☐ Commercial	-	⊠√ndustrial		
Waste Type: NTS (check one) Non-Putreso	Putrescible Asbestos Con	ntaining Material	FFACO-of		☐ WAC Exception ☐ Historic DOE/NV
Pollution Prevention Category: (check of	one) 🔀 Environmenta	al management	Defense P	'rojects	
Pollution Prevention Category: (check of	one) X Clean-Up		Routine		
Method of Characterization: (check one			Process K		Contents
at all three NTS landfills: wastes (nee Additional Prohibited Waste Sewage St.	dles, sharps, bloody clothin	ng).	•		gulatory levels-, and Medical
		nat are containme into contact	ined within this with petroleum hyd	load: rocarbons or c	
Acceptable waste at any NTS landfill:	☐ Paper		ınaltered geologi		☐ Empty containers
Asphalt	ood Soil	=	excluding tires)		Demolition debris
☐ Plastic ☐ Wire ☐ Cal	bie 🔲 Cioth	Insulation	n (non-Asbestost	iorm)	Cement & concrete
☐ Manufactured items: (swamp coolers,	furniture, rugs, carpet, e	electronic com	ponents, PPE, et	c.)	
Additional waste accepted at the Area	23 Mercury Landfill:	Office waste	Food Was	te 🔲 Anima	l Carcasses
Asbestos: Friable Non-Friab	le (contact SWO if regul	ated load) C	luantity:		
Additional waste accepted at the Area			·		
	ained automobiles and m	- '			sand/oil/water separators
Light ballasts (contact SWO) Dra Hydrocarbons (contact SWO)	ained fuel filters (gas & d	liesel)	Deconr Tanks	ed Undergro	ound and Above Ground
Additional waste accepted at the Area	8 Hydrocarbon Landfill	:			
l— ' ' — -	ained fuel filters (gas & d	•	=		plated oil filters
	idge from sand/oil/water			pelow 50 par	ts per million
	EQUIRED: WASTE GE lical clearance is necessa		SIGNATURE		
The above mentioned waste was gener knowledge, does not contain radiologic		rolled Waste	Management Ar	rea (CWMA)	and to the best of my
To the best of my knowledge, the waste site. I have verified this through the wa prohibited and allowable waste items.	e described above cons ste characterization me	tains only the ethod identifi	ose materials the ed above and a	at are allowe review of th	ed for disposal at this ne above-mentioned
Print Name: Danish K	irker	¥ 7°	"Rad	liological R	place BN-0646, Release Sticker" te use only.
Signature: Ward Dan	Date Date	te: <u>7-28</u>	<u>-0</u> 2		*
Note: Food waste, office trash and/or anim require a radiological clearance.	nal carcasses are consid	Jered not to co	ontain added radi	oactivity, and	d therefore do not
SWO USE ONLY				1 1	1-
Load Weight (net from scale or estima	ite): 15.000	Signature of	Certifier://_	wit do	nous

BN-0918(09/00)

Bechtel Nevada	NTS Landfill (Waste definitions			n	
SWO USE (Circle O	ne Area) AREA	23	(6)	9	LANDFILL
	tion, approval, and/or assis	tance, contact .	Solid Waste	Operation (S	SWO) at 5-7898.
Waste Generator: 77his for A-2.5	REQUIRED: WASTE OF IS IS FOR TOUCK IN THE PROPERTY OF THE PROP	ട്ടേ, and other on	site dispose	I of materials	s.) e Number <u>5-557</u> 7
Waste Category: (check one)	Commerci		Indust	ial	
Waste Type:	S Putrescible		FFACO	-onsite	WAC Exception Historic DOE/NV
Pollution Prevention Category:	(check one) Environme	ental management	Defens	e Projects	
Pollution Prevention Category:	(check one) 📈 Clean-Up		Routin	•	
Method of Characterization: (ch	eck one) Sampling	& Analysis	Proces	s Knowledge	Contents
	dioactive waste; RCRA waste; Ha stes (needles, sharps, bloody clot ewage Sludge; Animal carcasses-,	hing).	•		
•	REQUIRED: WASTE CON Check all allowable wastes	that are contain	ned within th	is load:	
NOTE: Waste disposed at the Area 6 gasoline (no benzene, lead); j	Hydrocarbon Landfill must have on the Hydrocarbon Landfill must have on the Hydrocarbon the Hydrocarbon Hydrocarbon Landfill must have been been been been been been been be				
Acceptable waste at any NTS la Asphalt Metal Plastic Wire Manufactured items: (swamo	Indfill: Paper Wood Soil Cable Cloth coolers, furniture, rugs, carpet	Rubber (e	excluding tires (non-Asbest	osform)	☐ Empty containers ☐ Demolition debris ☐ Cement & concrete
Additional waste accepted at th					al Carcasses
☐ Asbestos: ☐ Friable ☐ N	on-Friable (contact SWO if reg	gulated load) Q	uantity:		· .
Additional waste accepted at the Non-friable asbestos Light ballasts (contact SWO)	e Area 9 U10c Landfill: Drained automobiles and Drained fuel filters (gas 8		Deca	onned Underg	n sand/oil/water separators round and Above Ground
Hydrocarbons (contact SWO) Additional waste accepted at th	e Area 6 Hudrocarbon Land	fill	∐ Tank	<u> </u>	
☐ Septic sludge ☐ Rags ☐ Plants ※ Soi	☐ Drained fuel filters (gas &☐ Sludge from sand/oil/wat	& diesel) ter separators	PCE	is below 50 pa	e plated oil filters arts per million
initials: (if initialed, no	REQUIRED: WASTE radiological clearance is neces		SIGNATUR.	E	•
The above mentioned waste wa knowledge, does not contain ra		ntrolled Waste l	Management	Area (CWMA	A) and to the best of my
To the best of my knowledge, the site. I have verified this through prohibited and allowable waste	the waste characterization	ontains only the method identific	ed above and	a review of	the above-mentioned
Print Name: Denin /	D. K. Ker	Date: <u>4-30</u> -	-02	This contamination of the cont	taner/load is exempt from surv
Note: Food waste, office trash an require a radiological cleara		nsidered not to co		This contamin	nation based on radioactive active the state of the state
SWO USE ONLY	07			0	
Load Weight (net from scale o	r estimate): 20 ala	_ Signature of	Certifier:	Junio	+ (egs)

BN-0512 (09/00)

Bechtel N	evana	NTS (Wa		are available on			•
SWO USE (Circle O	ne Area)	AREA	23	(6	9	LANDFILL
For waste c	haracterizat	ion, approval	, andior assist	ance, contact S	Solid V	'aste Operation	(SWO) at 5-7898.
ste Generator:	× ' '	m is for rolloff		ENERATOR IN s, and other ons & R		posal of materia	als.) one Number: 5-7 755
cation / Origin:	- Devol - 1	Zirker E-L	Nuch.	C#1 399	8 C	15 5/6/02	one Hamber. 3 7733
ste Category: (ch	neck one)		Commerci			ndustrial	
ste Type: eck one)	☐ NT.	S n-Putrescible	Putrescible	ontaining Material	ĴX F	FACO-onsite FACO-offsite	WAC Exception Historic DOE/NV
lution Prevention	<u> </u>			ntal management	_=_	Defense Projects	Therence DODINA
llution Prevention			Clean-Up	nat management	_=_	Routine	
thod of Characte			Sampling 8	Analysis		rocess Knowledge	Contents
phibited Waste all three NTS land ditional Prohibite	dfills: was ed Waste Se	stes (needles, sh	arps, bloody cloth	ning).	·	•	A regulatory levels-, and Medical
he Area 9 U10c L				TENTS ALLOV			·
TE: Waste disposed gasoline (no be	d at the Area 6 nzene, lead); j	Hydrocarbon La et fuel; diesel fue	andfill must have c el; lubricants and t	ome into contact w hydraulics; kerosen	ith petro e: aspha	leum hydrocarbons litic petroleum hydr	or coolants such as: ocarbon; and ethylene glycol.
ceptable waste a	t any NTS la		Paper	=		geologic materia	
	Metal	∐ Wood	∐ Soil	Rubber (e:		•	☐ Demolition debris
	Wire	☐ Cable	☐ Cloth	_	•	sbestosform)	Cement & concrete
Manufactured iter ditional waste ac							imal Carcaceas
Asbestos: Fr	· —					OU Waste LI Ati	iiiidi Odi Casses
ditional waste ac		<u>.</u>		orated loady at			
Non-friable asbes		_		military vehicles		Solid fractions fr	om sand/oil/water separators
Light ballasts (cor			uel filters (gas &			Deconned Unde	rground and Above Ground
Hydrocarbons (co		_		·		Tanks	
ditional waste ac	cepted at th	e Area 6 Hydr	ocarbon Landf	īli:			·
Septic sludge	Rags	Drained f	uel filters (gas 8	diesel)		Crushed non-ter	rne plated oil filters
Plants D	1 soil	☐ Sludge fro	om sand/oil/wat	er separators		PCBs below 50	parts per million
-		REQUIR	RED: WASTE	GENERATOR :	SIGNA	TURE	
ials:(/	lf initialed, no	radiological cle	earance is neces	sary.)			
e above mentione owledge, does no				ntroiled Waste A	lanage		rvey Release for Waste Dis
the best of my ki e. I have verified ohibited and alloy	nowledge, ti	he waste desc	ribed above co	ontains only tho method identifie	se mat	This correction	rtainer/load is free of external radio
	this through		aracterization		•	process	knowledge a exempt from survey o
nt Name: <u>Dan</u>	this through				· —	process	knowledge and origin. tainer/load is free of radioactive nation based on radioanalysis.
nt Name: Dan	this through wable waste	items. Kir Kur Kirku	[Date: <u>5 - 2 - 0</u>	2	This con contamis	knowledge and origin. tainerload is free of radioactive nation based on radioanalysis. DATE: 5
nt Name: Dan	this through wable waste	items. Kir Kur Kur dor animal car	[Date: <u>5 - 2 - 0</u>	2	This con contamis	knowledge and origin. tainerload is free of radioactive nation based on radioanalysis. DATE: 5

BN-0918 (09/00)

3echtel Nevada NTS Landfill Load Verification (Waste definitions are available on page 2) WO USE (Circle One Area) AREA 6 23 For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-7898. REQUIRED: WASTE GENERATOR INFORMATION (This form is for rolloffs, dump trucks, and other onsite disposal of materials.) Phone Number Waste Generator: AUX 39 Cation / Origin: Commercial ste Category: (check one) Industrial ☐ NTS Putrescible FFACO-onsite WAC Exception Waste Type: leck one) Historic DOE/NV Non-Putrescible Asbestos Containing Material FFACO-offsite Ullution Prevention Category: (check one) Environmental management Defense Projects Pollution Prevention Category: (check one) Clean-Up Routine thod of Characterization: (check one) Sampling & Analysis Process Knowledge Contents Prohibited Waste Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels-, and Medical at all three NTS landfills: wastes (needles, sharps, bloody clothing). iditional Prohibited Waste Sewage Sludge; Animal carcasses-, Wet garbage (food waste); and Friable asbestos the Area 9 U10c Landfill: REQUIRED: WASTE CONTENTS ALLOWABLE WASTES Check all allowable wastes that are contained within this load: DTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol. Acceptable waste at any NTS landfill: Paper : Rocks / unaltered geologic materials Empty containers ☐ Wood ☐ Soil Rubber (excluding tires)] Asphalt ☐ Metal Demolition debris ☐ Cable ☐ Cioth ∟] Plastic ☐ Wire Insulation (non-Asbestosform) Cement & concrete [7] Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.) dditional waste accepted at the Area 23 Mercury Landfill: 🔲 Office waste 🔲 Food Waste 🗀 Animal Carcasses Asbestos: Friable Non-Friable (contact SWO if regulated load) Quantity: dditional waste accepted at the Area 9 U10c Landfill: Non-friable asbestos Drained automobiles and military vehicles Solid fractions from sand/oil/water separators Light ballasts (contact SWO) Drained fuel filters (gas & diesel) Deconned Underground and Above Ground Hydrocarbons (contact SWO) Tanks -dditional waste accepted at the Area 6 Hydrocarbon Landfill: Septic sludge Rags Drained fuel filters (gas & diesel) Crushed non-terne plated oil filters Soil ☐ Plants ☐ Sludge from sand/oil/water separators PCBs below 50 parts per million REQUIRED: WASTE GENERATOR SIGNATURE (If initialed, no radiological clearance is necessary.) he above mentioned waste was generated outside of a Controlled Waste Management Area (CWMA) and to the best of my knowledge, does not contain radiological materials. Radiation Survey Release for Waste Disposal o the best of my knowledge, the waste described above contains only those ma RCT Initials ite. I have verified this through the waste characterization method identified abo This container/load is free of external radioactive contamination. prohibited and allowable waste items. This contaner/load is exempt from survey due to process knowledge and origin. This container/load is free of radioactive contamination based on radioanalysis. Print Name: Signature Note: Food waste, office trash and/or animal carcasses are considered not to contain added radioactivity, and therefore do not

ote: Food waste, office trash and/or animal carcasses are considered not to contain added radioactivity, and therefore do no require a radiological clearance.

SWO USE ONLY

Load Weight (net from scale or stimate): 23 000 Signature of Certifier: byway Inaks

Bechtel Nevada

NTS Landfill Load Verification (Waste definitions are available on page 2)

SWO USE (Circle One Area) AREA	23 (6 al)	9 1	ANDFILL
For waste characterization, approval, and/or assistan	ce, contact Solid	Waste Oper	ation (SWO)	at 5-7898.
REQUIRED: WASTE GEN			notorials \	
(This form is for rolloffs, dump trucks, a Waste Generator:	ma other onsite t	uisposai ui II		per: 295-5527
Location / Origin: Area 25 (AS 25-25-02 (T(A) Tes 7	ce11 "P"	CAU 39	
Waste Category: (check one)		Industrial		
		FFACO-onsite	- - - - - - - - - - - - - - - - - - -	WAC Exception
Waste Type: NTS Putrescible (check one) Non-Putrescible Asbestos Conta	=	FFACO-offsite	-	Historic DOE/NV
Pollution Prevention Category: (check one)	management []	Defense Proje		
Pollution Prevention Category: (check one) Clean-Up		Routine		
Method of Characterization: (check one) Sampling & An		Process Know		Contents
Prohibited Waste Radioactive waste; RCRA waste; Hazard wastes (needles, sharps, bloody clothing)		ds, PCBs above	ISCA regulato	ry leveis-, and Medica
Additional Prohibited Waste Sewage Sludge; Animal carcasses-, Wel	garbage (food waste	e); and Friable a	sbestos	
at the Area 9 U10c Landfill: REQUIRED: WASTE CONTE	NTS ALLOWAR	LE WASTES	3	
Check all allowable wastes that	t are contained w	rithin this loa	d:	
NOTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydrocarbon landfill must have come	into contact with per	troleum hydroca	arbons or coolan	ts such as: and ethylene glycol
gasoline (no benzene, lead); jet tuer, cleser tuer, lubricants and hydradicants and hydradi	Rocks / unalter			Empty containers
	Rubber (excludi			Demolition debris
<u> </u>	Insulation (non-	•	, <u>–</u>	Cement & concret
☐ Plastic ☐ Wire ☐ Cable ☐ Cloth ☐			لــا ،	Dement & Winder
Manufactured items: (swamp coolers, furniture, rugs, carpet, ele				
Additional waste accepted at the Area 23 Mercury Landfill:			Animai Cari	Lasses
Asbestos: Friable Non-Friable (contact SWO if regulat	ed load) Quantity	A: 		
Additional waste accepted at the Area 9 U10c Landfill:		7	_	
Non-friable asbestos	_			oil/water separator
Light ballasts (contact SWO) Drained fuel filters (gas & die	:sel)	Deconned	Underground	and Above Ground
☐ Hydrocarbons (contact SWO)]	Tanks		
Additional waste accepted at the Area 6 Hydrocarbon Landfill:				
Septic sludge Rags Drained fuel filters (gas & die	sel) [Crushed n	on-teme plate	d oil filters
☐ Plants ☐ Sludge from sand/oil/water s	eparators [PCBs belo	w 50 parts pe	r million
REQUIRED: WASTE GE		IATURE		
Initials: (If initialed, no radiological clearance is necessary				
The above mentioned waste was generated outside of a Contro	olled Waste Mana	gement Area	(CWMA) and	to the best of my
knowledge, does not contain radiological materials.	med fracto mana,	2 - 11 11 to 11	,	
-	sina anly thans —	atariala thet	ere allowed fa	or dienosal at this
To the best of my knowledge, the waste described above conta site. I have verified this through the waste characterization me	uns only mose mathed ab	ateriais viat (C	are anowed IC	uispusai at ulis
prohibited and allowable waste Items.	· · · · · · · · · · · · · · · · · · ·	Radiation	n Survey Rele	ase for Waste Dis
		RCT Initia	als:	
Print Name:) Daniel Nir Kar	_		ntamination.	is free of external radio
1-11771	= 5-16-02		is container/load in container/load in container/load	s exempt from survey of and origin.
3		C C C C		is free of radioactive d on radioanalysis.
Note: Food waste, office trash and/or animal carcasses are consider require a radiological clearance.	ered not to contain	SIGNATURE	Have like	1 TOR DATE: 5
		//	1	,
SWO USE ONLY Load Weight (net from scale or estimate): 4/1600	::	· - //	7/ Russ	4
Load Weight (net from scale or estimate):	Signature of Cert	iner: <u>//- /</u>	10000	<u> </u>

Bechtel Ne		S Landfill L Waste definitions a						
SWO USE (C	ircle One Are	a) AR EA	23	(6)	LANDFILL	
For waste cha	aracterization, appro	val, andlor assista	ance, contac	t Solid ¥	Vašte Operat	ion (SWO)	at 5-7898.	٦
_ 	(This form is for ro	Kirker	, and other	INFOR	sposal of mai	erials.) Phone Nun	nber <u>5-55</u> 7	?
Location / Origin: +	-25 CAU			7)	1			
Waste Category: (che		U Commercia	<u> </u>		ndustrial FACO-onsite		U MAG Essayina	_
Waste Type: (check one)	NTS Non-Putrescible	Putrescible	ontaining Materi	_	FFACO-offsite		WAC Exception Historic DCE/NV	,
Pollution Prevention			ntal manageme		Defense Project		HISTORIC DCENT	-
Pollution Prevention					Routine			\dashv
Method of Characteris		Sampling &	Analyeis		Process Knowle	daa	Contents	-
Prohibited Waste		ste; RCRA waste; Haz						al la
at all three NTS landfi		s, sharps, bloody cloth						_
Additional Prohibited at the Area 9 U10c La		e; Animal carcasses-,	Wet garbage (fo	ood waste)	and Friable ast	estos		
:	Check all a	D: WASTE CONT allowable wastes t	hat are conta	ained wi	hin this load:			
NOTE: Waste disposed a	at the Area 6 Hydrocarbo ene, lead); jet fuel; diese	n Landfill must have co of fuel: lubricants and h	ome into contac vdraulics: keros	t with petr	oleum hydrocart altic petroleum i	ons or coola	nts such as: and ethylene olycol.	
Acceptable waste at a		☐ Paper			geologic mat		Empty containers	,
☐ Asphalt ☐ N	Metal Wood	1	Rubber	(excludin	g tires)		Demolition debris	,
☐ Plastic ☐ \	Wire Cable	Cloth	Insulati	on (non-A	(sbestosform)		Cement & concre	te
Manufactured item:	s: (swamp coolers, fur	niture, rugs, carpet,	electronic cor	nponents	, PPE, etc.)			
Additional waste acc		-				Animal Car	rcasses	
Asbestos: Fria			ulated load)	Quantity:				-∐
Additional waste acce	·			_	1			
Non-friable asbesto	=	ed automobiles and	•	es L	-		l/oil/water separator	- 1
Light ballasts (cont	· —	ed fuel filters (gas &	diesel)	<u>_</u>		nderground	and Above Ground	' I
Hydrocarbons (con			···	<u>L</u>	Tanks			4
Additional waste acce		•		_	ا با			1
Septic sludge	. —	ed fuel filters (gas &	•		Crushed nor	•		-
Plants \Soi		e from sand/oil/wate		اللاماة و	PCBs below	ou pans pe	r million	-
Initials: (If it	ਲਵਪਾ nitialed, no radiologica	UIRED: WASTE G I clearance is necess		T.SIGNA	NURE			
The above mentioned knowledge, does not			trolled Wast	e Manage	ement Area (C	:WMA) and	to the best of my	
To the best of my kno site. I have verified th prohibited and allowa	is through the waste				RCT Initial	<u>s</u> container/loa amination.	lease for Waste D	dioacti
Print Name: <u>Jan, e</u>	D. Kirker	,		 .	proc	container/los	d is exempt from surve pe and origin. Id is free of radioactive and on radioanalysis.	-
Signature:	210 K	~ D	ate: <u>5-20</u>	7-02	SIGNATURE:	1. 1. m. c	DATE:	-0848 (08
Note: Food waste, office require a radiologous		carcasses are cons	idered not to	contain a	dded radioacti	vity, and the	refore do not	
SWO USE ONLY		4000			1	1	000 - 7	$\overline{}$
Load Weight (net from	see orestimate	Y46507	Signature (of Certific	1 1/2	Dul	rence	

BN-0918 (09/00)

CITO DOL (ONOIC ONO THE	a) AREA	23	(6)	9	LANDFILL
For waste characterization, appro	oval, and/or assis	tance, contact So	id Waste	Operation (S)	NO) at 5-7898.
(This form is for row Waste Generator: YSK ER	IIRED: WASTE OF		ORMATI e disposa	l of materials.) Number: <u> </u>
Waste Category: (check one)	☐ Commerc		☑ Indust	rial	
Waste Type: NTS (check one) Non-Putrescible	Putrescible Asbestos 0	ontaining Material	FFACO	-onsite -offsite	WAC Exception Historic DOE/NV
Pollution Prevention Category: (check one	Environme	ental management	Defens	e Projects	
Pollution Prevention Category: (check one) Clean-Up		Routin	e	
Method of Characterization: (check one)	Sampling i	& Analysis	Proces	s Knowledge	Contents
Prohibited Waste Radioactive wa	ste; RCRA waste; Ha	zardous waste; Free li	quids, PCB	s above TSCA re	gulatory levels-, and Medical
at all three NTS landfills: wastes (needle Additional Prohibited Waste Sewage Sludg at the Area 9 U10c Landfill:	s, sharps, bloody cloti e; Animal carcasses-,		aste); and F	riable asbestos	
	allowable wastes on Landfill must have		<i>i within th</i> petroleum	nis load: hydrocarbons or o	
Acceptable waste at any NTS landfill: ☐ Asphalt ☐ Metal ☐ Wood	☐ Paper		tered geol	ogic materials	☐ Empty containers ☐ Demolition debris
 ,	☐ Cloth	insulation (n		•	Cement & concrete
■ Manufactured items: (swamp coolers, fur					
Auditional waste accepted at the Area 23	Mercury Landfill:	Office waste	☐ Food W	aste 🔲 Anima	l Carcasses
Asbestos: Friable Non-Friable	·	julated load) Quai	ntity:		<u>. </u>
Light ballasts (contact SWO) Drain	ed automobiles and		_	onned Undergro	sand/oil/water separators ound and Above Ground
Hydrocarbons (contact SWO)					
☐ Hydrocarbons (contact SWO) Additional waste accepted at the Area 6 H	ydrocarbon Land	fill:			· I
Additional waste accepted at the Area 6 H	lydrocarbon Land ed fuel filters (gas &		☐ Crus	shed non-teme	plated oil filters
Additional waste accepted at the Area 6 H	-	k diesel)		shed non-terne 3s below 50 par	·
Additional waste accepted at the Area 6 H Septic sludge □ Rags □ Drain □ Plants □ Soi □ Sludg REQ	ed fuel filters (gas & e from sand/oil/wat UIRED: WASTE	k diesel) er separators GENERATOR SIG	PCE	s below 50 par	·
Additional waste accepted at the Area 6 H Septic sludge Rags Drain Plants S S I Sludg REQ Initials: (If initialed, no radiological	ed fuel filters (gas & e from sand/oil/wat UIRED: WASTE il clearance is neces ed outside of a Co	k diesel) er separators GENERATOR SIG sary.)	SNATUR	Ss below 50 par E Area (CWMA)	ts per million and to the best of my
Additional waste accepted at the Area 6 H Septic sludge Rags Drain Plants Sol Sludg REQ Initials: (If initialed, no radiological The above mentioned waste was generate knowledge, does not contain radiological To the best of my knowledge, the waste d site. I have verified this through the waste	ed fuel filters (gas & e from sand/oil/wat UIRED: WASTE Il clearance is neces ed outside of a Co- materials.	k diesel) er separators GENERATOR SIGNATOR sary.) ntrolled Waste Man	ONATUR	Area (CWMA) adiation Surve CT Initials This contaminar	and to the best of my Py Release for Waste Dis
Additional waste accepted at the Area 6 H Septic sludge Rags Drain Plants Soil Sludge REQ Initials: (If Initialed, no radiological The above mentioned waste was generate knowledge, does not contain radiological To the best of my knowledge, the waste de site. I have verified this through the waste prohibited and allowable waste items.	ed fuel filters (gas & e from sand/oil/wat UIRED: WASTE of clearance is necessed outside of a Comaterials.	k diesel) er separators GENERATOR SIGNATOR sary.) ntrolled Waste Managements ontains only those method identified	ONATUR magement mate abovi	Area (CWMA) adiation Surve RCT Initials This contaminat This contaminat This contaminat	ts per million and to the best of my Release for Waste Dis
Additional waste accepted at the Area 6 H Septic sludge Rags Drain Plants Soil Sludg REQ	ed fuel filters (gas & e from sand/oil/wat UIRED: WASTE of clearance is necessed outside of a Comaterials.	er separators GENERATOR SIGNATUR Sary.) Introlled Waste Managementains only those method identified	mate abovi	Area (CWMA) adiation Surve CT Initials This contain process kn This contain this contain the contain	and to the best of my Py Release for Waste Dis ner/load is free of external radi ion. ner/load is exempt from survey owiedge and origin. ner/load is free of radioactive ion based on radioanalysis. DATE: SHOOL

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Bechtel Nevada NTS Landfill Load Ve		
SWO USE (Circle One Area) AREA 23	(6) 9 1	ANDFJLL
For waste characterization, approval, and/or assistance, contact	olid Waste Operation (SWO)	at 5-7898.
REQUIRED: WASTE GENERATOR (This form is for rolloffs, dump trucks, and other o Waste Generator: KAS DAN KILK Location / Origin: A-25 (Au 398 E MA)	ite disposal of materials.)	ber <u>5-5577</u>
Waste Category: (check one) Commercial	Industrial	
Waste Type: NTS Putrescible (check one) Non-Putrescible Asbestos Containing Materia	FFACO-onsite	WAC Exception Historic DOE/NV
Pollution Prevention Category: (check one) 📈 Environmental management	Defense Projects	
Pollution Prevention Category: (check one)	Routine	·
Method of Characterization: (check one) 😡 Sampling & Analysis	Process Knowledge	Contents
Prohibited Waste Radioactive waste; RCRA waste; Hazardous waste; F wastes (needles, sharps, bloody clothing). Additional Prohibited Waste Sewage Sludge; Animal carcasses. Wet garbage (for	•	y levels-, and Medical
at the Area 9 U10c Landfill: REQUIRED: WASTE CONTENTS ALLO Check all allowable wastes that are conta NOTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerose	ed within this load: th petroleum hydrocarbons or coolan	ts such as: and ethylene glycol.
·	altered geologic materials	Empty containers
☐ Asphalt ☐ Metal ☐ Wood ☐ Soil ☐ Rubber (cluding tires)	Demolition debris
	(non-Asbestosform)	Cement & concrete
☐ Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic com Additional waste accepted at the Area 23 Mercury Landfill: ☐ Office wast		2255
Asbestos: Friable Non-Friable (contact SWO if regulated load)		
Additional waste accepted at the Area 9 U10c Landfill:		
☐ Non-friable asbestos ☐ Drained automobiles and military vehicle	Solid fractions from sand/	oil/water separators
☐ Light ballasts (contact SWO) ☐ Drained fuel filters (gas & diesel) ☐ Hydrocarbons (contact SWO)	Deconned Underground aTanks	and Above Ground
Additional waste accepted at the Area 6 Hydrocarbon Landfill:		
☐ Septic sludge ☐ Rags ☐ Drained fuel filters (gas & diesel)	Crushed non-terne plated	l oil filters
Plants Soil Sludge from sand/oil/water separators	PCBs below 50 parts per	million
REQUIRED: WASTE GENERATOR Initials: (If initialed, no radiological clearance is necessary.)	IGNATURE	
The above mentioned waste was generated outside of a Controlled Waste knowledge, does not contain radiological materials.	anagement Area (CWMA) and t	to the best of my
To the best of my knowledge, the waste described above contains only the site. I have verified this through the waste characterization method identification prohibited and allowable waste items. Print Name: Daniel N Kirksir Signature: Anniel Date 3-3-63	Radiation Survey Release for RCT Initials This container/load is free of contamination. This container/load is exempt process knowledge and origin This container/load is free of recommendation based or radio signature:	external radioactive from survey due to
Note: Food waste, office trash and/or animal carcasses are considered not to c require a radiological clearance.		2 0 BN-0646 (09/99)
SWO USE ONLY	h the	
Load Weight (net from scale or estimate);) 4500 Signature o	Certifier: UX UUU	

Bechtel Nevada NTS Landfill Load Verification (Waste definitions are available on page 2) LAN. SWO USE (Circle One Area) AREA 23 6 9 For waste characterization, approval, and/or assistance, contact Solid Waste Operation (SWO) at 5-789, REQUIRED: WASTE GENERATOR INFORMATION This form is for rolloffs, dump trucks, and other onsite disposal of materials.) Phone Number: 5-55 Waste Generator: m Kirker 390 Location / Origin: 25 Emay Industrial Waste Category: (check one) Commercial WAC Exception □ NTS FFACO-onsite Putrescible Waste Type: (check one) Non-Putrescible Asbestos Containing Material FFACO-offsite Historic DOE/NV Pollution Prevention Category: (check one) Environmental management Defense Projects Pollution Prevention Category: (check one) Clean-Up Routine Method of Characterization: (check one) Sampling & Analysis Process Knowledge Contents **Prohibited Waste** Radioactive waste; RCRA waste; Hazardous waste; Free liquids, PCBs above TSCA regulatory levels-, and Medical wastes (needles, sharps, bloody clothing). at all three NTS landfills: Additional Prohibited Waste Sewage Sludge; Animal carcasses-, Wet garbage (food waste); and Friable asbestos at the Area 9 U10c Landfill: REQUIRED: WASTE CONTENTS ALLOWABLE WASTES Check all allowable wastes that are contained within this load: NOTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact with petroleum hydrocarbons or coolants such as: gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphaltic petroleum hydrocarbon; and ethylene glycol. Acceptable waste at any NTS landfill: Paper Rocks / unaltered geologic materials Empty containers ☐ Wood Soil ☐ Asphalt ☐ Metal Demolition debris Rubber (excluding tires) Plastic ☐ Wire Cable Cloth insulation (non-Asbestosform) Cement & concrete Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, PPE, etc.) Additional waste accepted at the Area 23 Mercury Landfill; 🔲 Office waste 🔲 Food Waste 🔲 Animal Carcasses Asbestos: Friable Non-Friable (contact SWO if regulated load) Quantity: Additional waste accepted at the Area 9 U10c Landfill: ☐ Non-friable asbestos ☐ Drained automobiles and military vehicles Solid fractions from sand/oil/water separators Light ballasts (contact SWO) Drained fuel filters (gas & diesel) Deconned Underground and Above Ground Hydrocarbons (contact SWO) Tanks Additional waste accepted at the Area 6 Hydrocarbon Landfill: ☐ Septic sludge ☐ Rags ☐ Drained fuel filters (gas & diesel) Crushed non-terne plated oil filters ☐ Plants Sludge from sand/oil/water separators PCBs below 50 parts per million M. REQUIRED: WASTE GENERATOR SIGNATURE (If initialed, no radiological clearance is necessary.) The above mentioned waste was generated outside of a Controlled Waste Management Area (CWMA) and to the best of my knowledge, does not contain radiological materials. To the best of my knowledge, the waste described above contains only those materials that are allowed for disposal at this

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

Radiation Survey Release for Waste Disposa

Signature of Certifier

	Radiation Survey Release for Waste Disposa
\mathbf{L}_{i}	RCT Initials
Print Name: Daniel V. Kickes	This container/load is free of external radioactive
Signature: Date: 5-7/-02	This contained is exempt from survey due to process knowledge and origin.
Note: Fond waste office trash and/or animal carpasses are considered not to contain:	This container/load is free of radioactive contamination based on radioanalysis.

require a radiological clearance

Load Weight (net from scale or estimate)

SWO USE ONLY

This container/load is free of radioactive containination based on radioanalysis.

SIGNATURE: DATE:

1 (0.1.) (1.1.)

Bechtel Nevada	NTS	Landfill					
SWO USE (Circle (One Area) AREA	23	7	5)	9	LANDFILL
For wasta charecteriza	ation, approva	al, andlor assist	tance, contact	Solid V	Vaste Opera	ation (SW	O) at 5-7898.
Waste Generator: 15N Z	is for rollo	RED: WASTE G ffs. dump truck J.EREL N				eterials.) Phone N	umber: <u>5-/773</u>
	R 25 C			<u>7 2 7</u>	<u>8</u>		
Waste Category: (check one) Waste Type: (check one)	ITS	Commerci Putrescible	ontaining Materia	5	ndustrial FACO-onsité FACO-offsite		WAC Exception Historic DOE/NV
Pollution Prevention Category	/		ntal management		Defense Proje		
Pollution Prevention Category		Clean-Up			Routine		
Method of Characterization: (c		Sampling 8	Analysis	$\overline{\mathbf{z}}$	Process Know	ledge	Contents
Prohibited Waste R							atory levels-, and Medical
at all three NTS landfills: w Additional Prohibited Waste S at the Area 9 U10c Landfill:	Sewage Sludge; A		Wet garbage (foo				
		: WASTE CON wable wastes i					[
NOTE: Waste disposed at the Area gasoline (no benzene, lead):	6 Hydrocarbon L	andfili must have c	ome into contact	with petro	oleum hydroca	irbons or coo	lants such as: n; and ethylene glycol.
Acceptable waste at any NTS I	landfill:	Paper	Rocks / u	naitered	l geologic ma	aterials	Empty containers
Asphalt	∐ Wood	اکل Soil	Rubber (- ,	Ī	Demolition debris
Plastic Wire	∐ Cable	Cloth		•	sbestosform	ı) I	Cement & concrete
Manufactured items: (swamp							
Additional waste accepted at t Asbestos: Friable		ercury Landilli: entact SWO if reg			ood Waste L	Animai C	arcasses
Additional waste accepted at t							
Non-friable asbestos	_	automobiles and	military vehicle	s 🗆	Solid fraction	ons from sa	nd/oil/water separators
Light ballasts (contact SWO)	_	fuel filters (gas &	•				nd and Above Ground
Hydrocarbons (contact SWO			•		Tanks		
Additional waste accepted at t		rocarbon Landf	īli:				
Septic sludge Rags	☐ Drained	fuel filters (gas &	diesel)		Crushed no	on-terne pla	ted oil filters
Plants	Sludge f	rom sand/oil/wate	er separators	Ø	PCBs belo	=	1
	REQUI	RED: WASTE	GENERATOR	SIGNA	TURE		
Initials: (If initialed, n	o radiological c	learance is necess	sary.)				
The above mentioned waste w knowledge, does not contain r			ntrolled Waste	Manage	ment Area ((CWMA) an	d to the best of my
To the best of my knowledge, site. I have verified this throug prohibited and allowable wast	h the waste c				RCT Initials This cont	s container/los tamination.	lease for Waste Dispo ad is free of external radioac d is exempt from survey due ge and origin.
Print Name:	5)0						ad is free of radioactive sed on radioanalysis.
Signature: David TOX	Juderel	Nelu :	Date: 22MAY.	02_	SIGNATURE:	8 1.5	Leroy Las Portes BN 0848 1
Note: F∞d waste, office trash a ræquire a radiological clear	nc/or animal carance.	arcasses are cons	sidered not to co	ontain a	ded radioac	tivity, and ti	herefore do not
SWO USE ONLY	سر ذک						
Load Weight (net from scale		40003	Signature of	Certific	er:		



Bechtel Nevada NTS Landfill Load Ver Waste definitions are available on		ion	
SWO USE (Circle One Area) AREA 23	(6)	9	LANDFILL
For waste characterization, approval, andior assistance, contact S	Solid Wa.	ste Operation (SV	VO) at 5-7898.
REQUIRED: WASTE GENERATOR IN (This form is for rolloffs, dump trucks, and other one Waste Generator:	NFORMA site dispo	osal of materials.)	Number 296 - 5577
Location / Origin: Quea 25/CW398 FMpe			
Waste Category: (check one)	Ind	ustrial	
Waste Type:	~	ACO-onsite	☐ WAC Exception ☐ Historic DOE/NV
Pollution Prevention Category: (check one) Environmental management	Def	ense Projects	
Pollution Prevention Category: (check one)	☐ Roi	utine	
Method of Characterization: (check one) Sampling & Analysis	☐ Pro	cess Knowledge	Contents
Prohibited Waste Radioactive waste; RCRA waste; Hazardous waste; Free at all three NTS landfills; wastes (needles, sharps, bloody clothing).	e liquids, P	CBs above TSCA reg	julatory levels-, and Medical
Additional Prohibited Waste Sewage Sludge; Animal carcasses-, Wet garbage (food at the Area 9 U10c Landfill:	i waste); an	d Friable asbestos	
REQUIRED: WASTE CONTENTS ALLOW Check all allowable wastes that are contain	NABLE I	WASTES	
NOTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact wigasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; keroseni	ith petrolet	ım hydrocarbons or c	
Acceptable waste at any NTS landfill: Paper Rocks / un	naltered ge	eologic materials	☐ Empty containers
Asphalt Metal Wood Soil Rubber (ex	xcluding t	ires)	☐ Demolition debris
<u>-</u>	•	estosform)	Cement & concrete
Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic compo	onents, P	PE, etc.)	
Additional waste accepted at the Area 23 Mercury Landfill: Office waste	☐ Food	l Waste 🔲 Animal	Carcasses
Asbestos: Friable Non-Friable (contact SWO if regulated load) Qu	uantity:		
Additional waste accepted at the Area 9 U10c Landfill:	_		
☐ Non-friable asbestos ☐ Drained automobiles and military vehicles	□s	olid fractions from s	sand/oil/water separators
Light ballasts (contact SWO) Drained fuel filters (gas & diesel)		econned Undergro	und and Above Ground
Hydrocarbons (contact SWO)	T	anks	,
Additional waste accepted at the Area 6 Hydrocarbon Landfill:			· ·
☐ Septic sludge ☐ Rags ☐ Drained fuel filters (gas & diesel)		rushed non-terne p	plated oil filters
☐ Plants ☐ Sludge from sand/oil/water separators		CBs below 50 part	s per million
REQUIRED: WASTE GENERATOR S Initials: (If initialed, no radiological clearance is necessary.)	SIGNAT	JRE	
The above mentioned waste was generated outside of a Controlled Waste M knowledge, does not contain radiological materials.	lanageme	ent Area (CWMA) a	and to the best of my
To the best of my knowledge, the waste described above contains only thos site. I have verified this through the waste characterization method identifie prohibited and allowable waste items.		This contains contains	Release for Waste Dispos or/load is free of external radioact of the second from survey due viedge and origin.
Print Name: Daniel D. Kirker		This contains contains contamination	n based on radioanalysis.
Signature a Date 3-22-02	L	gar	The Metroto BN-0046 (09
Note: Food waste, office trash and/or animal carcasses are considered not to cor require a radiological clearance.	ntain adde	ed radioactivity, and	therefore do not
SWO USE ONLY		11/1	and I
Load Weight (net from scale or estimate): 460 Signature of (Certifier:	Xe//de	
			BN-0918 (09/00)

Bechtel Nevada

NTS Landfill Load Verification (Waste definitions are available on page 2)

								
SWO USE	(Circle	One Area)	AREA	23		$\mathfrak{S}^{\prime\prime}$	3	LANDFILL
For was	te characte	rization, approva	il, and/or ass	sistance, contac	ct Solid	Waste Opera	tion (SW	O) at 5-7898.
		s form is for rollo	ED: WASTE ffs, dump tru	GENERATOR icks, and other	INFOR onsite d	lisposal of ma		1 1
Waste Generator: Location / Origin:		ER D/CAV	398				Phone Nu	imber: <u>295 - 55</u> 7 <u>7</u>
Waste Category:			Comme	rcial	X	Industrial		
Waste Type:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NTS	Putrescit		<u></u> -	FFACO-onsite		VVAC Exception
(check one)		Non-Putrescible	Asbestos	s Containing Materi	al 🗍	FFACO-offsite		Historic DOE/NV
Pollution Preven	tion Catego	ory: (check one)	-=	mental managemer		Defense Project	·	. . T
Pollution Preven	tion Catego	ry: (check one)	Clean-U	lp	<u></u>	Routine		
Method of Chara	cterization:	(check one)	Samplin	g & Analysis		Process Knowled	ge	Contents
Prohibited Waste at all three NTS I		Radioactive waste; wastes (needles, st			ree liquid	ls, PCBs above T	SCA regul	atory levels-, and Medical
Additional Prohi at the Area 9 U10		Sewage Sludge; A	nimal carcasse	s-, Wet garbage (fo	od waste); and Friable asl	estos	
				ONTENTS ALL			•	
		rea 6 Hydrocarbon La ad); jet fuel; diesel fu	el; lubricants ar	nd hydraulics; keros	ene; aspl	naltic petroleum I	ydrocarbo	n; and ethylene glycol.
Acceptable wast	e at any NT	S landfill:	Paper	_		d geologic mat	erials	Empty containers
Asphalt	∐ Metal	∐ Wood .	Soil	_	(excludin	• ,		Demolition debris
Plastic	Wire	☐ Cable	Cloth	. LI Insulati	on (non-/	Asbestosform)		Cement & concrete
		mp coolers, furnitu			 -		<u> </u>	
Additional waste	accepted a	at the Area 23 Me	rcury Landfil	I: Office was	te LF	ood Waste	Animal C	arcasses
Asbestos:	Friable [Non-Friable (co	ntact SWO if r	regulated load)	Quantity	: :========		
Additional waste	accepted a	at the Area 9 U10d	Landfill:			· 		
Non-friable as	bestos	Drained a	automobiles a	and military vehicl	es L	Solid fraction	s from sa	nd/oil/water separators
Light ballasts	(contact SW	O) Drained f	uel filters (gas	s & diesel)		Deconned U	ndergrour	d and Above Ground
☐ Hydrocarbons	(contact SV	VO)				Tanks		
Additional waste	accepted a	at the Area 6 Hyd	rocarbon Lar	ndfill:	_	_		
Septic sludge		. =	fuel filters (ga	s & diesel)	<u> </u>	Crushed nor	n-terne pla	ted oil filters
Plants	Soi	Sludge fr	om sand/oil/w	vater separators		PCBs below	50 parts	per million
				E GENERATO	R SIGN	ATURE		
Initials:	_ <i>(If initial</i> ed	i, no radiological cl	earance is nec	essary.)				
		e was generated o in radiological ma		Controlled Wast	e Manı	Radiation Su RCT Initials	rvey Rele	ase for Waste Dispos
To the best of m	v knowleda	e, the waste desc	rihed ahove	contains only t	hose n		ntsiner/load	is free of external radioacti
site. I have verifi	ed this thro	ough the waste ch	naracterizatio	n method ident	ified a			is exempt from survey due to and origin.
prohibited and a	llowable wa	aste items.						is free of radioactive of on radioanalysis.
Print Name:	aniel	O. Kir	Ker			SIGNATURE:	Justa.	DATE: 5-79
Signature	our I	D. Hurk		Date: <u>5-28</u>	800			
	e, office trast adiological cl	h and/or animal ca earance.	rcasses are c	considered not to	contain a	added radioacti	vity, and t	herefore do not
SWO USE ONL	<u>Y</u>							7 1
Load Weight (no	et from sca	le or estimate):	45,000	Signature	of Certif	ier: Lun	- 7	<u></u>
							- 5	BN-0018 (07/0)

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NTS Landfill Load Verification (Waste definitions are available on page 2)

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NO USE (Circle One Area) AREA 23	6 9 LANDFILL
For waste characterization, approval, and/or assistance, contact So	
REQUIRED: WASTE GENERATOR INF (This form is for rolloffs, dump trucks, and other ons. te Generator: RV/ER	ite disposal of materials.)
tion / Origin: E-MAD / CAU398	Phone Number: <u>5-55-7</u>
te Category: (check one)	
	FFACO-onsite WAC Exception
ck one) Non-Putrescible Asbestos Containing Material	FFACO-offsite Historic DOE/NV
ition Prevention Category: (check one) Environmental management	Defense Projects
ıtion Prevention Category: (check one)	Routine
	Process Knowledge Contents
ibited Waste Radioactive waste; RCRA waste; Hazardous waste; Free li three NTS landfills: wastes (needles, sharps, bloody clothing).	iquids, PCBs above TSCA regulatory levels-, and Medical
tional Prohibited Waste Sewage Sludge; Animal carcasses-, Wet garbage (food was a Area 9 U10c Landfill:	
REQUIRED: WASTE CONTENTS ALLOWA Check all allowable wastes that are contained	ABLE WASTES d within this load:
3: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact with	petroleum hydrocarbons or coolants such as:
gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; eptable waste at any NTS landfill: Paper Rocks / unali	asphaltic petroleum hydrocarbon; and ethylene glycol. tered geologic materials
sphalt	= '
	on-Asbestosform)
fanufactured items: (swamp coolers, furniture, rugs, carpet, electronic component	
tional waste accepted at the Area 23 Mercury Landfill: Office waste	
sbestos: Friable Non-Friable (contact SWO if regulated load) Quar	ntity:
tional waste accepted at the Area 9 U10c Landfill:	
lon-friable asbestos	Solid fractions from sand/oil/water separators
ight ballasts (contact SWO) Drained fuel filters (gas & diesel)	Deconned Underground and Above Ground
lydrocarbons (contact SWO)	☐ Tanks
tional waste accepted at the Area 6 Hydrocarbon Landfill:	
eptic sludge Rags Drained fuel filters (gas & diesel)	Crushed non-terne plated oil filters
lants Sludge from sand/oil/water separators	PCBs below 50 parts per million
REQUIRED: WASTE GENERATOR SIGNS: (If initialed, no radiological clearance is necessary.)	GNATURE
	(OUTIL) and the beat of min
above mentioned waste was generated outside of a Controlled Waste Mar viedge, does not contain radiological materials.	
le best of my knowledge, the waste described above contains only those I have verified this through the waste characterization method identified	materials that are allowed for disposal at this at Radiation Survey Release for Waste Disposal
ibited and allowable waste items.	RCT Initials
Name: Pariel D. Kirker	This container/load is free of external radioactive contamination.
ature: \ Date: 5-30-02	This container/load is exempt from survey due to process knowledge and origin. This container/load is free of radioactive containing and participation based on adioannalysis.
: Food waste, office trash and/or animal carcasses are considered not to conta	SIGNATURE: W. W. DATE: 5-32-6
require a radiological clearance.	- de 1, 1-1-1-25-5
O USE ONLY	The physical and the second
1 Weight (net from scale or estimate): 66,000 Signature of C	ertifier: January Jones

Becniei Nevada

NIS Landfill Load Verification (Waste definitions are available on page 2)

			1 5 7	
SWO USE (Ci	rcle One Area) AREA 23	6) 9	LANDFILL
For waste cha	racterization, appro	val, and/or assistance, co	ntact Solid Waste Operati	ол (SWO) at 5-7898.
	REQUII	RED: WASTE GENERAT	OR INFORMATION	
Waste Generator: 131	MER	ons, damp adeks, and ou	ner onsite disposal of mate	eriais.) Phone Number:5 - 5577
ocation / Origin: E -		1) 398	·	Horio Hambert
Vaste Category: (check		☐ Commercial	Industrial	
	T NTS	Putrescible	FFACO-onsite	WAC Exception
Vaste Type: check one)	Non-Putrescible	Asbestos Containing Ma	_	Historic DOENV
Collution Prevention Ca	ategory: (check one)	Environmental manage		
ollution Prevention Ca		Clean-Up	Routine	
lethod of Characteriza		Sampling & Analysis	Process Knowledg	e Contents
rohibited Waste				CA regulatory levels-, and Medical
t all three NTS landfills		sharps, bloody clothing).	,,,	,
		Animal carcasses-, Wet garbage	e (food waste); and Friable asbe	stos
t the Area 9 U10c Land		WALLE CONTENTS A	LLOWARI E WARTER	
	Check all all): WASTE CONTENTS A lowable wastes that are co	ontained within this load:	
IOTE: Waste disposed at	the Area 6 Hydrocarbon	Landfill must have come into con	ntact with petroleum hydrocarbo	ns or coolants such as:
gasoline (no benzei cceptable waste at an		~ <u>~~</u> ~~~~~~~~ ~~ ~~~~	erosene; asphaltic petroleum hy cs / unaltered geologic mater	<u></u> ,
Asphalt Me	· —	= =	cs / diractered geologic mater per (excluding tires)	Demolition debris
☐ Plastic ☐ W	_	<u> </u>	lation (non-Asbestosform)	Cement & concrete
_		ture, rugs, carpet, electronic		Content a concess
			vaste Food Waste	unimal Carcasses
☐ Asbestos: ☐ Friable		ontact SWO if regulated load	and the second s	initial dalcadoco
Idditional waste accep			, - Gadridy,	
Non-friable asbestos		automobiles and military ve	hicles Solid fractions	from sand/oil/water separators
Light ballasts (contact		fuel filters (gas & diesel)	_	lerground and Above Ground
☐ Hydrocarbons (conta			☐ Tanks	orginalia aria i ibere erearia
dditional waste accep		trocarbon Landfill:		
☐ Septic sludge ☐ Ra		fuel filters (gas & diesel)	Crushed non-t	eme plated oil filters
	- , <u> </u>	from sand/oil/water separato		O parts per million
- 1 rianus		IRED: WASTE GENERA		parto por minor.
nitials: <i>(lf ini</i>		clearance is necessary.)	7011 0101171 0112	
			esta Managamant Araa /Ck	YMA) and to the best of my
ne above menuoned v nowledge, does not c			aste management Area (Or	rmay and to the best of my
'a sh a haas as as we lead	uladaa dha waada da	serihad ahawa cantaina an	ly those mat	<u> </u>
o the best of my know ite. I have verified this	neage, me waste des through the waste o	scribed above contains on characterization method id	entified abou Radiation Su	rvey Release for Waste Dispo
prohibited and allowab		•	RCT Initials	•
\circ	101	111	. Contain	ontainer/load is free of external radioactination.
Print Name: <u>Jani</u>	el D. K	irker	proces	ontaner/load is exempt from survey du s knowledge and origin.
Signature: 0 /	10) 26 hrs	Date: 5-	J. V	entainerioed is free of radioactive ination based on radioanalysis.
•	to the section section is		SIGNATURE	DATE:
Note: Food waste, office require a radiologi	: trasn and/or animal d ical clearance.	arcasses are considered no	t to contain a	7
WO HEE ONLY			and the same of the same	The sales
oad Weight (net fron	erale or estimate):	80,000 - Signati	re of Certifier:	Quel
oad vveight (net fron	i scale of estimate).	v Signati	ne of Cermen. C 1/2/2/2	BN-0918 (07/0



Bechtel N	<i>evada</i> N	TS Landfill (Waste definitions					
SWO USE (Circle One Ar	ea) AREA	23	(6)	9	LANDFILL
For waste cl	haracterization, app	roval, andlor assis	stance, contact	Solid	Waste Ope	eration (S	WO) at 5-7898.
Waste Generator:	(This form is for	QUIRED: WASTE (rolloffs, dump truci	GENERATOR i ks, and other of	INFOF nsite d	RMATION isposal of) Number <u>19</u> 5 - 55 27
Location / Origin:	AU398/	E-MAD					· · · · · · · · · · · · · · · · · · ·
Waste Category: (ch	eck one)	☐ Commerc	ial	M	Industrial		
Waste Type:	T NTS	Putrescible	3	X	FFACO-onsi	te	WAC Exception
(check one)	☐ Non-Putresci	ble 🔲 Asbestos (Containing Material		FFACO-offsi	te	☐ Historic DOE/NV
Pollution Prevention	Category: (check or	ne) DE Environm	ental management		Defense Pro	jects	
Pollution Prevention	Category: (check or	ne) 💹 Clean-Up			Routine		
Method of Character	ization: (check one)	Sampling	& Analysis		Process Kno	wiedge	Contents
Prohibited Waste at all three NTS land	Radioactive wastes (need	vaste; RCRA waste; Ha les, sharps, bloody clot	azardous waste; Fr thing).	ee liquid	is, PCBs abo	ve TSCA re	gulatory levels-, and Medical
Additional Prohibited at the Area 9 U10c L	d Waste Sewage Slud andfill:	lge; Animal carcasses-	, Wet garbage (foo	d waste); and Fnable	asbestos	
	REQUIR Check al	RED: WASTE COM l'allowable wastes	ITENTS ALLO that are contai	WABL ned w	E WASTE	S ad:	
NOTE: Waste disposed gasoline (no ben	at the Area 6 Hydrocart zene, lead); jet fuel; die	oon Landfill must have sel fuel; lubricants and	come into contact thydraulics; kerose	with pet ne; aspl	roleum hydro nattic petroleu	carbons or o	coolants such as: bon; and ethylene glycol.
Acceptable waste at		☐ Paper			d geologic i		☐ Empty containers
Asphalt	Metal Woo	od Æ Soil	Rubber (excludi.	ng tires)		Demolition debris
Plastic	Wire Cabl	e ' Cloth	Insulation	n (non-	Asbestosfor	m)	Cement & concrete
Manufactured item	ns: (swamp coolers, fo	umiture, rugs, carpet	t, electronic comp	oonents	s, PPE, etc.))	
Additional waste acc			<u></u>				l Carcasses
🔲 Asbestos: 🔲 Fria	able 🔲 Non-Friable	e (contact SWO if reg	gulated load) C	uantity	:		
Additional waste acc	epted at the Area 9	U10c Landfill:					
Non-friable asbest	os 🔲 Drai	ned automobiles and	d militäry vehicle:	s 🗆	Solid frac	tions from	sand/oil/water separators
Light ballasts (con	tact SWO) 🔲 Drain	ned fuel filters (gas &	k diesel)] Deconnec	d Undergro	ound and Above Ground
Hydrocarbons (cor	ntact SWO)				Tanks		
Additional waste acc	epted at the Area 6	Hydrocarbon Land	fill:				
Septic sludge	Rags 🔲 Drai	ned fuel filters (gas a	& diesel)		Crushed	non-terne	plated oil filters
🔲 Plants 🗼 💥	[Soi] 🔲 Slud	ge from sand/oil/wal	ter separators		PCBs be	low 50 par	ts per million
	REC	QUIRED: WASTE	GENERATOR	SIGN	ATURE		
nitials: (If	initialed, no radiologic	al clearance is neces	sary.)				
The above mentione knowledge, does not			ntrolled Waste	Manag	ement Area	(CWMA)	and to the best of my
To the best of my kn						!!	ed for disposal at this
site. I have verified ti prohibited and allow		te characterization	method identifi		adiation Se	urvey Rel	ease for Waste Disposa
Print Name: Day	wed O.	Kirker		_ [This co	\ntono=14	is free of external radioactive is exempt from survey due to
Signature:	D26h		Dat 6 - 4-02	_ [is exempt from survey due to and origin, is free of radioactive ed on radioanalysis.
Note: Food waste, offi	ice trash and/or animi ogical clearance.	al carcasses are con	sidered not to co	оп [s	IGNATURE:	U Y/IC	DATE: 6-4-62 BN-0846 (1999)
SWO USE ONLY	-	65000			, 3	1.12	
oad Weight (net fro	om scale or estimat	38 200	Signature of	Certif	ier: 1/2	eth,	Kenzey
waa rreignii (nei ni	Joure of Commen	~,		, .,,			

Signature of Certifier:_

Bechtel Nevada

NTS Landfill Load Verification (Waste definitions are available on page 2)

SWO USE (Circle One Area) AREA 23 6	9 LANDFILL
For waste characterization, approval, and/or assistance, contact Solid V	
REQUIRED: WASTE GENERATOR INFOR	MATION
This form is for rolloffs, dump trucks, and other onsite di	sposal of materials.) Phone Number: 195-5577
Location / Origin: CAU398 / E-MAD	
Naste Category: (check one)	ndustrial
	FACO-onsite WAC Exception
`~~~~~ ~~	FACO-offsite Historic DOE/NV
ollution Prevention Category: (check one) 💢 Environmental management 🔲 [Defense Projects
<u> </u>	Routine
"	Process Knowledge Contents
rohibited Waste Radioactive waste; RCRA waste; Hazardous waste; Free liquids at all three NTS landfills: wastes (needles, sharps, bloody clothing).	, PCBs above TSCA regulatory levels-, and Medical
dditional Prohibited Waste Sewage Sludge; Animal carcasses-, Wet garbage (food waste); t the Area 9 U10c Landfill:	and Friable asbestos
REQUIRED: WASTE CONTENTS ALLOWABLE Check all allowable wastes that are contained with	
OTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact with petro	leurn hydrocarbons or coolants such as:
gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; aspha	
	geologic materials
☐ Asphalt ☐ Metal ☐ Wood ☐ Soil ☐ Rubber (excluding ☐ Plastic ☐ Wire ☐ Cable ☐ Cloth ☐ Insulation (non-Asphalt	
Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components,	· — i
dditional waste accepted at the Area 23 Mercury Landfill: Office waste	
☐ Asbestos: ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity:	
dditional waste accepted at the Area 9 U10c Landfill:	
☐ Non-friable asbestos ☐ Drained automobiles and military vehicles ☐	Solid fractions from sand/oil/water separators
Light ballasts (contact SWO) Drained fuel filters (gas & diesel)	Deconned Underground and Above Ground
] Hydrocarbons (contact SWO)	Tanks
Additional waste accepted at the Area 6 Hydrocarbon Landfill:	
Septic sludge Rags Drained fuel filters (gas & diesel)	Crushed non-terne plated oil filters
☐ Plants ☐ So : ☐ Sludge from sand/oil/water separators ☐	PCBs below 50 parts per million
- REQUIRED: WASTE GENERATOR SIGNA	TURE
itials: (If initialed, no radiological clearance is necessary.)	
The above mentioned waste was generated outside of a Controlled Waste Manage zowledge, does not contain radiological materials.	ment Area (CWMA) and to the best of my
To the best of my knowledge, the waste described above contains only those may	aniala dhad ana allamad dan diamadal addhia
site. I have verified this through the waste characterization method identified aborehibited and allowable waste items.	Radiation Survey Release for Waste Disposal
Ondred and anomable redictions.	RCT Initials This container/load is free of external radioactive
Print Name: Dantel D. Kirker	Contamination. This contamenload is exempt from survey due to process knowledge and origin.
- 1/107/1 G-U-02	This containerfload is free of radioactive contamination based on radioactive.
digitality.	SIGNATURE: 14 14 DATES 4-02
te: Food waste, office trash and/or animal carcasses are considered not to contain require a radiological clearance.	BN-0846 (09/99)
SWO USE ONLY	The Marie Town of the Control of the
and Weight (net from scale or estimate): Signature of Certific	
49,600	BN-0918 (07/C0)

Bechtel Nevada NTS Landfill Load Verification Waste definitions are available on page 2)

(Waste definitions are available of	
SWO USE (Circle One Area) AREA 23	
For waste characterization, approval, and/or assistance, contact to	
REQUIRED: WASTE GENERATOR IN (This form is for rolloffs, dump trucks, and other on	NFORMATION Site disposed of metoricle \
Waste Generator. BN/ER	Phone Number: 295 – 55 7 2
Location / Origin: E-MAN / CAU 398	
Waste Category: (check one)	☑ Industrial
Waste Type: NTS Putrescible	FFACO-onsite WAC Exception
(check one) Non-Putrescible Asbestos Containing Material	☐ FFACO-offsite ☐ Historic DOE/NV
Pollution Prevention Category: (check one) Environmental management	Defense Projects
Pollution Prevention Category: (check one) 🔀 Clean-Up	Routine
Method of Characterization: (check one) Sampling & Analysis	Process Knowledge Contents
Prohibited Waste Radioactive waste; RCRA waste; Hazardous waste; Free at all three NTS landfills: wastes (needles, sharps, bloody clothing).	e liquids, PCBs above TSCA regulatory levels-, and Medical
Additional Prohibited Waste Sewage Sludge; Animal carcasses-, Wet garbage (food at the Area 9 U10c Landfill:	waste); and Friable asbestos
REQUIRED: WASTE CONTENTS ALLOW	VABLE WASTES
Check all allowable wastes that are containe NOTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact wil	th petroleum hydrocarbons or coolants such as:
gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene	e; asphaltic petroleum hydrocarbon; and ethylene glycol.
	altered geologic materials
	cluding tires)
	(non-Asbestosform)
Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic compo	· <u></u>
Additional waste accepted at the Area 23 Mercury Landfill: Office waste	The state of the s
Asbestos: Friable Non-Friable (contact SWO if regulated load) Qui	antity:
Additional waste accepted at the Area 9 U10c Landfill:	
Non-friable asbestos Drained automobiles and military vehicles	Solid fractions from sand/oil/water separators
Light ballasts (contact SWO) Drained fuel filters (gas & diesel)	Deconned Underground and Above Ground
Hydrocarbons (contact SWO)	Tanks
Additional waste accepted at the Area 6 Hydrocarbon Landfill:	·
Septic sludge Rags Drained fuel filters (gas & diesel)	Crushed non-terme plated oil filters
Plants Soil Sludge from sand/oil/water separators	PCBs below 50 parts per million
REQUIRED: WASTE GENERATOR S	SIGNATURE
Initials: (If initialed, no radiological clearance is necessary.)	Table
The above mentioned waste was generated outside of a Controlled Waste M knowledge, does not contain radiological materials.	lanagement Area (CWMA) and to the best of my
To the best of my knowledge, the waste described above contains only thos site. I have verified this through the waste characterization method identified prohibited and allowable waste items.	se materials that are allowed for disposal at this d above and a review of the above-mentioned
0-110 V1200	Radiation Survey Release for Waste Dispo
Signature Date: 6-4-0	This container/load is free of external radioactive contamination. This container/load is exempt from survey due in process knowledge and origin.
Note: Food waste, office trash and/or animal carcasses are considered not to corquire a radiological clearance.	This container/load is free of radioactive
SWO USE ONLY	The comment of the second of the
Load Weight (net from scale or estimate): 4 (100) Signature of (
	BN-0918 (07/C0)

Bechtel Nevada

NTS Landfill Load Verification (Waste definitions are available on page 2)

SWO USE (Circle One Area) AREA 23 6	9 LANDFILL
For waste characterization, approval, and/or assistance, contact Solid W	Vaste Operation (SWO) at 5-7898.
REQUIRED: WASTE GENERATOR INFORM (This form is for rolloffs, dump trucks, and other onsite dis	IATION
Waste Generator. BN/ER	Phone Number: 295 - 55 2 2
Location / Origin: CAU398 / E-MAD	
Waste Category: (check one)	dustrial
	FACO-onsite WAC Exception
*	FACO-offsite Historic DOE/NV
	efense Projects
} 	outine ocess Knowledge Contents
Prohibited Waste Radioactive waste; RCRA waste; Hazardous waste; Free liquids,	
at all three NTS landfills: wastes (needles, sharps, bloody clothing).	
Additional Prohibited Waste Sewage Sludge; Animal carcasses-, Wet garbage (food waste); a st the Area 9 U10c Landfill:	and Friable asbestos
REQUIRED: WASTE CONTENTS ALLOWABLE Check all allowable wastes that are contained with	
NOTE: Waste disposed at the Area 6 Hydrocarbon Landfill must have come into contact with petrols gasoline (no benzene, lead); jet fuel; diesel fuel; lubricants and hydraulics; kerosene; asphalt	eum hydrocarbons or coolants such as:
Acceptable waste at any NTS landfill: Paper Rocks / unaltered of	
☐ Asphalt ☐ Metal ☐ Wood ☒ Soil ☐ Rubber (excluding	tires)
Plastic Wire Cable Cloth Insulation (non-Asi	· —
Manufactured items: (swamp coolers, furniture, rugs, carpet, electronic components, F	
Additional waste accepted at the Area 23 Mercury Landfill: Office waste Foo	od Waste LIAnimal Carcasses
☐ Asbestos: ☐ Friable ☐ Non-Friable (contact SWO if regulated load) Quantity: \dditional waste accepted at the Area 9 U10c Landfill:	
	Solid fractions from sand/oil/water separators
	Deconned Underground and Above Ground
	Tanks
Additional waste accepted at the Area 6 Hydrocarbon Landfill:	
	Crushed non-terne plated oil filters
	PCBs below 50 parts per million
REQUIRED: WASTE GENERATOR SIGNAT nitials: (If initialed, no radiological clearance is necessary.)	TURE
	CONTRACTOR AND AND AND AND AND AND AND AND AND AND
The above mentioned waste was generated outside of a Controlled Waste Managen knowledge, does not contain radiological materials.	ment Area (CWMA) and to the best or my
To the best of my knowledge, the waste described above contains only those mater site. I have verified this through the waste characterization method identified above	rials that are allowed for disposal at this
rohibited and allowable waste items.	Radiation Survey Release for Waste Disposal
	RCT Initials
Print Name: Daniel D. Kirksv	This container/load is free of external radioactive contamination.
ignature: 2 16) Like Date: 6-4-02	This containerfload is exempt from survey due to process knowledge and origin. This containerfload is free of radioactive
Note: Food waste, office trash and/or animal carcasses are considered not to contain a	contamination based on radioanalysis. SIGNATURE: DATE DATE DATE DATE DATE DATE DATE DATE
require a radiological clearance.	5+000 (00%)
SWO USE ONLY Load Weight (net from scale or estimate): Signature of Certified	
Toda vergin (net not i socia 7. socialization)	BN-0918 (07/00)

CLOSURE REPORT - CAU 398 Section: Appendix E Revision: 1 Date: April 2003

APPENDIX E FIELD PHOTOGRAPHS

CLOSURE REPORT - CAU 398 Section: Appendix E Revision: 1 Date: April 2003

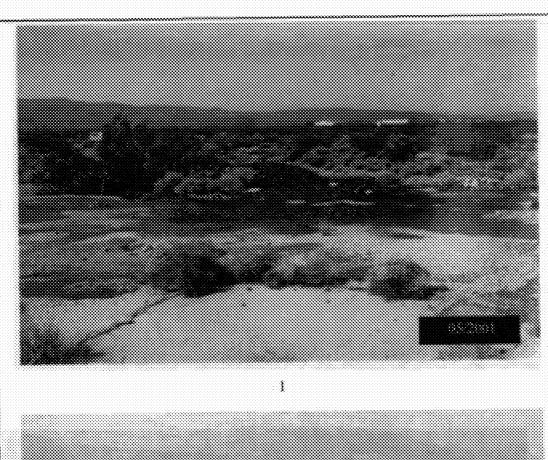
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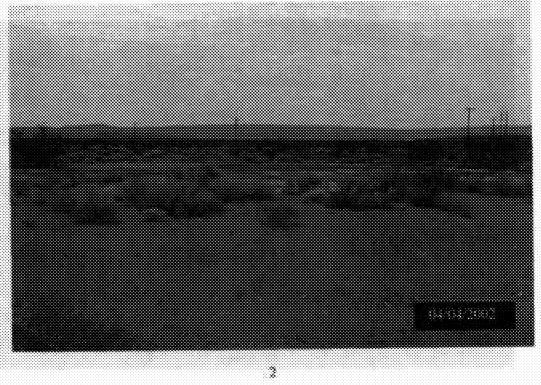
PHOTOGRAPH LOG

PHOTO NUMBER	DATE	DESCRIPTION
1	05/2001	CAS 25-44-01 before remediation
2	04/04/2002	CAS 25-44-01 after remediation
3	05/16/2002	CAS 25-44-02 during remediation
4	08/21/2002	CAS 25-44-02 after remediation
5	05/2001	CAS 25-44-03 before remediation
6	08/21/2002	CAS 25-44-03 after remediation
7	04/29/2002	CAS 25-25-02 during remediation
8	08/21/2002	CAS 25-25-02 after remediation
9	05/2001	CAS 25-25-03 before remediation
10	08/21/2002	CAS 25-25-03 after remediation
11	05/30/2002	CAS 25-25-04 during remediation
12	08/21/2002	CAS 25-25-04 after remediation
13	05/2001	CAS 25-25-05 before remediation
14	04/29/2002	CAS 25-25-05 during remediation
15	08/21/2002	CAS 25-25-05 after remediation
16	05/2001	CAS 25-25-16 (from CAS 25-01-02) before remediation
17	08/21/2002	CAS 25-25-16 (from CAS 25-01-02) after remediation

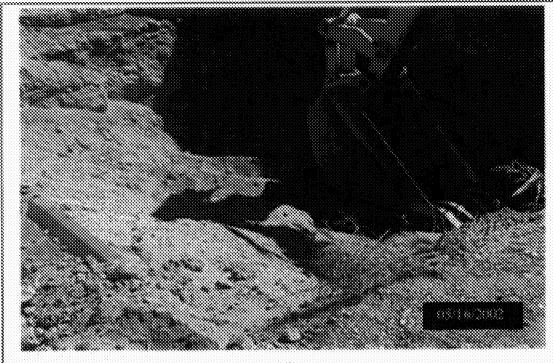
CLOSURE REPORT - CAU 398 Section: Appendix E Revision: 1 Date: April 2003

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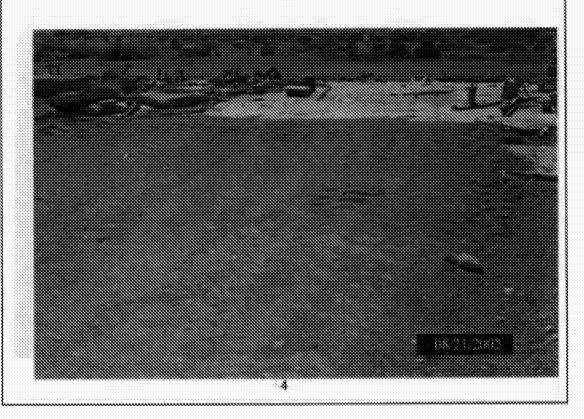


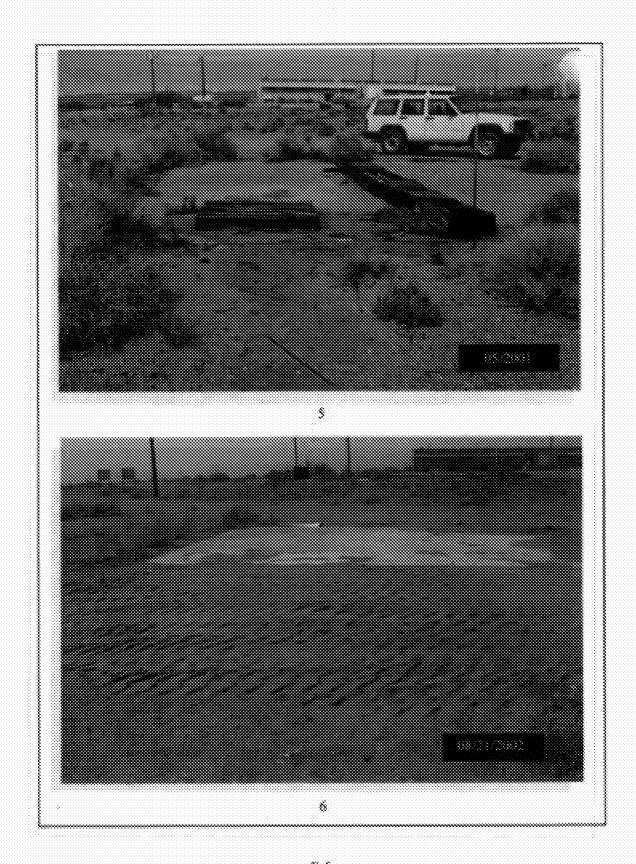


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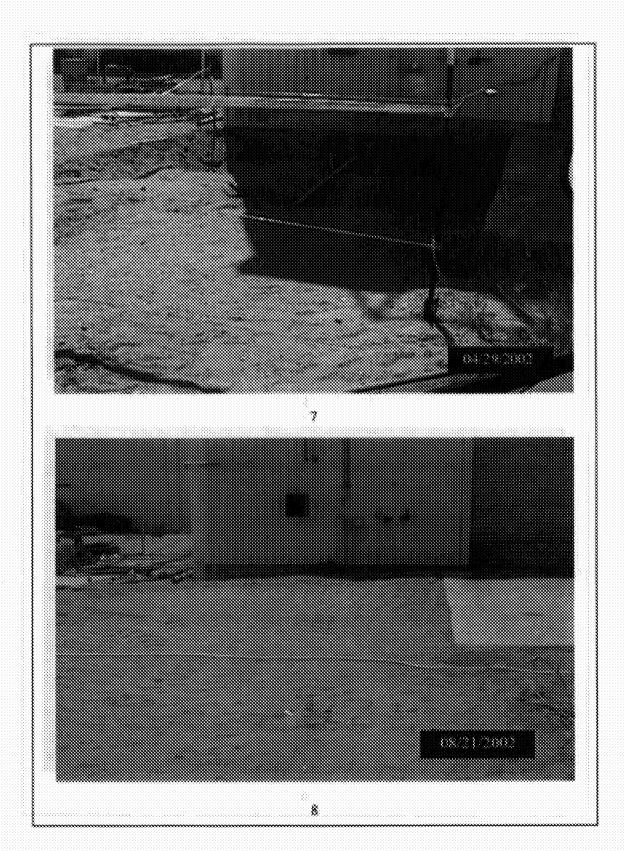


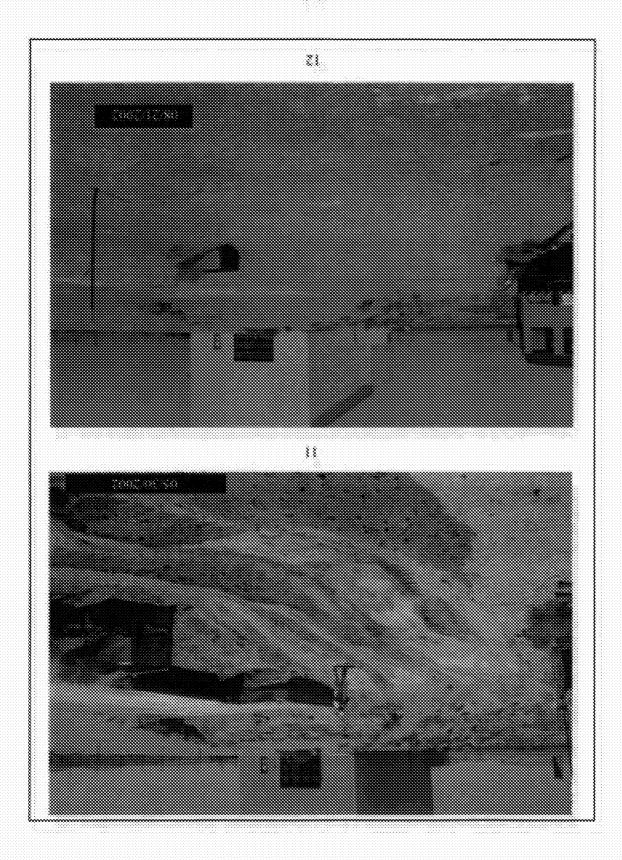
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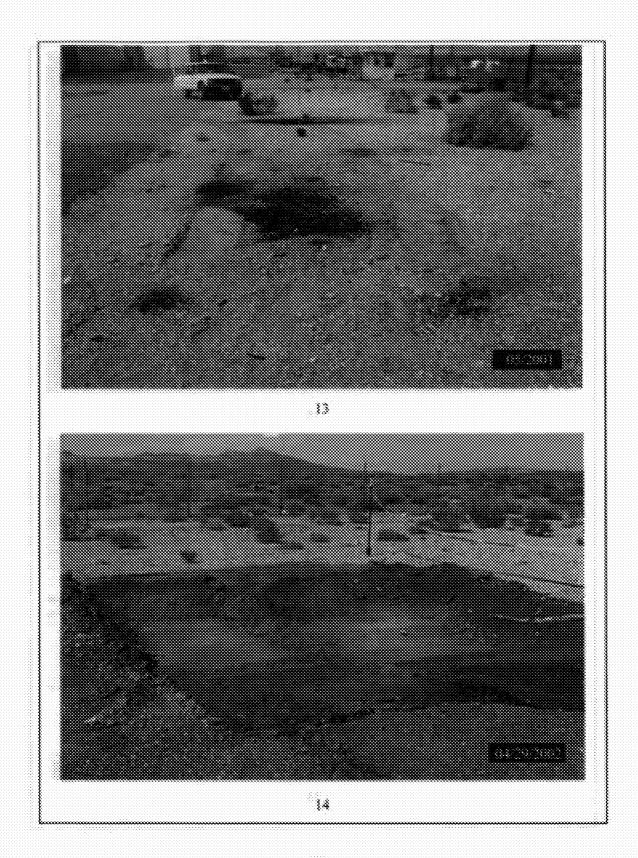


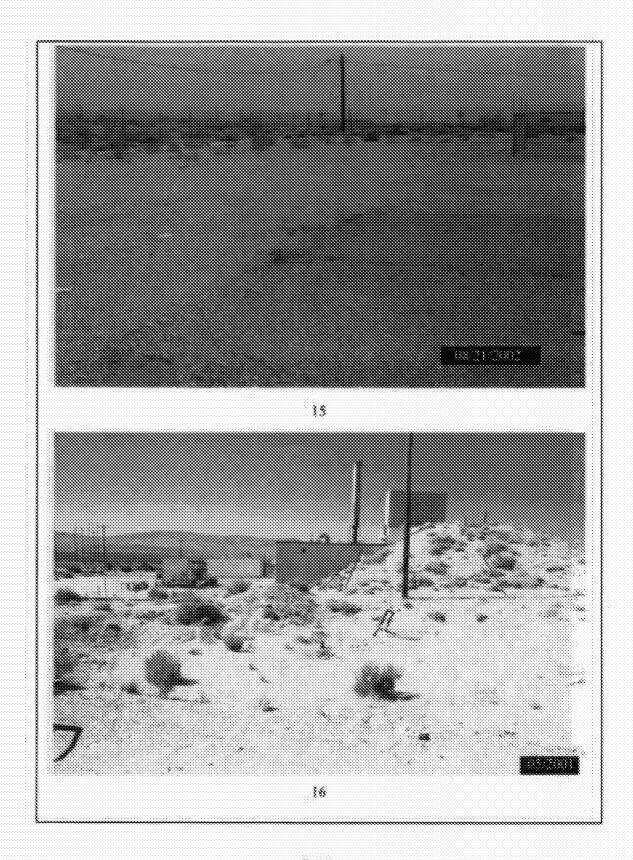


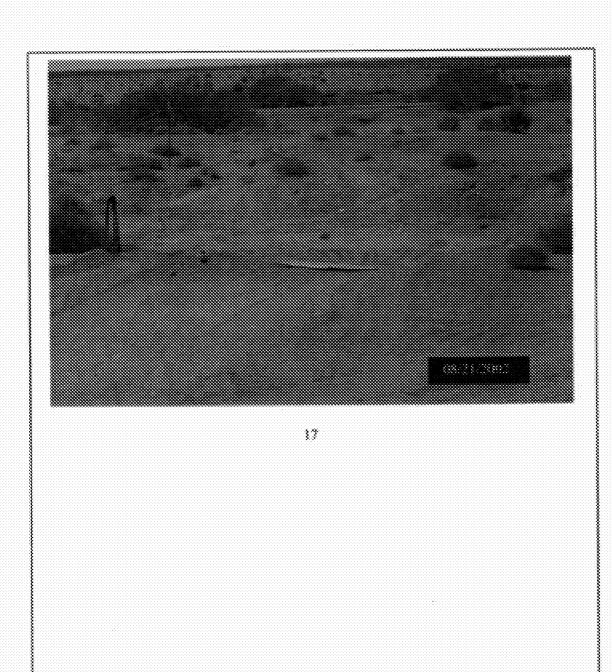
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CLOSURE REPORT - CAU 398 Section: Appendix F . Revision: 1 Date: April 2003

APPENDIX F

NEVADA ENVIRONMENTAL RESTORATION PROJECT DOCUMENT REVIEW SHEET

CLOSURE REPORT - CAU 398 Section: Appendix F Revision: 1 Date: April 2003

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NEVADA ENVIRONMENTAL RESTORATION PROJECT DOCUMENT REVIEW SHEET

1. Document Title/Number: Corrective Action Unit 398: Area 25 Spill Sites, Nevada 2. Document Date: February 2003

Test Site, Nevada / DOE/NV--873

3. Revision Number: 1

5. Responsible NNSA/NV ERP Project Mgr.: Janet Appenzeller-Wing

7. Review Criteria: Full

8. Reviewer/Organization/Phone No.: Ted Zaferatos / NDEP / (702) 486-2856

4. Originator/Organization: Bechtel Nevada

6. Date Comments Due: March 7, 2003

9. Reviewer's Signature:

10. Comment	11.	12.	13.	14.
Number/ Location	Typeª	Comment	Comment Response	Accept
1. pg. vi, Table of Contents	М	The reference to Figure 13 on page 28 should be to Figure 14 on page 28.	The Table of Contents has been corrected.	Yes
2. pg. 3, Section 1.2, 2 nd paragraph	М	The description of the seven CASs being discussed in the paragraph is inaccurate. The Closure Report demonstrates that four of the Corrective Action Sites (CASs), being discussed, contain Total Petroleum Hydrocarbons (TPH) as the only Contaminant of Concern (COC) present. One CAS contains TPH and Polychlorinated Biphenyls (PCBs) as COCs. One CAS contains TPH, PCBs, lead and cadmium as COCs.	The first part of the 2 nd paragraph on page 3 and of the 4 th paragraph on page ix has been changed to read as follows: "Seven CASs were clean closed by removal of all impacted soil. At four CASs total petroleum hydrocarbons (TPH) was identified as the only COC present above action levels. At one CAS TPH and Polychlorinated Biphenyls (PCBs) were identified as COCs present above action levels. At one CAS TPH, PCBs, lead and cadmium were identified as COCs, and at a final CAS, TPH and cadmium were identified as COCs present above action levels."	Yes
3. pg. 27, Section 2.3, 1 st paragraph	М	The paragraph refers to Figure 13. The correct figure is Figure 14.	The reference to the Figure has been corrected.	Yes

^aComment Types: M = Mandatory, S = Suggested.

10. Comment Number/ Location	11. Type³	12. Comment	13. Comment Response	14. Accept
4. pg. 39, Section 5.1	М	The section describes site closure activities as eight of the CASs in the CAU, but does not mention or describe activities at the remaining five CASs in the CAU.	 Text describing the closure activities at the five CASs not previously mentioned has been added to Section 5.0 and the list reordered to list the CASs in numerical order. The following items have been added to the text list. CAS 25-25-06. No COC present, site was closed by taking no further action. CAS 25-25-07. TPH was the only COC present and due to site location, limited access and safety risks, the site was closed in place with administrative controls instituted. CAS 25-25-08. TPH was the only COC present and due to site location, access and safety risks, the site was closed in place with administrative controls instituted. CAS 25-25-17. TPH was the only COC present and due to site conditions and limited access, the site was closed in place with administrative controls instituted. CAS 25-44-04. No COC present, site was closed by taking no further action. 	Yes

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DISTRIBUTION LIST

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CLOSURE REPORT - CAU 398 Section: Distribution List

1 (Controlled)*

Revision: 1 Date: April 2003

DISTRIBUTION LIST

*Provide copy of initial distribution of all revisions; others receive NDEP-approved revision only.

Nevada Division of Environmental Protection

Paul Liebendorfer Bureau of Federal Facilities Division of Environmental Protection 333 W. Nye Lane, Room 138 Carson City, NV 89706-0866

Donald Elle 1 (Controlled)*

Bureau of Federal Facilities Division of Environmental Protection 1771 E. Flamingo Rd., Suite 121-A Las Vegas, NV 89193-0837

U.S. Department of Energy

Janet Appenzeller-Wing 1 (Uncontrolled)*
Environmental Restoration Division
U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
P.O. Box 98518, M/S 505
Las Vegas, NV 89193-8518

Sabine Curtis 1 (Uncontrolled)*
Environmental Restoration Division

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