Nevada
Environmental
Restoration
Project

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Closure Report for
Building 650 Leachfield
Corrective Action Unit 94:
Nevada Test Site, Nevada

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October 1998

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**CLOSURE REPORT FOR
CORRECTIVE ACTION UNIT 94:
BUILDING 650 LEACHFIELD
NEVADA TEST SITE, NEVADA**

Controlled Copy No.:__

Revision 0

**Prepared by:
Bechtel Nevada
Environmental Restoration**

October 1998

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

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**CLOSURE REPORT FOR
CORRECTIVE ACTION UNIT 94:
BUILDING 650 LEACHFIELD
NEVADA TEST SITE, NEVADA**

Approved By: Janet Appenzeller-Wing
Janet L. Appenzeller-Wing, Project Manager
Industrial Sites Subproject

Date: 10/13/98

Approved By: Runore Wycoff
Runore C. Wycoff, Project Manager
Nevada Environmental Restoration Project

Date: 10/13/98

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ACRONYMS AND ABBREVIATIONS

A.C.	Air Conditioning
AST	Aboveground Storage Tank
BGS	Below Ground Surface
BN	Bechtel Nevada
CAS	Corrective Action Site
CAU	Corrective Action Unit
CFR	Code of Federal Regulations
cm	centimeters
CMP	Corrugated Metal Piping
DOE	U.S. Department of Energy
DOE/NV	U.S. Department of Energy, Nevada Operations Office
dpm	disintegrations per minute
EPA	Environmental Protection Agency
FFACO	Federal Facility Agreement and Consent Order
ft	foot
gal	gallon
in	inch
IT	International Technology Corporation
L	liter
$\mu\text{g/kg}$	microgram per kilogram

ACRONYMS AND ABBREVIATIONS (Continued)

m	meter
m ³	cubic meter
MDL	method detection limit
NA	not analyzed
ND	not detected above the method detection limit
NDEP	Nevada Division of Environmental Protection
NEPA	National Environmental Policy Act
NTS	Nevada Test Site
NTSWAC	Nevada Test Site Waste Acceptance Criteria
OD	outer diameter
PCB	polychlorinated biphenyl
pCi/g	picocuries per gram
PEER	Pollution, Environment, Energy, and Resources Consultants
SDG	sample delivery group
RCRA	Resource Conservation and Recovery Act
REEC _o	Reynolds Electrical and Engineering Co., Inc.
RWAP	Radioactive Waste Acceptance Program
VCP	vittrified clay pipe
VOC	Volatile Organic Compound
yd ³	cubic yard

ABSTRACT

Building 650 currently houses the Radiochemistry Laboratory used for bioassay and environmental sample analysis in support of the Nevada Test Site (NTS) radiological environmental monitoring and other programs. Historically, laboratory effluent was discharged to the leachfield through two clay pipelines that converged into a distribution box. The Distribution Box was connected to four infiltration leachfield pipelines spaced across a 9-meter (m) (30-foot [ft]) wide field. The length of the pipelines varied between 10 m and 15 m (33 ft and 50 ft). These pipes provided for the distribution of effluent over a large area so that liquid could slowly percolate through the gravel into the underlying soil of the leachfield. Characterization results showed that the Distribution Box, soil below the Distribution Box, leachfield piping, and soil had been impacted with radiological and hazardous constituents.

Closure activities at the Building 650 Leachfield began on June 15, 1998. Excavation and sampling was completed in multiple phases. Phase I included the excavation and sampling of all areas reported to be impacted during site characterization. These areas included the Distribution Box, the northeast corner of the leachfield, and the upgradient pipeline. During Phase I, the upgradient pipeline was also grouted closed. Phase II included the excavation and sampling of the leachfield pipeline. Phase III included overexcavation, both laterally and vertically as required, of the leachfield area after the Phase II sampling revealed detectable levels of constituents of concern. After overexcavation and when sample results indicated that the soil met established clean-up criteria, the excavations were backfilled, the site was graded, and all fencing was removed. Closure activities were completed on September 17, 1998, with the shipment and disposal of the 89 B-25 boxes of mixed waste generated during closure.

The closure was completed in accordance with the approved Closure Plan (DOE, 1998c) and subsequent agreements between DOE and the NDEP (DOE, 1998a) as a Clean Closure under Section V.A.1 of the Resource Conservation and Recovery Act (RCRA) Operational Permit (NDEP, 1995). Under the conditions of 40 Code of Federal Regulations (CFR) §270.1(c)(5) and (6) for a closure by removal equivalency, this Closure Report demonstrates that the closure meets or exceeds the requirements of 40 CFR §264.280(e). Impacted soils and materials have been removed from the site and verification samples provide lateral and vertical confirmation of the removal. All RCRA-hazardous waste has been transferred to the NTS Area 5 Waste Storage Unit to await final disposal at an off-site treatment, storage, and disposal facility. All mixed waste generated at the site has been disposed in Pit 3 at the NTS Area 5 Radioactive Waste Management Site. All non-hazardous debris has been disposed of in the Area 9 10C Landfill.

Therefore, the Department of Energy, Nevada Operations, requests that a Notice of Completion be issued by the Nevada Department of Environmental Protection and the Building 650 Leachfield, Corrective Action Unit 94, be moved from Appendix III to Appendix IV of the Federal Facilities Agreement and Consent Order "Closed Corrective Action Units." Under 40 CFR §270.1(c)(5) and (6), Post-Closure Monitoring is not required at this site.

1.0 INTRODUCTION

This report describes the remediation activities performed and the results of confirmatory sampling conducted at the Building 650 Leachfield. The Building 650 Leachfield was a historic laboratory disposal unit located southeast of Building 650 in Mercury, Nevada, Area 23 of the Nevada Test Site (NTS) (Figure 1). The Federal Facility Agreement and Consent Order (FFACO, 1996) lists the Building 650 Leachfield as Corrective Action Unit (CAU) 94 and Corrective Action Site (CAS) 23-05-01. Remediation of the Building 650 Leachfield was required under the Resource Conservation and Recovery Act (RCRA) Operational Permit, which is the Permit for a Hazardous Waste Facility, Permit Number NEV HW009 (Nevada Division of Environmental Protection [NDEP], 1995), and the FFACO (1996). The Building 650 Leachfield is listed in Part V of the RCRA Operational Permit.

1.1 PURPOSE

The purpose of this report is to provide documentation of the completed corrective action and provide data supporting the completion of the action. Building 650 currently houses the Radiochemistry Laboratory used for bioassay and environmental sample analysis in support of the NTS radiological environmental monitoring and other programs. Historically, laboratory effluent was discharged to the leachfield through two clay pipelines, one originating at the north end of Building 650 and extending south along the east side of the building and the other originating at the south end of Building 650 and extending east along the south side of the building. The pipeline along the south side of Building 650 originated as a drain from an emergency shower. The shower was never used and it was disconnected and grouted in November 1992 (REECo, 1993). These two pipelines converged into a single pipeline off the southeast corner of Building 650 (Figure 2). The pipelines terminated at a Distribution Box measuring 0.9 x 0.9 x 2 m (3 x 3 x 7 ft). The pipeline was grouted from the Distribution Box back 0.6 m (2 ft) during the operational closure (Reynolds Electrical and Engineering Co., Inc. [REECo], 1994).

The Distribution Box was connected to four infiltration leachfield pipelines spaced across a 9-m- (30-ft-) wide field. The length of the pipelines varied between 10 m and 15 m (33 ft and 50 ft). The leachlines consisted of small sections of solid clay pipe. Each section of piping is approximately 0.3 m (1 ft) long with 5 cm (2 in) spacing between each section. The pipes were located approximately 2 m to 2.5 m (6 ft to 8 ft) below the ground surface and rested on 0.3 m to 0.6 m (1 ft to 2 ft) of gravel packing. These pipes provided for the distribution of effluent over a large area so that liquid could slowly percolate through the gravel into the underlying soil of the leachfield. Characterization results showed that the Distribution Box and soil below the Distribution Box and northeast corner of the leachfield had been impacted with radiological and

FIGURE 1
CAU 94 - BUILDING 650 LEACHFIELD LOCATION

FIGURE 2
 LOCATION OF BUILDING 650 LEACHFIELD
 AND PREVIOUSLY IDENTIFIED IMPACTED AREAS

hazardous waste (U.S. Department of Energy [DOE], 1998b). Verification sampling was conducted on the lower leachfield pipelines concurrent with site closure activities.

The leachfield was used as a land disposal unit from 1965 to October 1993, with an estimated annual discharge rate of less than 984 liters (L) (260 gallons [gal]) (REECo, 1993). Hazardous waste discharged to the leachfield included hydrochloric acid, nitric acid, toluene, xylene, acetone, detergents, and other chemicals used to perform radionuclide separations. Radionuclides found in the discharge included tritium, Americium-241, Cobalt-60, Cesium-137, Plutonium-239, Strontium-89, Strontium-90, and other mixed fission products (DOE, 1989). Discharge of radioactive waste was discontinued in 1979. Discharge of RCRA-regulated materials to the leachfield ended in 1987. Discharge of non-RCRA regulated materials (water) continued until the discharge piping leading to the Distribution Box was sealed in 1994 (REECo, 1994). Previous characterization activities at the Building 650 Leachfield have involved excavating and sampling a series of trenches (REECo, 1993; International Technology Corporation [IT], 1995), collecting soil samples during closure of the discharge line (REECo, 1994), a geophysical evaluation (IT, 1996), and subsurface sampling of the Distribution Box (Emer, 1995). The results of these previous site characterization studies are summarized in the Building 650 Leachfield Characterization Plan (DOE, 1997a).

The most recent site characterization report (DOE, 1998b) suggested that waste was limited in extent. Constituents of concern exceeding background levels were found in the following locations:

- Radioactive constituents Plutonium-238 and Plutonium-239/240 were detected in the Distribution Box and the soil below the Distribution Box to a depth of 6.7 m (22 ft) at sample location LCHB-1 (Figure 2).
- Acetone, a listed hazardous waste, was detected at low-level 3.4 m (11 ft) below ground surface (BGS) at sample location LCHB-8 (Figure 2).

During site characterization, other constituents were also detected in the northeast corner of the leachfield; however, the concentrations were less than regulatorily established clean-up levels. These consisted of the following:

- Polychlorinated biphenyls (PCB) down to a depth of 3.4 m (11 ft)
- Cobalt-60 to a depth of 2.7 m (9 ft)

These constituents were found at sample location LCHB-2 (Figure 2). The area where these constituents were detected was also excavated and disposed of as a mixed waste because of the proximity to the other areas requiring remediation.

In addition to the constituents of concern identified during site characterization, additional constituents of concern were identified in closure verification samples from the leachfield. These included 2-Butanone, methylene chloride, toluene, and tetrachloroethylene (PCE), Americium-241, and Cesium-137.

1.2 SCOPE

The scope of work for this project consists of the following activities:

- Preplanning and site preparation, including the preparation of all plans and permits, utility clearance, and mobilization of equipment to the site.
- Removal of the Distribution Box using a backhoe.
- Removal of the grouted section of the discharge piping leading into the Distribution Box and collection of swipe samples from within the ungrouted section.
- Excavation of discharge piping and surrounding soil approximately 30 m (100 ft) north (upgradient) of the Distribution Box.
- Grouting the entire discharge pipeline from the north excavation location.
- Removal of the soil within a 4.9-m (16-ft) diameter of the Distribution Box, to a depth of 3 m (10 ft), using a backhoe and emplacement of a 3.7-m- (12-ft-) diameter corrugated pipe for surface casing.
- Removal of the soil below the box to a depth of 7.6 m (25 ft) using a 2.6-m- (8.5-ft-) diameter auger drill rig.
- Excavation of the piping and the soil below the piping to 3.7 m (12 ft) in the northeast corner of the leachfield using a backhoe.
- Excavation of the remaining piping and impacted soil in the leachfield using a backhoe.
- Collection of verification soil samples.
- Backfilling the excavated areas and returning the site to unrestricted use.
- Disposal of excavated materials following applicable federal, state, and DOE Regulations.
- Certification of Closure by an independent, Professional Engineer.

Site characterization revealed that the only constituents of concern were acetone and Plutonium; however, sampling during closure revealed additional volatile organic compounds (VOCs) and radioisotopes. The following remediation levels were used to verify clean closure:

- Background levels for radioactive constituents have been established in the Offsite Radiation Exposure Review Project, Phase II Soils Programs report (DOE, 1989). The level established in this report for Plutonium-238/239/240 is 0.5 picocuries per gram (pCi/g). In addition to Plutonium, Americium-241, Cobalt-60, and Cesium-137 were also detected in verification samples. Because it is a daughter product, Americium-241 has the same background level of 0.5 pCi/g as Plutonium. The background level for Cobalt-60 has been established as 500 pCi/g. The background level for Cesium-137 is 3.0 pCi/g. Any soil below these levels will also meet the performance objectives for certification of nonradioactive waste at the NTS (REECo, 1995).
- The remediation level for any listed waste component is the standard analytical method detection limit for SW 846, U.S. Environmental Protection Agency (EPA) Method 8260, which is 20 micrograms per kilogram ($\mu\text{g/kg}$) for acetone and 2-Butanone, and 5 $\mu\text{g/kg}$ for methylene chloride, toluene, and tetrachloroethylene.

1.3 CLOSURE REPORT CONTENTS

This document is divided into the following sections:

- Section 1.0 - Introduction
- Section 2.0 - Closure Activities
- Section 3.0 - Waste Disposition
- Section 4.0 - Closure Verification Results
- Section 5.0 - References

2.0 CLOSURE ACTIVITIES

Closure activities at the Building 650 Leachfield began on June 15, 1998, with a health and safety kickoff meeting and mobilization. Excavation and sampling were completed in multiple phases. Phase I included the excavation and sampling of all areas indicated to be impacted during site characterization. These areas included the Distribution Box, the northeast corner of the leachfield, and upgradient pipeline. During Phase I, the upgradient pipeline was also grouted closed. Phase II included the excavation and sampling of the leachfield pipeline. Phase III included overexcavation of the leachfield area after the Phase II sampling revealed detectable levels of constituents of concern. After sample results indicated that the soils met established clean-up criteria, the excavations were backfilled, the site was graded, and all fencing was removed.

2.1 DESCRIPTION OF CORRECTIVE ACTION ACTIVITIES

2.1.1 Preplanning and Site Preparation

Several plans were prepared prior to beginning corrective action activities at the Building 650 Leachfield. These plans included the Closure Plan (DOE, 1998c), Field Management Plan (DOE, 1998d), Site-Specific Health and Safety Plan and Job Hazard Analysis (DOE, 1998e). In addition, a National Environmental Policy Act (NEPA) checklist was prepared and a site survey was performed by a biologist. The survey confirmed the presence of the endangered Bear Paw Poppy on the site. All workers were instructed to avoid the area where the poppies were growing, if possible. This area was staked and flagged, and signs were posted directing personnel to avoid the area.

Site preparation involved utility surveys, removal of fencing, mobilization of equipment to the site, and designation of the exclusion zone, decontamination area, and waste management area.

A survey of both above ground and underground utilities was done so that the excavation areas would not cross any utilities lines. A metal detecting instrument and existing as-built drawings were used for the underground survey and a map of existing underground utilities was produced as part of the excavation permit. A Hot Work Permit was also maintained during the duration of the project.

The field office was established inside the east bay of the ambulance port. The middle bays were used for storage of B-25 boxes. Fencing was removed from the northern end of the site to allow equipment access to the site. Yellow rope with red flagging was used to demarcate the boundaries of the exclusion zone where no chain-link fencing was in place. All sides of the exclusion zone were marked with radiological control signs.

The decontamination pad was relined with new plastic and the old plastic from site characterization activities was disposed of in a B-25 box. A hot line was established inside the exclusion zone, near the entrance of the field office for personnel decontamination and doffing of protective clothing. A waste management area was established at the southern end of the site, outside the chain-link fenced area. The waste management area was constructed of orange fencing and marked with hazardous waste storage and contaminated material signs. A small, separate area was constructed adjacent to this area for the storage of three drums of hazardous waste. The original waste management area was too small to contain all the B-25 boxes. Therefore, a second waste management area was constructed near the first. The site layout is provided in Figure 3.

2.1.2 Removal of the Distribution Box

The Distribution Box was removed using a backhoe. Prior to the removal of the Distribution Box, the soil around the box was excavated to a depth of 3 m (10 ft) to a diameter of 4.9 m (16 ft) centered around the box. This area was excavated not only to remove the box, but to place a 3-m- (10-ft-) long, 3.7-m- (12-ft-) diameter piece of corrugated metal piping (CMP) for surface casing for the solid-stem auger used to remove the soil below the Distribution Box.

The pipeline along the south end of Building 650 was found at 0.75 m (2.5 ft) BGS. This pipeline then dropped vertically and intersected the pipeline located along the east side of Building 650. A single pipeline then led into the Distribution Box at a depth of approximately 1.7 m (5.5 ft) BGS. The intersection of the two discharge pipelines was removed as part of the excavation around the Distribution Box. The integrity of the pipelines was good and the pipeline along the south end of Building 650 was visually confirmed to be grouted. Because the emergency shower was never used, no hazardous or radioactive constituents would have been discharged through the pipeline along the south end of Building 650 (REECo, 1993). Characterization sample LCHB-11 confirmed that no constituents of concern had impacted the soil below the pipeline (DOE, 1998c).

The pipelines leading out of the Distribution Box and into the leachfield were found at a depth of approximately 1.8 m (6.0 ft) BGS. The pipelines leading into the leachfield fed out of the east and west sides of the Distribution Box. On each side, two pipelines lead out then turned south into the leachfield at an elbow joint located 0.6 m (2 ft) and 3 m (10 ft) from the Distribution Box, respectively.

All soil excavated from above the depth of the pipelines leading into and out of the Distribution Box was stockpiled as clean soil to be used later as backfill material. All soil excavated below the pipelines was placed in B-25 boxes. Visible staining of the soil was not observed. After the soil from around the Distribution Box was removed, the box was lifted from the excavation using a backhoe and placed on plastic. The box integrity was good with the exception of a hole in the

bottom, which originated from the historic discharge of acid and was enlarged during past characterization activities. The box was wrapped in a double layer of plastic, secured with yellow roping, labeled, and placed on dunnage in the waste management area to await bulk disposal.

2.1.3 Excavation of Discharge Piping and Soil Upgradient of the Distribution Box

Excavation upgradient of the Distribution Box was not part of the approved Closure Plan (DOE, 1998c). However, this excavation was included in an April 24, 1998, letter to NDEP from DOE (1998a). One location of the upper pipeline was excavated to remove low levels of acetone previously detected in the soil (REECo, 1993). The acetone was originally detected in the soil below the intersection of pipe leading from a laboratory room on the east side of Building 650 and the main pipeline leading to the Distribution Box. The intersection had been cemented during previous pipeline activities.

The excavated area was located on the east side of Building 650, approximately 46 m (150 ft) north of the Distribution Box (Figure 3). Because of the proximity of underground utilities and the shallow depth of the pipeline, the area was hand-excavated. The section of cemented piping was found and removed, as well as the soil 0.15 m (0.5 ft) below the piping. No visible staining was apparent in the soil. Because radiological constituents were not identified in this area, the piping and soil were placed in two 208-L (55-gal) drums and labeled hazardous waste. The drums were then stored in the waste management area until they were taken to the Area 5 Hazardous Waste Storage Pad on August 12, 1998.

Soil samples were collected from below the pipeline at the upgradient excavation (650NEXC-1 and 650NEXC-2). Soil samples were also collected below the pipeline that led into the Distribution Box (650DB-8N). The sample was collected north of the intersection of the pipeline on the east side of Building 650 with the pipeline that runs along the southern end of Building 650. Sample collection is discussed in Section 2.1.8 and results are discussed in Section 4.0 of this Closure Report.

2.1.4 Sampling and Grouting of the Discharge Piping

After the Distribution Box and the cemented section of piping from the upgradient excavation were removed, swipe samples were collected from the exposed open piping at each location. No visible residue was present in the pipe at either location. The swipes were then analyzed using a one-minute alpha/beta count and a 20-minute gamma count for radiological constituents. Results indicated that no added radioactivity was present and the pipeline was grouted. The pipeline was grouted in three directions:

- From the excavation to the end of open pipeline, about 6 m (20 ft) further upgradient (north).
- From the excavation to Building 650.
- From the excavation to the Distribution Box excavation (south).

The grouting was visually confirmed in the Distribution Box excavation and sandbags were piled next to the opening to plug the hole so that the grout could set. Once the grout was confirmed in the Distribution Box excavation, the slurry to stabilize the CMP was poured to a thickness of about 1.5 m (5 ft). The remaining 1.5 m (5 ft) was backfilled and compacted with Type II soil to the surface.

2.1.5 Removal of the Soil below the Distribution Box

Based on the depth of impacted soil that needed to be removed, a 2.6-m (8.5-ft) diameter, solid-stem auger drill rig was used to remove the soil below the Distribution Box to a depth of approximately 7.6 m (25 ft) BGS. Soil was removed by drilling down until soil collected on the auger. The auger with soil was lifted out of the hole and a large metal box with removable panels on one side was placed under the auger using a forklift. The auger was then lowered into the box and rotated to remove the soil from the auger into the box. The box was moved out from below the auger and the side panels were removed to allow access to the soil. A small loader then removed the soil and placed it into the B-25 boxes. As the B-25 boxes were filled, they were moved out of the exclusion zone and into the waste management area. Prior to release from the exclusion zone, the B-25 boxes were swiped and surveyed with a hand-held Electra, and waste tracking and hazard labels were placed on the boxes.

Staining or discoloration was not observed in any soil removed from the Distribution Box excavation. Removal of the Distribution Box and underlying soil generated approximately 112 cubic meters (m^3) (147 cubic yards [yd^3]) of mixed waste which was placed into 42 B-25 boxes.

2.1.6 Excavation of the Northeast Corner of the Leachfield

Site characterization indicated that sample locations LCHB-2 and LCHB-8 (Figure 2) were impacted with VOC constituents which required removal. Sample location LCHB-2 was removed during the drilling activities. Based on site characterization reporting, sample location LCHB-8 was believed to be on the eastern outer pipeline. However, during closure, it was found to be 0.6 m (2 ft) east of the eastern inner pipeline instead of on the eastern outer pipeline. An area 3 m (10-ft) long, 2.1 m (7-ft) wide, and 3.7 m (12-ft) deep was excavated using a backhoe in the northeast corner of the leachfield to remove location LCHB-8. The excavation

began at the edge of the slurry wall surrounding the CMP and extended into the leachfield following the pipeline (Figure 4). The eastern inner leachfield pipeline was found at a depth of 1.8 m (6 ft) BGS. All soil from above the pipeline was stockpiled as clean soil for backfill use. The pipeline and all soil and leach gravel below the pipeline were placed in B-25 boxes for disposal. This excavation filled six B-25 boxes (approximately 15 m³ [20 yd³]). The piping and the gravel packing around the pipeline was visibly stained, but the soil below was not stained.

2.1.7 Excavation of the Leachfield Piping

The leachfield pipelines were excavated using a backhoe. The pipelines were found at a depth of approximately 1.8 to 2.1 m (6 to 7 ft) BGS resting in a coarse, 2.5- to 5-centimeter (cm) (1- to 2-inch [in]) diameter gravel pack, typically 0.3 to 0.6 m (1 to 2 ft) thick. Leachfield piping was originally believed to consist of four 15-m- (50-ft-) long infiltration lines consisting of solid piping with open spaces at the pipe joints spaced across a 9-m- (30-ft-) wide field. Each section of piping was believed to be approximately 0.6 m (2 ft) long with 5-cm (2-in) spacing between each section (DOE, 1998b). During closure, it was discovered that the two eastern pipelines were 15 m (50 ft) in length, whereas the western outer pipeline was only 13.5 m (45 ft) long and the western inner pipeline was only 9 m (30 ft) long (Figure 4). The western inner pipeline also angled west toward the western outer pipeline and the depth and thickness of the gravel packing material also varied. Each pipeline consisted of 0.3-m (1-ft) sections of clay pipe with 5- to 10-cm (2- to 4-in) spacings between the sections.

Soil from above the pipelines was stockpiled as clean fill material. Soil from below the pipeline and the gravel packing material was placed in B-25 boxes. The sections of pipe were segregated from the soil and placed aside on plastic to be swiped and surveyed by the Electra for radiological constituents. After being swiped and surveyed, the piping was wrapped in plastic and placed in a B-25 box.

Most of the gravel around the pipeline was stained a dark brown-to-black color. However, only the soil below the eastern outer pipeline showed evidence of staining. The stained soil was limited in extent to less than 0.3 m (1 ft) both laterally and vertically, and all visibly stained soil was removed. This initial removal of leachfield piping, gravel, and soil resulted in the removal of approximately 53 m³ (70 yd³) of soil.

Site characterization data indicated that the leachfield had not been impacted by constituents of concern beyond the northeast corner (DOE, 1998b). However, verification sampling from the pipeline trenches revealed that detectable levels of hazardous constituents of concern had leached into the soil below the pipeline and gravel in each of the trenches except the area of the eastern inner trench. Elevated radiological constituents were found in only one verification sample near the Distribution Box. Most of the trenches had hazardous constituents of concern reported at low levels near the analytical method detection limit. The western inner trench, however, contained elevated levels of constituents of concern well above any levels detected during site

characterization. In addition to the elevated levels in this trench, additional constituents of concern not encountered during site characterization were detected, including methylene chloride, 2-butanone, toluene, and tetrachloroethene.

Initially, all trenches were excavated to a depth of 2.4 m to 2.7 m (8 ft to 9 ft) and were approximately 0.8 m (2.5 ft) wide. Based on the results of the initial verification samples, all the trenches except the eastern inner trench were overexcavated a minimum of an additional 0.3 m (1 ft) in depth to remove the impacted soil and resampled. The final depth of the overexcavated trenches varied from 2.9 m to 4.0 m (9.5 ft to 13 ft). Overexcavation of sidewall samples increased the width of the southernmost portion of the western inner trench by approximately 0.3 m (1 ft) on either side. The eastern and western outer trenches were each overexcavated 3 m (10 ft) along the length of the trench on either side of the verification samples that detected constituents of concern. The entire western inner trench was overexcavated. The overexcavations resulted in an additional 30 m³ (40 yd³) of soil to be disposed.

The unexpected additional volume of impacted soil resulted in a shortage of B-25 boxes. Soil not placed in B-25 boxes was temporarily stored in plastic-lined, 15-m³ (20-yd³) end-dump trailers and covered with plastic to await the arrival and certification of additional B-25 boxes from the manufacturer. The three end-dump trailers were labeled with hazardous waste and contaminated material signs and stored temporarily inside the exclusion zone. Upon the arrival of additional B-25 boxes, the soil and plastic were transferred to the boxes using a backhoe.

2.1.8 Collection of Soil Samples

Soil samples were collected to verify that all impacted soil was removed and that constituents of concern were below the proposed clean-up levels. Unique sample identifications were given to each area to distinguish sample locations. In addition, quality assurance samples were also collected. Blind duplicates and equipment blanks were collected for at least twenty percent of the samples, trip blanks were sent with every sample batch for VOC analysis, and matrix spike/matrix spike duplicate samples were designated in every sample batch.

In the upgradient pipeline excavation, samples were collected by using a stainless steel hand trowel in the area below and adjacent to the cemented section of pipe. Two samples were collected for VOC analysis and one composite sample from both locations was collected for radiological analysis. Samples from this location were designated 650NEXC.

Samples from the Distribution Box excavation were collected from the sidewalls and bottom of the hole. Sidewall samples were collected from approximate depths of 2.4 m, 4.6 m, and 7.6 m (8 ft, 15 ft, and 25 ft) BGS. Samples from the Distribution Box area were designated 650DB, followed by the depth in feet and compass direction of the sidewall or "BOTTOM." The samples from 2.4 m (8 ft) BGS were collected by scraping the sides of the excavation with the backhoe bucket. Grab samples were then collected from the soil in the bucket. The deeper

samples were collected using the solid-stem auger. The auger was shifted so that it rested against the sidewall depth to be sampled, then it was rotated less than a quarter turn. The auger was then raised from the hole and a grab sample was collected from the soil on the auger. The bottom sample was collected by drilling down a few inches past the 7.6-m (25-ft) depth of the hole and sampling the soil brought up on the auger.

Samples from the northeast leachfield excavation and the leachfield pipeline trenches were collected using a backhoe. Samples from the northeast leachfield were designated with NLFEXC, followed by the depth in feet and compass direction of the sidewall or BOTTOM. Samples from the leachfield pipeline trenches were designated by 650LFEOUT for the eastern outer pipeline, 650LFEIN for the eastern inner pipeline, 650LFWOUT for the western outer pipeline, and 650LFWIN for the western inner pipeline. The initial round of samples did not have a depth associated with the name of the sample. However, the resampling after overexcavation of impacted areas in the trenches included the original sample name with a depth and the letter "V" to indicate verification samples. Sidewall samples also included the compass direction of the sidewall and the letters "SW." Samples were collected along the length of each pipeline at the beginning, middle, and end of the line. Reverification samples were only collected in areas that were determined to be impacted based on the initial sampling. These samples were only analyzed for VOC constituents.

All samples were analyzed for VOC and radiological constituents except the overexcavated areas. Based on initial sample results, VOC constituents were the only constituents of concern remaining, therefore samples from overexcavation were reanalyzed only for VOCs. Soil samples were placed in clean, glass or nalgene laboratory jars. All samples were labeled with a sample identification, date and time sampled, sampler's initials, and analysis to be performed. A custody seal was placed across the lid of each sample container. Samples were placed in an ice chest and cooled to approximately 4 degrees Centigrade (39.2 degrees Fahrenheit). Samples were controlled under strict chain of custody until relinquished to the laboratory.

During the collection of all verification samples, both the auger and the backhoe bucket were decontaminated by spraying the bucket withalconox, scrubbing it with a stiff bristle brush, and rinsing it with a hose. Water from the decontamination procedure was collected over the impacted soil pile that was placed in the B-25 box.

2.1.9 Backfilling the Excavated Areas

The excavated areas were backfilled once sample data indicated the areas met the established clean-up levels. The Distribution Box borehole was backfilled with pea gravel to within 0.6 m (2 ft) of surface grade in order to reduce the chance of future subsidence in the area. The corrugated metal piping was then cut to grade and the remaining 0.6 m (2 ft) was backfilled with Type II fill to provide a surface for asphalt patching. The trenches and upgradient excavation were backfilled with the clean soil removed from above the pipeline and Type II fill. The site

was compacted and graded using a backhoe. Asphalt patching was completed on September 10, 1998. The site was returned to unrestricted use.

During excavation, the drainage pathway was diverted away from the site. After backfilling was completed, site drainage was restored and a 0.45-m (1.5-ft) diameter corrugated metal pipe cut in half and placed in the drainage to prevent excessive erosion.

Equipment was demobilized from the site after it had been surveyed and swiped to ensure that no radiological contamination was present. If contamination had been present, the equipment would have been decontaminated. However, all surveys and swipe results indicated that no decontamination was required.

2.1.10 Certification of Closure

As required under 40 Code of Federal Regulation 264.115, closure must be certified by an independent Professional Engineer. Dean Nelson of Peer Consultants acted as the Professional Engineer for this closure. He reviewed the Closure Plan (DOE, 1998c), all aspects of the closure activities, and the final laboratory data to reach his conclusion that clean closure was accomplished according to the Closure Plan (DOE, 1998c). The Certification of Closure is provided in Appendix A.

2.2 DEVIATIONS FROM CLOSURE PLAN AS APPROVED

Although not part of the approved Closure Plan (DOE, 1998c), the excavation and sampling of the upgradient pipeline was outlined in an April 24, 1998, letter from the DOE to NDEP (DOE, 1998a). The letter stated that the soil removed from this excavation would be placed in a B-25 box and disposed as mixed waste. However, as required under the waste minimization policy, hazardous waste must be segregated from mixed waste. Because site characterization sample analysis revealed only listed hazardous constituents, the soil was placed into 208-L (55-gal) drums and managed and disposed as hazardous waste.

The approved Closure Plan (DOE, 1998c) proposed using a backhoe or trackhoe to excavate the area below the Distribution Box instead of the solid-stem auger drill rig that was used. The decision to switch to the drill rig was based on safety and shoring concerns involving working around an open excavation 7.6 m (25 ft) deep, given the limited space behind Building 650. Also, an excavation of that depth would have required benching every 1.5 m (5 ft) of depth, which would have significantly increased the width of the excavation and the volume of soil to be disposed. In addition, if impacted soils were found greater than 7.6 m (25 ft) in depth, the borehole could have been extended easier and safer than through backhoe excavation.

Originally, the excavation around the Distribution Box was to be 2.4 m (8 ft) wide x 2.4 m (8 ft) long x 7 m (23 ft) deep. The use of the drill rig increased the size of the excavation around the Distribution Box to a 4.9-m (16-ft) diameter from the surface to a depth 3 m (10 ft) BGS. After the 3 m (10 ft) depth was reached, the diameter of the excavation decreased to the 2.6-m (8.5-ft) diameter of the auger for the remaining 4.6 m (15 ft) of the excavation.

The increase in the size of the excavation around the Distribution Box resulted in a smaller excavation in the northeast corner of the leachfield. The size of the excavation decreased from a length of 7 m (23 ft) to a length of 3 m (10 ft). This reduced the overall number of samples that were to be collected from the length of the excavation. Therefore, 19 samples were collected instead of the proposed 23 samples.

The unplanned excavation required in the leachfield, due to the unexpected presence of constituents of concern, resulted in deviations from the approved Closure Plan (DOE, 1998c). The extra volume of soil that had to be removed and disposed based on initial verification sample data resulted in a shortage of B-25 boxes. Pending delivery of B-25 boxes, the soil had to be temporarily stockpiled in 15-m³ (20-yd³) end-dump trailers instead of being placed directly into the B-25 boxes as outlined in the Closure Plan. The additional excavation also resulted in an increased number of verification samples collected from the leachfield. The Closure Plan (DOE, 1998c) estimated that 12 samples would be collected from the leachfield, whereas 36 samples were actually collected.

2.3 CORRECTIVE ACTION SCHEDULE AS COMPLETED

The corrective action began on June 15 and was completed on September 17, 1998, with the disposal of all waste generated at the site. A detailed schedule as completed for the corrective action is provided in Table 1.

2.4 SITE PLAN/SURVEY PLAT

Survey data was not available at the time of this draft report. Survey data of site landmarks will be incorporated into the figures of the final closure report for this site.

TABLE 1 - BUILDING 650 LEACHFIELD CLOSURE SCHEDULE AS COMPLETED

TABLE 1 - BUILDING 650 LEACHFIELD CLOSURE SCHEDULE AS COMPLETED (CONTINUED)

Activity ID	Activity Description	Actual Start	Actual Finish	1998															
				JUN				JUL				AUG				SEP			
				1	8	15	22	29	6	13	20	27	3	10	17	24	31	7	14
10130	Excavate Eastern Outer Pipeline	07JUL98	08JUL98						▲										
10140	Sample Eastern Outer Pipeline	08JUL98	08JUL98						▲										
10150	Excavate Western Inner Pipeline	13JUL98	13JUL98						▲										
10160	Sample Western Inner Pipeline	13JUL98	13JUL98						▲										
PHASE III EXCAVATION																			
Leachfield Overexcavation																			
10170	Overexcavate Leachfield Pipeline	29JUL98	30JUL98																
10190	Sample Following Overexcavation	29JUL98	30JUL98																
SITE CLOSURE																			
Site Closure & Demobilization																			
10180	Backfill Site	24AUG98	31AUG98																
10200	Remove Fencing	31AUG98	31AUG98																
10210	Grade Site for Closure	31AUG98	08SEP98																
10220	Ship Waste for Onsite Disposal	15SEP98	17SEP98																
MILESTONE																			
Building 650 Leachfield Completion Milestone																			
10230	M/S - Complete Building 650 Leachfield Closure		17SEP98																

3.0 WASTE DISPOSITION

Hazardous, mixed, and nonhazardous wastes were generated as part of the closure activities. Daily sanitary waste, such as cups, bags, and paper, was bagged and placed in a dumpster on a daily basis. A few shipments of construction debris, including asphalt, plastic, and absorbent pads used during a hydraulic leak on the backhoe, were sent to the U10C Landfill on the NTS.

The characterization, handling, shipping, and certification of the impacted soil and other waste was conducted according to the waste profile developed under the requirements of the Nevada Test Site Waste Acceptance Criteria (NTSWAC) (DOE, 1996a) and the Bechtel Nevada Waste Certification Program Plan for Radioactive Waste Storage or Disposal (Bechtel Nevada [BN], 1996f) as appropriate. Waste control and certification activities were also subject to a U.S. Department of Energy, Nevada Operations Office (DOE/NV) Radioactive Waste Acceptance Criteria (RWAP) approval process. Waste manifests for the hazardous and mixed waste shipments are provided in Appendix B.

3.1 HAZARDOUS WASTE

Two 208-L (55-gal) drums of hazardous waste were generated on June 18 and 22, 1998, at the upgradient excavation area. This waste consisted of soil, piping, and cement that were removed from the excavation. The drums were stored in a separate section of the waste management area. The drums were removed from the waste management area on August 12, 1998, and moved to the permitted NTS Area 5 Hazardous Waste Storage Unit to await shipment to an off-site treatment, storage, and disposal facility.

3.2 MIXED WASTE

Mixed waste generation began on June 17 and continued through August 31, 1998. All mixed waste was placed into B-25 boxes under observation by BN Performance Assurance or BN Waste Control personnel. A total of 89 B-25 boxes were filled. The boxes were temporarily closed by securing two of the six clips on the box. Upon approval for disposal, all clips were secured. The boxes were weighed using portable scales and loaded on a flatbed truck for shipment to the NTS Area 5 Radioactive Waste Management Site for final disposal in Pit 3. Shipment of the boxes began on September 15 and was completed on September 17, 1998.

4.0 CLOSURE VERIFICATION RESULTS

All verification samples were collected following Section 2.4 of the approved Closure Plan. Soil samples were collected from all excavated areas and analyzed for VOC and radiological constituents. The VOC analysis was performed using SW 846, EPA Method 8260 by Nevada Environmental Laboratory, located in Las Vegas, Nevada. The radiological analysis included a 20-minute gamma count (BN Procedure L-E10.602.PC [BN, 1996d]), a gross alpha/beta scan (BN Procedure L-E10.612.PL [BN, 1996b] and L-E10.603.PC [BN, 1996e]), and isotopic Plutonium (BN Procedure L-E10.601.PL [BN, 1996c] and L-E10.608.PC [BN, 1996a]). These analyses were performed on-site by the BN radioanalytical laboratory. All laboratory data packages are provided in Appendix C.

In addition to soil samples, swipe samples were collected from the exposed discharge piping. These swipe samples were collected in accordance with BN Procedure L-A14.107.H, Revision 1 (BN, 1998). The swipes were analyzed using the Tennelec for a 1-minute alpha/beta count and subsequently submitted to the radioanalytical laboratory for a 20-minute gamma count.

4.1 UPGRADIENT EXCAVATION AND DISCHARGE PIPELINE

Two soil samples were collected for VOC analysis from the upgradient excavation (Figure 3) and one from the south end of the discharge piping (Figure 4). Although radiological constituents were not found during site characterization, a confirmatory composite soil sample was collected for radiological analysis. Swipe samples were collected from the interior and exterior of the exposed pipelines in the upgradient excavation, as well as at the south end of the discharge line as it led into the distribution box. Sample results are provided in Table 2.

4.1.1 VOC Soil Samples

Previous sampling at the upgradient location revealed levels of acetone at 31 $\mu\text{g/kg}$ (REECo, 1993). After the piping and surrounding soil was removed, soil samples were collected. Sample 650NEXC-1 was collected 0.15 m (0.5 ft) below the cemented section of piping, at a depth of about 1 m (3 ft) BGS. Sample 650NEXC-2 was collected at a depth of about 1 m (3 ft) BGS, just east of the cemented section of piping. This location was as close as possible to the location of the 1993 sample that contained the detectable levels of acetone. Sample results indicated that no detectable VOC constituents were present at this location.

Sample 650DB-8N was sampled as one of the sidewall samples from the Distribution Box excavation. Because it was collected on the north sidewall of the Distribution Box excavation below the discharge pipeline, it also represents the verification sample for south end of the discharge pipeline. Results are discussed in Section 4.2 of this Closure Report.

TABLE 2 - SAMPLE RESULTS FROM THE UPGRADEMENT EXCAVATION AND DISCHARGE LINE

SAMPLE ID	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^D	ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
UPGRADEMENT (NORTH) EXCAVATION						
650NEXC-1	North excavation area- 0.5 feet below pipe center of pipe junction	June 23, 1998	ND ^C	650NEXC-1 & 650NEXC-2 composited for sample	NA	NA
(V451, B515) ^A						
650NEXC-2	North excavation area- 3 feet below ground surface, east of pipe junction	June 23, 1998	ND	K40 4.32E+00 Ra226 6.26E-01 Th228 6.88E-01		
(V451, B515)						
650NEXCPIPE	Composited swipe samples at the junction of the discharge line	June 23, 1998	NA	ND	NA	NA
(B510)						
DISCHARGE LINE AT THE DISTRIBUTION BOX						
650DB-8N	North wall of distribution box-below piping at 8 feet depth	June 23, 1998	Methylene Chloride 6	K40 3.67E+00 Ra226 4.82E-01 Th228 5.12E-01	Gross Alpha 4.40E+00 Gross Beta 3.01E+00	Pu239 1.90E-02 Pu238 6.73E-03
(V451, B515)						
650DB-NV9	Overexcavation of 650DB-8N at 9 feet depth	July 30, 1998	ND ^C	NA ^D	NA	NA
(V476)						
650DB-NSW9	North sidewall of 650DB-NV9 at 9 feet depth	July 30, 1998	ND	NA	NA	NA
(V476)						
650PIPE	Composited swipe samples from the end of the discharge line at the distribution box	June 23, 1998	NA	ND	NA	NA
(B494)						

NOTES:

A: SDG - Sample Delivery Group identification of analytical data.
 B: VOCs - Volatile Organic Compounds analyzed using SW 846 US EPA Method 8260B.
 Concentrations reported in micrograms per kilogram (µg/kg).
 C: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).
 D: pCi/g - picocuries per gram

4.1.2 Radiological Soil Samples

As part of verification, a composite sample was collected from 650NEXC-1 and 650NEXC-2, even though previous sampling at this location indicated no levels of radiological constituents. This sample was submitted for a 20-minute gamma count, which indicated that no radioactivity above established guidance levels was present in the soil.

4.1.3 Radiological Swipe Samples

Three swipe samples, two from the interior of the pipe and one from the exterior, were collected from each of the three pipelines in the upgradient excavation. Five swipe samples, three from the interior of the pipes and two from the exterior, were collected from the two pieces of pipeline brought up from the south end of the discharge line. These swipes were each run for a one-minute alpha/beta count. The swipes were then composited for a 20-minute gamma count. Both counts indicated no added radioactivity on the swipes. Results are summarized in Table 2.

4.2 DISTRIBUTION BOX EXCAVATION

Thirteen soil samples and one duplicate were initially collected from the sidewalls and bottom of the Distribution Box excavation. Sidewall samples were collected from the approximate depths of 2.4 m, 4.6 m, and 7.6 m (8 ft, 15 ft, and 25 ft) BGS. These samples were analyzed for both VOC and radiological constituents. Based on initial results, three areas from the 2.4-m (8-ft) depth were overexcavated and resampled. These verification results indicated that all constituents of concern were below their respective clean-up levels. Swipe samples were also collected from the interior and exterior of the exposed pipeline that led into the Distribution Box. These results indicated that all radiological constituents were below established background levels. Sample results are provided in Table 3.

4.2.1 VOC Soil Samples

All samples collected from the Distribution Box excavation were nondetect for VOC constituents except for the following. Sample 650DB-8N was collected from the north sidewall at a depth of 2.4 m (8 ft) BGS. Initial sample results indicated methylene chloride at $6 \mu\text{g/kg}$, which is above the proposed clean-up level of $5 \mu\text{g/kg}$. The area was overexcavated to a depth of 2.7 m (9 ft) and two samples, 650DB-NV9 and 650DB-NSW9, were collected from the area below sample 650DB-8N and from the north sidewall of the new excavation, respectively. The samples were analyzed for VOCs constituents only and results from these samples indicated that VOC constituents were not detectable.

TABLE 3 - SAMPLE RESULTS FROM THE DISTRIBUTION BOX EXCAVATION

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^E	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
NORTH DISTRIBUTION BOX EXCAVATION						
650DB-8N (V451, B515) ^A	North wall of distribution box-below piping at 8 feet depth	June 23, 1998	Methylene Chloride 6	K40 3.67E+00 Ra226 4.82E-01 Th228 5.12E-01	Gross Alpha 4.40E+00 Gross Beta 3.01E+00	Pu239 1.90E-02 Pu238 6.73E-03
650DB-NV9 (V476)	Overexcavation of 650DB-8N at 9 feet depth	July 30, 1998	ND ^C	NA ^D	NA	NA
650DB-NSW9 (V476)	North sidewall of 650DB-NV9 at 9 feet depth	July 30, 1998	ND	NA	NA	NA
650DB-15N (V457, B525)	North wall of distribution box-at 15 feet depth	June 27, 1998	ND	Cs137 6.81E-01 K40 4.10E+00 Ra226 3.05E-01 Th228 4.43E-01	Gross Alpha 4.06E+00 Gross Beta 2.72E+00	Pu239 3.33E-01 Pu238 1.50E-02
650DB-15NE (V457, B525)	Duplicate of 650DB-15N	June 27, 1998	ND	Cs137 7.01E-01 K40 2.80E+00 Ra226 3.85E-01 Th228 4.67E-01	Gross Alpha 3.85E+00 Gross Beta 2.31E+00	Pu239 2.86E-01 Pu238 1.63E-02
650DB-25N (V457, B525)	North wall of distribution box- at 25 feet depth	June 28, 1998	ND	K40 4.07E+00 Ra226 3.62E-01 Th228 4.41E-01 Th232 2.76E+00	Gross Alpha 4.40E+00 Gross Beta 2.79E+00	Pu239 9.54E-03 Pu238 2.32E-03
SOUTH DISTRIBUTION BOX EXCAVATION						
650DB-9S (V451, B515)	South wall of distribution box excavation	June 23, 1998	ND	K40 2.78E+00 Ra226 4.53E-01 Th228 4.35E-01	Gross Alpha 4.48E+00 Gross Beta 1.46E+00	Pu239 3.75E-03 Pu238 1.87E-03
650DB-15S (V457, B525)	South wall of distribution box-at 15 feet depth	June 27, 1998	ND	Cs137 3.24E-01 K40 2.82E+00 Ra226 3.40E-01 Th228 3.75E-01	Gross Alpha 5.60E+00 Gross Beta 2.19E+00	Pu239 4.57E-01 Pu238 1.18E-02

TABLE 3 - SAMPLE RESULTS FROM THE DISTRIBUTION BOX EXCAVATION (CONT.)

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs (µg/kg)	GAMMA (pCi/g)	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
SOUTH DISTRIBUTION BOX EXCAVATION (CONT.)						
650DB-25S (V457, B525)	South wall of distribution box-at 25 feet depth	June 28, 1998	ND	K40 2.83E+00 Ra226 4.33E-01 Th228 3.42E-01 Th232 8.52E-01	Gross Alpha 1.40E+00 Gross Beta 1.35E+00	Pu239 4.66E-02 Pu238 1.27E-03
EAST DISTRIBUTION BOX EXCAVATION						
650DB-8.5E (V451, B515)	East wall of distribution box-below piping (Overexcavated in 650LFEOU-1)	June 23, 1998	Methylene Chloride 7	K40 3.06E+00 Ra226 4.81E-01 Th228 5.17E-01	Gross Alpha 5.07E+00 Gross Beta 3.98E+00	Pu239 4.75E-02 Pu238 6.20E-03
650LFEOU-1 (V467, B595)	East outer pipeline- 6 feet east of distribution box center at 9 feet depth (Overexcavation of 650DB-8.5E)	July 8, 1998	Methylene Chloride 5	K40 2.65E+00 Ra226 3.88E-01 Th228 3.83E-01	Gross Alpha 2.08E+00 Gross Beta 1.96E+00	Pu239 4.67E-02 Pu238 5.86E-03
650LFEOU-1V10 (V476)	Overexcavation of 650LFEOU-1 at 10 feet depth	July 29, 1998	ND	NA	NA	NA
650LFEOU-1NSW10 (V476)	North sidewall of 650LFEOU-1V10 at 10 feet depth	July 29, 1998	ND	NA	NA	NA
650LFEOU-1SSW10 (V476)	South sidewall of 650LFEOU-1V10 at 10 feet depth	July 29, 1998	ND	NA	NA	NA
650DB-15E (V457, B525)	East wall of distribution box-at 15 feet depth	June 27, 1998	ND	Cs137 5.94E-01 K40 2.46E+00 Ra226 3.58E-01 Th228 5.62E-01 Th232 6.89E-01	Gross Alpha 2.43E+00 Gross Beta 1.81E+00	Pu239 2.69E-01 Pu238 5.52E-03
650DB-25E (V457, B525)	East wall of distribution box-at 25 feet depth	June 28, 1998	ND	K40 2.60E+00 Ra226 5.48E-01 Th228 5.79E-01	Gross Alpha 2.38E+00 Gross Beta 1.86E+00	Pu239 4.03E-03 Pu238 2.04E-03

TABLE 3 - SAMPLE RESULTS FROM THE DISTRIBUTION BOX EXCAVATION (CONT.)

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs (µg/kg)	GAMMA (pCi/g)	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
WEST DISTRIBUTION BOX EXCAVATION						
650DB-9W (V451, B515)	West wall of distribution box excavation (Overexcavated in 650LFEOUT-4 due to elevated Pu239)	June 23, 1998	ND	Am24 9.65E-01 Co60 9.26E-01 Cs137 1.61E+00 K40 3.62E+00 Ra226 4.06E-01	Gross Alpha 1.32E+01 Gross Beta 5.68E+00	Pu239 2.01E+00 Pu238 2.53E-02
650LFEOUT-4 (V467, B595)	East outer pipeline- 50 feet south of bend in pipe, at 8 feet depth (Overexcavation of 650DB-9W)	July 8, 1998	ND	K40 3.82E+00 Ra226 4.42E-01	Gross Alpha 6.59E+00 Gross Beta 2.81E+00	Pu239 2.48E-02 Pu238 6.19E-03
650DB-15W (V457, B525)	West wall of distribution box-at 15 feet depth	June 27, 1998	ND	Cs137 9.08E-01 K40 4.04E+00 Ra226 3.63E-01 Th228 5.53E-01 Th232 5.21E-01	Gross Alpha 6.11E+00 Gross Beta 3.78E+00	Pu239 2.95E-01 Pu238 1.60E-02
650DB-25W (V457, B525)	West wall of distribution box- at 25 feet depth	June 28, 1998	ND	K40 3.04E+00 Ra226 3.14E-01 Th228 5.51E-01	Gross Alpha 2.17E+00 Gross Beta 2.86E+00	Pu239 1.65E-02 Pu238 2.31E-03
BOTTOM OF DISTRIBUTION BOX EXCAVATION						
650DB- 25Bottom (V457, B525)	Bottom of distribution box- at 25 foot depth	June 28, 1998	ND	K40 2.95E+00 Ra226 3.83E-01 Th228 5.79E-01	Gross Alpha 1.92E+00 Gross Beta 2.66E+00	Pu239 7.74E-03 Pu238 1.89E-03

NOTES:

A: SDG - Sample Delivery Group identification of analytical data.

B: VOCs - Volatile Organic Compounds analyzed using SW 846 US EPA Method 8260B. Concentrations reported in micrograms per kilogram (µg/kg).

C: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).

D: NA - Not Analyzed.

E: pCi/g - picocuries per gram

Sample 650DB-8.5E was collected from the east sidewall at a depth of 2.6 m (8.5 ft) BGS. Initial sample results indicated methylene chloride at $7 \mu\text{g/kg}$, which is above the proposed clean-up level of $5 \mu\text{g/kg}$. The area had already been excavated to a depth of 2.7 m (9 ft) as part of the removal of the eastern outer pipeline and sample 650LFEOU-1 had been collected as part of the verification sampling for that pipeline. This sample result indicated methylene chloride at $5 \mu\text{g/kg}$, which is at the detection limit for methylene chloride. Therefore, the area was overexcavated to a depth of 3 m (10 ft). Three samples (650LFEOU-1V10, 650LFEOU-1NSW10, and 650LFEOU-1SSW10) were collected from the area below sample 650LFEOU-1, and from the north and south sidewalls of the new excavation, respectively. The samples were analyzed for VOC constituents only and results showed no detectable VOC constituents. Sample results are provided in Table 3.

4.2.2 Radiological Soil Samples

All soil samples collected from the Distribution Box excavation showed no radioactivity above guidance levels except for 650DB-9W, collected at a depth of 2.7 m (9 ft). This sample contained 2.01 pCi/g of Plutonium-239, which is about four times the background level of 0.5 pCi/g that has been established for Plutonium. The area had already been excavated to a depth of 2.7 m (9 ft) as part of the removal of the western outer pipeline and sample 650LFWOUT-4 was collected and analyzed for radiological constituents. Sample results indicated no radioactivity above guidance levels in the sample. Sample results are provided in Table 3.

4.3 NORTHEAST CORNER OF LEACHFIELD EXCAVATION

Five verification samples and one duplicate were collected from the depth of 3.7 m (12 ft) in the excavation in the northeast corner of the leachfield. Samples were collected from the south, east, and west sidewalls and bottom of the excavation. All sample results were below the guidance levels. Sample results are provided in Table 4.

4.3.1 VOC Soil Samples

No VOCs were detected in the samples collected in the northeast corner of the leachfield. Sample results are provided in Table 4.

4.3.2 Radiological Soil Samples

All radiological results from the northeast corner excavation were below established guidance levels. Sample results are provided in Table 4.

TABLE 4 - SAMPLE RESULTS FROM THE NORTHEAST CORNER OF LEACHFIELD EXCAVATION

SAMPLE ID	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA ^D (pCi/g)	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
NLFEXC-12E (V463, B550) ^A	East wall - 7 feet south of distribution box center at 12 feet depth	July 1, 1998	ND ^C K40 Ra226 Th228 Th232 5.35E-01 3.23E-01 3.78E+00	3.78E+00 3.23E-01 5.35E-01 9.09E-01 2.87E+00 4.19E-01 4.58E-01	Gross Alpha 4.45E+00 Gross Beta 5.89E+00 Pu239 1.43E-02 Pu238 1.34E-03	
NLFEXC-12W (V463, B550)	West wall - 12.5 feet south of distribution box center at 12 feet depth	July 1, 1998	ND K40 Ra226 Th228 4.58E-01 4.19E-01 2.87E+00	Gross Alpha 3.58E+00 Gross Beta 3.40E+00 Pu239 1.58E-01 Pu238 1.38E-03		
NLFEXC-12S (V463, B550)	South wall directly below leachfield pipeline at 12 feet depth	July 1, 1998	ND Cs137 K40 Ra226 Th228 1.00E+00 5.14E+00 3.23E-01 5.47E-01	Gross Alpha 7.41E+00 Gross Beta 3.41E+00 Pu239 4.15E-01 Pu238 7.31E-03		
NLFEXC- (V463, B550)	Bottom of excavation adjacent to LCBH-8 at 12 feet depth	July 1, 1998	ND K40 Ra226 Th228 2.84E-01 3.95E-01 3.40E+00	Gross Alpha 1.52E+00 Gross Beta 1.78E+00 Pu239 5.58E-02 Pu238 1.27E-03		
NLFEXC- (V463, B550)	Bottom of excavation - 5 feet south of distribution box center at 12 feet depth	July 1, 1998	ND K40 Ra226 Th228 3.40E+00 3.52E-01 3.98E-01	Gross Alpha 2.52E+00 Gross Beta 2.63E+00 Pu239 2.65E-03 Pu238 1.34E-03		
NLFEXC- (V463, B550)	Duplicate of NLFEXC-12Bottom2	July 1, 1998	ND K40 Ra226 Th228 4.30E+00 4.25E-01 3.81E-01	Gross Alpha 3.69E+00 Gross Beta 2.12E+00 Pu239 2.93E-01 Pu238 1.28E-03		

NOTES:

A: SDG - Sample Delivery Group identification of analytical data.
 B: VOCs - Volatile Organic Compounds analyzed using SW 846 US EPA Method 8260B. Concentrations reported in micrograms per kilogram (µg/kg).
 C: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).
 D: pCi/g - picocuries per gram
 A "North Wall" sample was not collected since the north side of the excavation was bounded by the corrugated metal pipe casing and cement slurry.

4.3.3 Radiological Swipe Samples

Radiological swipe samples were not collected from the pipeline that was removed from the excavation. Based on site characterization results, the pipeline in this area was believed to be impacted with constituents of concern and was placed directly into the B-25 boxes along with the excavated soil.

4.4 LEACHFIELD PIPELINE EXCAVATION

Site characterization data indicated that the leachfield pipelines were not impacted with constituents of concern. Therefore, verification sampling was initially limited to the collection of samples from the bottom of the trench at the beginning, middle, and end of the length of the pipeline. Based on the results of the initial sampling, additional excavation and sampling were required at several locations and sidewall samples were then incorporated into the sampling regime. All of the initial samples indicated no radioactivity above guidance levels, therefore all additional samples were only analyzed for VOC constituents. Following the necessary overexcavation and resampling, all results were nondetect for VOC constituents. Sample locations are shown in Figure 4.

Both of the western pipelines appeared clean upon visual inspections but both eastern pipelines contained a dark brown to black residue that easily peeled from inside the sections of piping. The residue was sampled and results indicated elevated levels of hazardous and radiological constituents (Table 5). Instrument surveys revealed that all four of the pipelines had elevated levels of fixed alpha and beta radionuclides. Swipe samples collected from the piping also revealed elevated levels of removable alpha and gamma radionuclides on several of the pipe segments (Table 5).

4.4.1 VOC Soil Samples

4.4.1.1 East Inner Pipeline

The east inner pipeline was the continuation of the northeast leachfield excavation. Therefore, only two samples, 650LFEIN-1 and 650LFEIN-2, were collected from the remaining length of the pipeline at a depth of 2.7 m (9 ft) and 2.6 m (8.5 ft) BGS, respectively. The results of the samples were nondetect for VOC constituents (Table 6).

TABLE 5 - RESIDUE AND SWIPE SAMPLE RESULTS FROM THE LEACHFIELD PIPING

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^C	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
650PIPERES (V465, B554) ^A	Residue from inside the east inner pipeline	July 2, 1998	Acetone 130	Am241 2.05E+02 Co57 7.25E-01 Co60 2.94E+00 Cs137 1.06E+01 Ra226 2.13E+00 Th228 5.52E+00 Th232 2.27E+00	Gross Alpha 1.32E+03 Gross Beta 7.72E+01	Pu239 1.47E+03 Pu238 1.21E+01
East Inner Pipe (B553)	Swipe sample from entire length of east inner pipeline	July 2, 1998	NA ^D	ND ^E	NA	NA
East Outer Pipe (B595)	Swipe sample of the entire length of east outer pipeline	July 8, 1998	NA	ND	NA	NA
West Inner Pipe 0-33' (B600)	Swipe sample of the entire length of west inner pipeline	July 13, 1998	NA	ND	NA	NA
West Outer Pipe 0-16' (B553)	Swipe sample of the west outer pipeline- 0-16 feet from distribution box	July 2, 1998	NA	ND	NA	NA
West Outer Pipe 16-45' (B595)	Swipe sample of the west outer pipeline- 16-45 feet from distribution box	July 8, 1998	NA	ND	NA	NA

NOTES:

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B: VOCs - Volatile Organic Compounds analyzed using SW 846 US EPA Method 8260B. Concentrations reported in micrograms per kilogram (µg/kg).

C: pCi/g - picocuries per gram

D: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).

E: NA - Not Analyzed.

TABLE 6 - SAMPLE RESULTS FROM THE EAST INNER LEACHFIELD PIPELINE

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^D		GROSS ALPHA/BETA (pCi/g)		PLUTONIUM (pCi/g)	
650LFEIN-1 (V465, B554) ^A	East inner pipeline- 28 feet south of distribution box center, at 9 feet depth	July 2, 1998	ND ^C	Co60	1.33E-01	Gross Alpha	6.09E+00	Pu239	2.94E-01
				Cs137	1.61E-01	Gross Beta	4.58E+00	Pu238	1.02E-02
				K40	4.34E+00				
				Ra226	6.20E-01				
				Th228	5.48E-01				
650LFEIN-2 (V465, B554)	East inner pipeline- 53 feet south of distribution box center, at 8.5 feet depth	July 2, 1998	ND	K40	3.24E+00	Gross Alpha	3.79E+00	Pu239	2.46E-03
				Ra226	6.20E-01	Gross Beta	3.33E+00	Pu238	2.42E-03
				Th228	4.42E-01				

NOTES:

A: SDG - Sample Delivery Group identification of analytical data.

B: VOCs - Volatile Organic Compounds analyzed using SW 846 US EPA Method 8260B. Concentrations reported in micrograms per kilogram (µg/kg).

C: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).

D: pCi/g - picocuries per gram

4.4.1.2 East Outer Pipeline

The east outer pipeline was sampled at four locations. Sample results are summarized in Table 7. Sample 650LFEOOUT-1 was collected at a depth of 2.7 m (9 ft) BGS. The location was adjacent to the CMP excavation as the pipeline trended east out of the Distribution Box. This sample also served as the first overexcavation of sample 650DB-8.5E. Initial results indicated methylene chloride at 5 $\mu\text{g/kg}$. This area was overexcavated to a depth of 3 m (10 ft) BGS and resampled as samples 650LFEOOUT-1V10 and north and south sidewall samples 650LFEOOUT-1NSW10 and 650LFEOOUT-1SSW10. The results of these samples were nondetect for all VOC constituents.

Sample 650LFEOOUT-2 was collected at a depth of 2.7 m (9 ft) BGS, about 1.5 m (5 ft) south of the bend in the leachfield pipeline. Sample results indicated that the only VOC constituent present was tetrachloroethene at levels of 11 $\mu\text{g/kg}$. This area was overexcavated to a depth of 3.45 m (10.5 ft) BGS and resampled as 650LFEOOUT-2V10.5 and east and west sidewall samples 650LFEOOUT-2ESW10.5 and 650LFEOOUT-2WSW10.5. No VOCs were detected in the verification samples collected.

Sample 650LFEOOUT-3 was collected at a depth of 2.4 m (8 ft) BGS, about 7.6 m (25 ft) south of the bend in the leachfield pipeline. Initial results indicated that methylene chloride was present at 5 $\mu\text{g/kg}$, therefore this location was overexcavated to a depth of 2.8 m (9.5 ft). Bottom sample 650LFEOOUT-3V9.5 and east and west sidewall samples 650LFEOOUT-3ESW9.5 and 650LFEOOUT-3WSW9.5 were collected. No VOCs were detected in the verification samples collected.

Sample 650LFEOOUT-4 was collected at a depth of 2.4 m (8 ft) BGS, about 15 m (50 ft) south of the bend in the leachfield pipeline. No VOCs were detected in the verification samples collected.

Residue was collected from inside the east inner pipeline and analyzed. The residue contained acetone at a level of 130 $\mu\text{g/kg}$. Therefore, all the piping was disposed as mixed waste. This residue was observed in both the eastern inner and outer pipelines, however, it was most prevalent in the eastern inner pipeline. No residue was observed in the two western pipelines.

4.4.1.3 West Inner Pipeline

Three samples and a duplicate were collected from the west inner pipeline. Results are provided in Table 8. Sample 650LFWIN-1 was collected at a depth of 2.6 m (8.5 ft) BGS, about 1 m (3 ft) south of the backfill around the CMP. Sample results indicated elevated levels of acetone (200 $\mu\text{g/kg}$), 2-butanone (66 $\mu\text{g/kg}$), methylene chloride (5 $\mu\text{g/kg}$), and toluene (5 $\mu\text{g/kg}$), all above clean-up levels. This area was over excavated to a depth of 3 m (10 ft) so that a bottom

TABLE 7 - SAMPLE RESULTS FROM THE EAST OUTER LEACHFIELD PIPELINE

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^D	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
650LFEOUT-1 (V467, B595) ^A	East outer pipeline- 6 feet east of distribution box center, at 9 feet depth	July 8, 1998	Methylene Chloride 5	K40 2.65E+00 Ra226 3.88E-01 Th228 3.83E-01	Gross Alpha 2.08 Gross Beta 1.96	Pu239 4.67E-02 Pu238 5.86E-03
650LFEOUT-1V10 (V476)	Overexcavation of 650LFEOUT-1 at 10 feet depth	July 29, 1998	ND ^C	NA ^E	NA	NA
650LFEOUT-1NSW10 (V476)	North sidewall of 650LFEOUT-1V10 at 10 feet depth	July 29, 1998	ND	NA	NA	NA
650LFEOUT-1SSW10 (V476)	South sidewall of 650LFEOUT-1V10 at 10 feet depth	July 29, 1998	ND	NA	NA	NA
650LFEOUT-2 (V467, B595)	East outer pipeline- 5 feet south of bend in pipe, at 9 feet depth	July 8, 1998	Tetrachloroethene (PCE) 11	Cs137 2.67E-01 K40 1.54E+00 Ra226 5.16E-01 Th228 2.90E-01	Gross Alpha 2.71 Gross Beta 1.98	Pu239 3.33E-02 Pu238 2.39E-03
650LFEOUT-2V10.5 (V495)	Overexcavation of 650LFEOUT-2 at 10.5 feet depth	August 25, 1998	ND	NA	NA	NA
650LFEOUT-2ESW10.5 (V496)	East sidewall of 650LFEOUT-2V10.5 at 10.5 feet depth	August 26, 1998	ND	NA	NA	NA
650LFEOUT-2WSW10.5 (V496)	West sidewall of 650LFEOUT-2V10.5 at 10.5 feet depth	August 26, 1998	ND	NA	NA	NA
650LFEOUT-3 (V467, B595)	East outer pipeline- 25 feet south of bend in pipe, at 8 feet depth	July 8, 1998	Methylene Chloride 5	K40 2.20E+00 Ra226 5.54E-01 Th228 2.77E-01	Gross Alpha 3.57 Gross Beta 1.74	Pu239 1.02E-01 Pu238 1.38E-02
650LFEOUT-3V9.5 (V476)	Overexcavation of 650LFEOUT-3 at 9.5 feet depth	July 29, 1998	ND	NA	NA	NA
650LFEOUT-3ESW9.5 (V476)	East sidewall of 650LFEOUT-3V9.5 at 9.5 feet depth	July 29, 1998	ND	NA	NA	NA
650LFEOUT-3WSW9.5 (V476)	West sidewall of 650LFEOUT-3V9.5 at 9.5 feet depth	July 29, 1998	ND	NA	NA	NA

TABLE 7 - SAMPLE RESULTS FROM THE EAST OUTER LEACHFIELD PIPELINE (CONT.)

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs (µg/kg)	GAMMA (pCi/g)	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
650LFEOU-4 (V467, B595)	East outer pipeline-50 feet south of bend in pipe at 8 feet depth	July 8, 1998	ND	K40 3.82E+00 Ra226 4.42E-01	Gross Alpha 6.59 Gross Beta 2.81	Pu239 2.48E-02 Pu238 6.19E-03

NOTES:

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C: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).

D: pCi/g - picocuries per gram

E: NA - Not Analyzed.

TABLE 8 - SAMPLE RESULTS FROM THE WEST INNER LEACHFIELD PIPELINE

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^C	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
650LFWIN-1 (V469, B600) ^A	West inner pipeline - 3 feet south of corrugated metal pipe (CMP) casing at 8.5 feet depth	July 13, 1998	Acetone 200	K40 3.70E+00	Gross Alpha 2.00E-06	Pu239 1.08E-01
			2-Butanone 66	Ra226 4.26E-01	Gross Beta 2.90E-06	Pu238 3.04E-03
			Methylene Chloride 5	Th22 6.02E-01		
			Toluene 5			
650LFWIN-1V10 (V476)	Overexcavation of 650LFWIN-1 at 10 feet depth	July 30, 1998	ND ^D	NA ^E	NA	NA
650LFWIN-4V10 (V476)	Duplicate of 650LFWIN-1V10	July 30, 1998	ND	NA	NA	NA
650LFWIN-1ESW10 (V476)	East sidewall of 650LFWIN-1V10 at 10 feet depth	July 30, 1998	ND	NA	NA	NA
650LFWIN-1WSW10 (V476)	West sidewall of 650LFWIN-1V10 at 10 feet depth	July 30, 1998	ND	NA	NA	NA
650LFWIN-2 (V469, B600)	West inner pipeline- 16 feet south of CMP casing, at 9 feet depth	July 13, 1998	Acetone 68	Cs137 1.69E-01	Gross Alpha 1.71E-06	Pu239 6.47E-02
			2-Butanone 61	K40 2.33E+00	Gross Beta 2.83E-06	Pu238 1.38E-03
			Methylene Chloride 6	Ra226 3.81E-01		
				Th22 5.19E-01		
650LFWIN-4 (V469, B600)	Duplicate of 650LFWIN-2	July 13, 1998		Th23 4.26E-01		
			Acetone 84	Cs137 2.23E-01	Gross Alpha 4.95E-06	Pu239 9.62E-03
			2-Butanone 33	K40 4.90E+00	Gross Beta 3.76E-06	Pu238 1.21E-03
			Methylene Chloride 7	Ra226 4.24E-01		
650LFWIN-2V11 (V476)	Overexcavation of 650LFWIN-2 at 11 feet depth	July 30, 1998	ND	NA	NA	NA
650LFWIN-2ESW11 (V476)	East sidewall of 650LFWIN-2V11 at 11 feet depth	July 30, 1998	ND	NA	NA	NA
650LFWIN-2WSW11 (V476)	West sidewall of 650LFWIN-2V11 at 11 feet depth	July 30, 1998	ND	NA	NA	NA

TABLE 8 - SAMPLE RESULTS FROM THE WEST INNER LEACHFIELD PIPELINE (CONT.)

SAMPLE ID	SAMPLE LOCATION	SAMPLE DATE	VOCs (µg/kg)	GAMMA (pCi/g)	ALPHA/BETA (pCi/g)	GROSS PLUTONIUM (pCi/g)
650LFWIN-3 (V469, B600)	West inner pipeline- 33 feet south of CMP casing, at 9 feet depth	July 13, 1998	Acetone 160 2-Butanone 120 Methylene Chloride 11 Toluene 6	K40 2.99E+00 Ra226 4.17E-01 Th22 4.65E-01	Gross Alpha 2.33E-06 Gross Beta 2.33E-06	Pu239 9.63E-03 Pu238 1.21E-03
650LFWIN-3V11 (V476)	Overexcavation of 650LFWIN-3 at 11 feet depth	July 30, 1998	ND	NA	NA	NA
650LFWIN-3ESW11 (V476)	East sidewall of 650LFWIN-3V11 at 11 feet depth	July 30, 1998	Acetone 41	NA	NA	NA
650LFWIN-3VESW13 (V495)	Overexcavation of 650LFWIN-3ESW11 at 13 feet depth	August 25, 1998	ND	NA	NA	NA
650LFWIN-3WSW11 (V476)	West sidewall of 650LFWIN-3V11 at 11 feet depth	July 30, 1998	Acetone 130	NA	NA	NA
650LFWIN-3VWSW13 (V495)	Overexcavation of 650LFWIN-3WSW11 at 13 feet depth	August 25, 1998	ND	NA	NA	NA

NOTES:

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C: pCi/g - picocuries per gram
D: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).
E: NA - Not Analyzed.

sample (650LFWIN-1V10) and east and west sidewall samples (650LFWIN-1ESW10 and 650LFWIN-1WSW10) could be collected. No VOCs were detected in the verification samples collected.

Sample 650LFWIN-2 was collected at a depth of 2.7 m (9 ft), about 5 m (16 ft) south of the backfill around the CMP. Sample results indicated elevated levels of acetone (68 $\mu\text{g/kg}$), 2-butanone (61 $\mu\text{g/kg}$), and methylene chloride (6 $\mu\text{g/kg}$), all above clean-up levels. The duplicate sample (650LFWIN-4) revealed similar levels. This area was over excavated to a depth of 3.3 m (11 ft) so that a bottom sample (650LFWIN-2V11) and east and west sidewall samples (650LFWIN-2ESW11 and 650LFWIN-2WSW11) could be collected. No VOCs were detected in the verification samples collected.

Sample 650LFWIN-3 was collected at a depth of 2.7 m (9 ft) BGS, about 11 m (33 ft) south of the backfill around the CMP. Sample results indicated elevated levels of acetone (160 $\mu\text{g/kg}$), 2-butanone (120 $\mu\text{g/kg}$), methylene chloride (11 $\mu\text{g/kg}$), and toluene (6 $\mu\text{g/kg}$), all above clean-up levels. This area was over excavated to a depth of 3.3 m (11 ft) so that a bottom sample (650LFWIN-3V11) and east and west sidewall samples (650LFWIN-3ESW11 and 650LFWIN-3WSW11) could be collected. The bottom sample was nondetect, however, acetone was found in samples 650LFWIN-3ESW11 and 650LFWIN-3WSW11 at 41 $\mu\text{g/kg}$ and 130 $\mu\text{g/kg}$, respectively. These sample locations were overexcavated to a depth of 4.0 m (13 ft), and samples 650LFWIN-3VESW13 and 650LFWIN-3VWSW13 were collected. No VOCs were detected in the verification samples collected.

4.4.1.4 West Outer Pipeline

The west outer pipeline was sampled in four locations. Results are provided in Table 9. Sample 650LFWOUT-1 was collected at a depth of 2.6 m (8.5 ft) BGS, about 1.3 m (4 ft) south of the bend in the pipeline. No VOCs were detected in the sample.

Sample 650LFWOUT-2 was collected at a depth of 2.7 m (9 ft) BGS, about 7.6 m (25 ft) south of the bend in the pipeline. Sample results indicated that methylene chloride was present at a level of 5 $\mu\text{g/kg}$, and PCE at 8 $\mu\text{g/kg}$. This area was overexcavated to a depth of 3 m (10 ft) so that a bottom sample (650LFWOUT-2V10) and east and west sidewall samples (650LFWOUT-2ESW10 and 650LFWOUT-2WSW10) could be collected. No VOCs were detected in the verification samples collected.

Sample 650LFWOUT-3 was collected at a depth of 2.7 m (9 ft) BGS, about 13.9 m (46 ft) south of the bend in the pipeline. No VOCs were detected in the sample. Sample 650LFWOUT-4 was an overexcavation of 650DB-8.5W and was not analyzed for VOC constituents.

4.4.2 Radiological Soil Samples

Radiological soil samples were collected from all of the initial soil sample locations. None of the samples from the leachfield contained any radioactivity above guidance levels. Therefore, none of the samples from the areas overexcavated were analyzed for radiological constituents.

4.4.3 Radiological Instrument Readings and Swipe Samples

Swipe samples were collected from all the pipelines that were excavated from the leachfield. Instrument readings, using the Electra, were also used to determine if fixed radioactivity was present in the piping. Following the 1-minute alpha/beta count, swipe samples from each pipelines were composited together for a 20-minute gamma count. Maximum instrument readings from the exterior of the east inner pipeline were 0 disintegrations per minute (dpm) alpha and 880 dpm beta/gamma. Maximum readings from the interior of the pipeline were 108 dpm alpha and 975 dpm beta/gamma. The 1-minute alpha/beta count results were all less than the 20 dpm release limit for the NTS. The 20-minute gamma results indicated no detected radioactivity.

Maximum instrument readings from the exterior of the east outer pipeline were 0 dpm alpha and 500 dpm beta/gamma. Maximum readings from the interior of the pipeline were 4.3 dpm alpha and 1,014 dpm beta/gamma. The 1-minute alpha/beta count results were all less than the 20 dpm release limit for the NTS, except for one swipe that was 25 dpm alpha. The 20-minute gamma results indicated no detected radioactivity.

Maximum instrument readings from the exterior of the west outer pipeline were 0 dpm alpha and 600 dpm beta/gamma. Maximum readings from the interior of the pipeline were 4 dpm alpha and 750 dpm beta/gamma. The 1-minute alpha/beta count results were all less than the 20 dpm release limit for the NTS. The 20-minute gamma results indicated no detected radioactivity.

Maximum instrument readings from the interior and exterior of the west inner pipeline were 0 dpm alpha and 770 dpm beta/gamma. The 1-minute alpha/beta count results were all less than the 20 dpm release limit for the NTS. The 20-minute gamma results indicated no detected radioactivity.

4.5 QUALITY CONTROL SAMPLES

Four blind duplicates were collected during the sampling activities, representing at least 20 percent of the samples collected. All results from the blind duplicates were similar to the results from the primary sample.

TABLE 9 - SAMPLE RESULTS FROM THE WEST OUTER LEACHFIELD PIPELINE

SAMPLE ID (SDG)	SAMPLE LOCATION	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^C	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
650LFWOUT-1 (V465, B554) ^A	West outer pipeline- 4 feet south of bend in pipe at 8.5 feet depth	July 2, 1998	ND ^D	K40 3.21E+00 Ra226 3.23E-01 Th22 5.00E-01 Th23 3.78E-01	Gross Alpha 6.31E+00 Gross Beta 3.19E+00	Pu239 3.12E-02 Pu238 2.97E-03
650LFWOUT-2 (V467, B595)	West outer pipeline- 25 feet south of bend in pipe at 9 feet depth	July 8, 1998	Methylene Chloride 5 Tetrachloroethene (PCE) 8	K40 4.22E+00 Ra226 4.63E-01 Th22 5.52E-01	Gross Alpha 4.99E+00 Gross Beta 4.32E+00	Pu239 3.26E-02 Pu238 8.15E-03
650LFWOUT-2V10 (V476)	Overexcavation of 650LFWOUT-2 at 10 feet depth	July 30, 1998	ND	NA ^E	NA	NA
650LFWOUT-2ESW10 (V476)	East sidewall of 650LFWOUT-2V10 at 10 feet depth	July 30, 1998	ND	NA	NA	NA
650LFWOUT-2WSW10 (V476)	West sidewall of 650LFWOUT-2V10 at 10 feet depth	July 30, 1998	ND	NA	NA	NA
650LFWOUT-3 (V467, B595)	West outer pipeline- 46 feet south of bend in pipe at 9 feet depth	July 8, 1998	ND	K40 4.19E+00 Ra226 3.26E-01 Th22 5.10E-01	Gross Alpha 6.85E+00 Gross Beta 5.23E+00	Pu239 6.21E-02 Pu238 1.64E-03
650LFWOUT-4 (B597)	Overexcavation of 650DB-8.5W 6 feet west of distribution box center on west outer pipe, at 9 feet depth	July 9, 1998	NA	Cs137 1.71E-01 K40 1.75E+00 Ra226 4.64E-01 Th22 4.11E-01	Gross Alpha 6.45E+00 Gross Beta 3.57E+00	Pu239 4.47E-01 Pu238 2.49E-02

NOTES:

A: SDG - Sample Delivery Group identification of analytical data.

B: VOCs - Volatile Organic Compounds analyzed using SW 846 US EPA Method 8260B. Concentrations reported in micrograms per kilogram (µg/kg).

C: pCi/g - picocuries per gram

D: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).

E: NA - Not Analyzed.

Nine trip blanks were collected during the sampling activities (Table 10). Chloroform was detected in TB-062798 at 6 $\mu\text{g/kg}$, which probably came from the purified water used to make the trip blank. No other volatile constituents were detected in any of the trip blanks. Chloroform was not found in any other samples. After the detection of the chloroform, distilled water was used for all trip and equipment blanks. Three equipment blanks were collected, none of which contained detectable levels of VOC or radiological constituents (Table 10).

A matrix spike and matrix spike duplicate were also designated for each sample batch analyzed for VOC constituents. These samples showed that the soils at Building 650 could interfere with the results for certain VOC analytes. However, none of these analytes were constituents of concern for this project.

4.6 LAND-USE RESTRICTION

Following overexcavation of the leachfield, all hazardous constituents of concern were below detection levels and all radiological constituents were below established background levels. Therefore, based upon the analytical results, this site is considered clean and available for unrestricted use. A Post-Closure Plan is not necessary for this site.

TABLE 10 - RESULTS OF QUALITY CONTROL SAMPLES

SAMPLE ID (SDG)	SAMPLE DATE	VOCs ^B (µg/kg)	GAMMA (pCi/g) ^C	GROSS ALPHA/BETA (pCi/g)	PLUTONIUM (pCi/g)
TRIP BLANKS					
TB-062398 (V451) ^A	23-Jun-98	ND ^D	NA ^E	NA	NA
TB-062798 (V457)	27-Jun-98	Chloroform 6	NA	NA	NA
TB-070198 (V463)	01-Jul-98	ND	NA	NA	NA
TB-070298 (V465)	02-Jul-98	ND	NA	NA	NA
TB-070898 (V467)	08-Jul-98	ND	NA	NA	NA
TB-071398 (V469)	13-Jul-98	ND	NA	NA	NA
TB-072998 (V476)	29-Jul-98	ND	NA	NA	NA
TB-082598 (V495)	25-Aug-98	ND	NA	NA	NA
TB-082698 (V496)	26-Aug-98	ND	NA	NA	NA
EQUIPMENT BLANKS					
EB-070898 (B595)	08-Jul-98	NA	ND	NA	NA
EB-071398 (V469, B600)	13-Jul-98	ND	ND	Gross Alpha 3.43E-01 Gross Beta 4.42E-01	Pu239 7.25E-04 Pu238 2.61E-03
EB-030998 (V476)	30-Jul-98	ND	ND	NA	NA

NOTES:

A: SDG - Sample Delivery Group identification of analytical data.

B: VOCs - Volatile Organic Compounds analyzed using SW 846 US EPA Method 8260B. Concentrations reported in micrograms per kilogram (µg/kg).

C: pCi/g - picocuries per gram

D: ND - Not Detected at laboratory Method Detection Limit (refer to Appendix C).

E: NA - Not Analyzed.

5.0 CONCLUSIONS

The Building 650 Distribution Box, leachfield lines, and all impacted soil were excavated and disposed as mixed waste. Verification sampling indicated that several areas of the leachfield were impacted with constituents of concern. These impacted areas were subsequently overexcavated and resampled. Overexcavation continued until verification sample results were below established clean-up levels. Following removal of all impacted soil, the excavations were backfilled with clean soil. The site was graded and all fencing was removed to allow unrestricted access to the site. Waste was disposed according to the Closure Plan (DOE, 1998c).

The information presented in this report documents that the closure was accomplished in accordance with the approved in the Closure Plan (DOE, 1998c) and subsequent agreements between DOE and the NDEP (DOE, 1998a) as a Clean Closure under Section V.A.1 of the RCRA Operational Permit (NDEP, 1995). Under the conditions of 40 CFR §270.1(c)(5) and (6) for a closure by removal equivalency, this Closure Report demonstrates that the closure meets or exceeds the requirements of 40 CFR §264.280(e). Verification sample data demonstrate that all constituents of concern that had migrated both laterally and vertically from the leachfield piping were removed to approved clean-up levels. Appendix A- Closure Certification, contains the certification from the Independent Professional Engineer that the closure meets the requirements identified in these documents.

5.1 POST-CLOSURE MONITORING

Site closure was completed by removal of all impact material. Waste was disposed of in accordance with all applicable federal, state, and DOE regulations. Therefore, under the conditions of 40 CFR §270.1(c)(5) and (6), no post-closure monitoring is required at the Building 650 Leachfield.

5.2 CLOSURE PETITION

The closure was completed in accordance with the approved Closure Plan (DOE, 1998c) and subsequent agreements between DOE and the NDEP (DOE, 1998a) as a Clean Closure under Section V.A.1 of the RCRA Operational Permit (NDEP, 1995). Under the conditions of 40 CFR §270.1(c)(5) and (6) for a closure by removal equivalency, this Closure Report demonstrates that the closure meets or exceeds the requirements of 40 CFR §264.280(e). Impacted soils and materials have been removed from the site and verification samples provide lateral and vertical confirmation of the removal. All RCRA-hazardous waste has been transferred to the NTS Area 5 Waste Storage Unit to await final disposal at an off-site treatment, storage, and disposal facility. All mixed waste generated at the site has been disposed in Pit 3 at the NTS Area 5 Radioactive

Waste Management Site. All non-hazardous debris has been disposed of in the Area 9 10C Landfill.

Therefore, the DOE/NV requests that a Notice of Completion be issued by the NDEP and that the Building 650 Leachfield, CAU 94, be moved from Appendix III to Appendix IV of the FFACO "Closed Corrective Action Units."

6.0 REFERENCES

BN, see Bechtel Nevada.

Bechtel Nevada, 1996a, Alpha Spectrometry Operations, L-E10.608.PC, Las Vegas, NV

Bechtel Nevada, 1996b, Detection of Gross Alpha and Beta in Soil and Water, L-E10.612.PL, Las Vegas, NV

Bechtel Nevada, 1996c, Detection of Plutonium in Air, Water, and Soil, L-E10.601.PL, Las Vegas, NV

Bechtel Nevada, 1996d, Gamma Ray Spectrometry Operations, L-E10.602.PC, Las Vegas, NV

Bechtel Nevada, 1996e, Operation of the Tennelec LB5X00 Sample Changer, L-E10.603.PC, Las Vegas, NV

Bechtel Nevada, 1996f, Waste Certification Program Plan for Radioactive Waste Storage or Disposal at the Nevada Test Site, B-A20/96.03, Revision 1, Las Vegas, NV

Bechtel Nevada, 1998, General Radiological Control Technician Field Instructions, L-A14.107.H, Revision 1, Las Vegas, NV

DOE, see U.S. Department of Energy

Emer, D., 1995, 1995 Logbook Preliminary Subsurface Evaluation of the Distribution Box, 22 February, REEC Co, Las Vegas, NV

Federal Facilities Agreement and Consent Order (FFACO) of 1996. Prepared by Nevada Division of Environmental Protection, U.S. Department of Energy, and U.S. Department of Defense

IT Corporation, 1995, Area 23 Building 650 Leachfield Preliminary Investigation, Letter Report, Las Vegas, NV

IT Corporation, 1996, Geophysical Investigation Report for Area 6 Steam Cleaning Effluent Ponds and Decontamination Pond Facility and Area 23 Building 650 Leachfield, Nevada Test Site, Mercury Nevada, Knoxville, TN

NDEP, see Nevada Division of Environmental Protection

Nevada Division of Environmental Protection, 1995, Permit For a Hazardous Waste Facility, Permit Number NEV HW009

REEC Co, see Reynolds Electrical and Engineering Co., Inc.

Reynolds Electrical and Engineering Co., Inc, 1993, Building 650 Leachfield Waste Discharge Line Sampling Activity, Mercury, NV

Reynolds Electrical and Engineering Co., Inc, 1994, Area 23 Building 650 Distribution Box and Laboratory 126 Discharge Line Operational Closure, Mercury, NV

Reynolds Electrical and Engineering Co., Inc., 1995, Nevada Test Site Performance Objective for Certification of Nonradioactive Hazardous Waste, G-E11/96.01, Mercury, NV

U.S. Department of Energy, Nevada Operations Office, 1989, Offsite Radiation Exposure Review Project, Phase II Soils Programs, DOE/NV/1038-423, Las Vegas, NV

U.S. Department of Energy, Nevada Operations Office, 1996, Nevada Test Site Waste Acceptance Criteria, DOE/NV-325, Las Vegas, NV

U.S. Department of Energy, Nevada Operations Office, 1997a, Resource Conservation and Recovery Act Industrial Site Environmental Restoration Site Characterization Plan, Area 23, Building 650 Leachfield, DOE/NV-462, Las Vegas, NV

U.S. Department of Energy, Nevada Operations Office, 1998a, Building 650 Leachfield Upper Pipeline Data and Plan of Action for Corrective Action Unit (CAU) 94 Closure, Letter from R. Wycoff to P. Liebendorfer dated April 24, 1998

U.S. Department of Energy, Nevada Operations Office, 1998b, Characterization Report for the Area 23, Building 650 Leachfield, Corrective Action Unit No. 94, Nevada Test Site, Revision 1, DOE/NV-489, Las Vegas, NV

U.S. Department of Energy, Nevada Operations Office, 1998c, Closure Plan for Corrective Action Unit No. 94, Building 650 Leachfield, Nevada Test Site, Nevada, DOE/NV/11718-180, Las Vegas, NV

U.S. Department of Energy, Nevada Operations Office, 1998d, Field Management Plan for Corrective Action Unit No. 94, Building 650 Leachfield, Nevada Test Site, Nevada, Las Vegas, NV

U.S. Department of Energy, Nevada Operations Office, 1998e, Site-Specific Health and Safety Plan for Corrective Action Unit No. 94, Building 650 Leachfield, Nevada Test Site, Nevada, Las Vegas, NV

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APPENDIX A

CLOSURE CERTIFICATION

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

I certify under penalty of law that the Building 650 Leachfield, Corrective Action Unit 94, located in Area 23 at the Nevada Test Site has been closed in accordance with the approved Closure Plan for CAU No. 94: Area 23, Building 650 Leachfield, Nevada Test Site, dated March 1998 and the Permit for a Hazardous Waste Management Facility Number NEV HW009, United States Department of Energy, Nevada Operations Office, Nevada Test Site, dated March 27, 1995. All measures required in the Closure Plan and the applicable Resource Conservation and Recovery Act 42 U.S.C. 6901-6991i and Title 40 CFR 260-268 have been fully implemented and that, to the best of my knowledge, no violations exist.

Gerald W. Johnson, Manager
Department of Energy/Nevada Operations Office

10/6/98

Date

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

CERTIFICATION OF CLOSURE BY THE INDEPENDENT PROFESSIONAL ENGINEER

I, Dean D. Nelson, a registered Professional Engineer, hereby state that I have reviewed the Closure Plan for the closure of the Building 650 Leachfield, Corrective Action Unit 94, located in Area 23 of the Nevada Test Site and am familiar with the rules and regulations of Title 40 CFR 264.280(e) and 270.1(c)(5) and (6) pertaining to the clean closure of such a facility. The closure of this facility has been performed in compliance with the approved Closure Plan for Corrective Action Unit No. 94, Building 650 Leachfield, Nevada Test Site, Nevada, dated March 1998 and Building 650 Leachfield Upper Pipeline Data and Plan of Action for Corrective Action Unit (CAU) 94 Closure, a letter from the U.S. Department of Energy, Nevada Operations to the Nevada Department of Environmental Protection, dated April 24, 1998, accepted as noted in section 2.2 of this report, and the Permit for a Hazardous Waste Management Facility Number NEV HW009, dated March 27, 1995.

PEER Consultants, P.C.
2439 Losee Road, Suite 1C
North Las Vegas, NV 89109

APPENDIX B

WASTE MANIFESTS

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Manifest
Document
No.:

Bechtel Nevada

Page 1 of 1

78084

NTS ONSITE WASTE TRANSPORT MANIFEST

1. Generator's Name, Organization, and Location: (If Bechtel Nevada, include department no.)
(Please Print)

Shannon Parsons Charge # CHU6 BODE
H23 BLDG 650

Generator's Phone: 702) 295-0645

2. Date of Accumulation or Transport:

8-12-98

3.a Transporter Name:
(Please Print)

3.b Vehicle I.D. No.:

83832

4. U.S. D.O.T. Description. Include: EPA Waste Code and Waste Stream; and Package Identification Numbers.

5. Containers

6. Total
Quantity

7. Unit
Wt./Vol.

No.

Type

HM

a

X

Hazardous waste, Sol. d, nos, 9,
NA 3077, 96 III F003

2

DM

110

6

b

c

d

Use continuation pages for additional items, as necessary.

8. Special Handling Instructions and Additional Information:

Emergency Contact # 702 295 6400
a) 980811, 980812 ERG #171

9. Generator's Certification:

I hereby certify that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for highway transport according to applicable regulations.

I further certify that the contents information above is true and correct to the best of my knowledge through process knowledge or laboratory analysis. I certify that, where applicable, I have appropriately segregated wastes and have made a good-faith effort to minimize the amount of waste generated at work locations under my purview.

10. Generator's Signature:

Date:

Shannon M. Parsons - DPM

8/12/98

11. Transporter's Signature:

Date:

Shannon M. Parsons 12/14/98

8/12/98

12. Discrepancy Indication:

13. Disposal/Accumulation Site Signature
(Acknowledges acceptance of waste)

Date:

Shannon M. Parsons

8-12-98

Bechtel Nevada

HAZARDOUS WASTE CERTIFICATION

980 84

Associated Onsite Manifest

1. Is this waste considered abandoned? ☐ Yes ☒ No
2. Has any of the waste listed on the attached manifest been used or stored in a Controlled Waste Management Area (CWMA) as defined below? ☐ Yes ☒ No

A CWMA is "an area in which the potential exists for contamination due to presence of unencapsulated or unconfined radioactive material or an area that is exposed to beams or other sources of particles capable of causing activation, i.e. neutrons, protons, etc.
3. Has any of the waste listed on the attached manifest been used or stored in any other posted or suspected radiological control area? ☐ Yes ☒ No
4. Has any of the waste listed on the attached manifest commingled with any radioactive mixed waste? ☐ Yes ☒ No
5. Has any of the waste listed on the attached manifest commingled with loose radioactive contamination? ☐ Yes ☒ No
6. Has any of the waste listed on the attached manifest commingled with fixed radioactive contamination? ☐ Yes ☒ No

1. Generator able to certify waste as nonradioactive:

Based upon the knowledge of the origin, storage, use and potential exposure of the waste, I CERTIFY THAT NO RADIOACTIVITY HAS BEEN **ADDED** TO THE WASTE LISTED ON THE ATTACHED MANIFEST.

Shannon M. Parsons-Delany
Signature of Certifier

8/12/98
Date

2. To be completed by Waste Management personnel only:

- ☒ No further analysis required, all process knowledge is present and documented, and the waste listed on the attached manifest is fully characterized.

[Signature]
Signature of Waste Management Specialist

8-12-98
Date

IF ANY OF THE ABOVE QUESTIONS ARE ANSWERED "YES," THE WASTE WILL REQUIRE ONE OF THE FOLLOWING:

1. DOCUMENTATION DEMONSTRATING THAT NO POTENTIAL FOR INTERNAL CONTAMINATION EXISTS (PROCESS KNOWLEDGE); OR
2. RESULTS OF RADIOANALYSES PERFORMED ON THE WASTE.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV3890090001		Manifest Document No. WCS42		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.		
3 Generator's Name and Mailing Address Bechtel Nevada Corporation P.O. Box 98521 Las Vegas, NV 89193-8521						A. State Manifest Document Number				
						B. State Generator's ID				
4 Generator's Phone (702-295-6400)						C. State Transporter's ID				
						D. Transporter's Phone				
5 Transporter 1 Company Name Bechtel Nevada Corporation						6 US EPA ID Number NV3890090001				
7 Transporter 2 Company Name						8 US EPA ID Number				
						E. State Transporter's ID				
9 Designated Facility Name and Site Address Area 5 RWMS Mercury, NV						F. Transporter's ID				
						G. State Facility's ID				
10 US EPA ID Number NV3890090001						H. Facility's Phone				
1 US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12 Containers		13 Total	14 Unit	15
						No.	Type	Quantity	Wt/Vol	Waste No.
a. ☒ HM Hazardous waste, solid, n.o.s, 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)						14	CM	54,182	K	F002 F003 F005
b.										
c. NAME <u>Diane Mitchell</u>										
DATE <u>7/16/98</u> BECHTEL NEVADA RWP										
d.										
Additional Descriptions for Materials Listed Above Emergency Contact 702-295-6400 Emergency Response Guide # 171 (attached)						K. Handling Codes for Wastes Listed Above				
5 Special Handling Instructions and Additional Information 98-2795, 98-2791, 98-2789, 98-2790, 98-2807, 98-2824, 98-2775, 98-2782, 98-2799, 98-2780, 98-2805, 98-2801, 98-2802. Shipment No. DPM98009						The shipment contains the following package numbers; 98-2792, 98-2795, 98-2791, 98-2789, 98-2790, 98-2807, 98-2824, 98-2775, 98-2782, 98-2799, 98-2780, 98-2805, 98-2801, 98-2802.				
GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name Stacey L. Alderson						Signature 		Month Day Year 9 14 98		
17 Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name <u>CURTIS STEVENS</u>						Signature 		Month Day Year 9 17 98		
18 Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name						Signature		Month Day Year		
Discrepancy Indication Space										
2 Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19										
Printed/Typed Name <u>Karen E. Williams</u>						Signature 		Month Day Year 9 17 98		

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV3890090001

Manifest Document No.
WCS49

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3 Generator's Name and Mailing Address

Bechtel Nevada Corporation
P.O. Box 98521
Las Vegas, NV 89193-8521

A. State Manifest Document Number

B. State Generator's ID

4 Generator's Phone (702-295-6400)

5 Transporter 1 Company Name

Bechtel Nevada Corporation

6 US EPA ID Number

NV3890090001

C. State Transporter's ID

D. Transporter's Phone

7 Transporter 2 Company Name

8 US EPA ID Number

E. State Transporter's ID

F. Transporter's ID

9 Designated Facility Name and Site Address

Area 5 RWMS
Mercury, NV

10 US EPA ID Number

NV3890090001

G. State Facility's ID

H. Facility's Phone

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

HM

a. X Hazardous waste, solid, n.o.s, 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)

12 Containers

No.

Type

13 Total

Quantity

14 Unit

Wt/Vol

I.

Waste No.

1

DT

3,451

K

F002, F003, F005

NAME Diane Mitchell

DATE 9-17-98 BECHTEL NEVADA RWP

J. Additional Descriptions for Materials Listed Above

Emergency Contact 702-295-6400

Emergency Response Guide # 171 (attached)

K. Handling Codes for Wastes Listed Above

15 Special Handling Instructions and Additional Information

SHIPPING No. DPM98016

The shipment contains the following package number: 98-LCF8

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

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

Printed/Typed Name

Stacey L. Alderson

Signature

Month Day Year

9/17/98

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

Curtis Stevens

Curtis Stevens

9/17/98

19 Discrepancy Indication Space

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

Printed/Typed Name

Karon E. Williams

Signature

Karon E. Williams

Month Day Year

9/17/98

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV3890090001

Manifest Document No.
WCS48

2. Page 1
of 1

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

3 Generator's Name and Mailing Address

Bechtel Nevada Corporation
P.O. Box 98521
Las Vegas, NV 89193-8521

4 Generator's Phone (702-295-6400)

5 Transporter 1 Company Name

Bechtel Nevada Corporation

6 US EPA ID Number

NV3890090001

7 Transporter 2 Company Name

8 US EPA ID Number

9 Designated Facility Name and Site Address

Area 5 RWMS
Mercury, NV

10 US EPA ID Number

NV3890090001

A. State Manifest Document Number

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's ID

G. State Facility's ID

H. Facility's Phone

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

HM

12 Containers

No. Type

13 Total

Quantity

14 Unit

Wt/Vol

I

Waste No.

a. X Hazardous waste, solid, n.o.s, 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)

5

CM

20.532

K

F002, F003, F005

b.

c.

d.

NAME Diane Mitchell

DATE 9-17-98 BECHTEL NEVADA RWP

Additional Descriptions for Materials Listed Above

Emergency Contact 702-295-6400

Emergency Response Guide # 171 (attached)

K. Handling Codes for Wastes Listed Above

5 Special Handling Instructions and Additional Information

98-0571, 97-6310, 98-0570, 97-6316.

SHIPPING No. DPM98015

The shipment contains the following package numbers; 976311,

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

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Stacey L. Alderson

Signature

Stacey L. Alderson

Month Day Year

9/14/98

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

Curtis S. Peltus

Curt S. Peltus

9/17/98

9 Discrepancy Indication Space

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

Printed/Typed Name

Karen E. Williams

Signature

Karen E. Williams

Month Day Year

9/17/98

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

NV3890090001

Manifest Document No.

WCS47

2. Page 1

of

1

Information in the shaded areas

is not required by Federal law.

3 Generator's Name and Mailing Address

Bechtel Nevada Corporation

P.O. Box 98521

Las Vegas, NV 89193-8521

4 Generator's Phone (702-295-6400)

A. State Manifest Document Number

B. State Generator's ID

5 Transporter 1 Company Name

Bechtel Nevada Corporation

6 US EPA ID Number

NV3890090001

C. State Transporter's ID

D. Transporter's Phone

7 Transporter 2 Company Name

8 US EPA ID Number

E. State Transporter's ID

F. Transporter's ID

9 Designated Facility Name and Site Address

Area 5 RWMS

Mercury, NV

10 US EPA ID Number

NV3890090001

G. State Facility's ID

H. Facility's Phone

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

HM

12 Containers

No.

Type

13 Total

Quantity

14 Unit

Wt/Vol

I.

Waste No.

a. X Hazardous waste, solid, n.o.s, 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)

14

CM

53,460

K

F002, F003, F005

b.

c.

d.

NAME Shane Mitchell

DATE 9-17-98 BECHTEL NEVADA RWT

J. Additional Descriptions for Materials Listed Above

Emergency Contact 702-295-6400

Emergency Response Guide # 171 (attached)

K. Handling Codes for Wastes Listed Above

15 Special Handling Instructions and Additional Information

98-1232, 98-1230, 981219, 98-1233, 98-1243, 98-1229, 97-6314, 98-1214, 98-1220, 98-0572, 97-6309, 21-3653, 21-3661.

SHIPMENT No. DPM98014

The shipment contains the following package numbers; 98-1240,

16 GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed,

marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable

and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;

OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Stacey L. Alderson

Signature

Month Day Year

9/14/98

17 Transporter 1 Acknowledgement of Receipt of Materials

X Printed/Typed Name

Signature

Month Day Year

7/12/98

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19 Discrepancy Indication Space

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

Printed/Typed Name

Signature

Month Day Year

9/17/98

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NV3890090001		Manifest Document No. WCS44		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.		
3 Generator's Name and Mailing Address Bechtel Nevada Corporation P.O. Box 98521 Las Vegas, NV 89193-8521 4 Generator's Phone (702-295-6400)						A. State Manifest Document Number				
						B. State Generator's ID				
5 Transporter 1 Company Name Bechtel Nevada Corporation				6 US EPA ID Number NV3890090001		C. State Transporter's ID				
7 Transporter 2 Company Name				8 US EPA ID Number		D. Transporter's Phone				
9 Designated Facility Name and Site Address Area 5 RWMS Mercury, NV				10 US EPA ID Number NV3890090001		E. State Transporter's ID				
						F. Transporter's ID				
						G. State Facility's ID				
						H. Facility's Phone				
11 US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12 Containers		13 Total	14 Unit	I. Waste No.
						No.	Type	Quantity	Wt/Vol	
a. ☒ HM Hazardous waste, solid, n.o.s., 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)						14	CM	50,692	K	F002 F003 F005
b.										
c. NAME <u>Quinn Mitchell</u> DATE <u>9-16-98</u> BECHTEL NEVADA RWP										
d.										
Additional Descriptions for Materials Listed Above Emergency Contact 702-295-6400 Emergency Response Guide # 171 (attached)						K. Handling Codes for Wastes Listed Above				
5 Special Handling Instructions and Additional Information The shipment contains the following package numbers; 97-6327, 98-2461, 98-2462, 98-2457, 98-2821, 98-2772, 98-2800, 97-6313, 98-1217, 98-1231, 97-6318, 98-2812, 97-6319, 98-2471. SHIPPING NO. DPM98011										
6 GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name Stacey L. Alderson				Signature			Month Day Year 9/14/98			
17 Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name <u>CURTIS STEVENS</u>				Signature			Month Day Year 9/17/98			
18 Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month Day Year			
Discrepancy Indication Space										
Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19										
Printed/Typed Name <u>Karen E. Williams</u>				Signature			Month Day Year 9/17/98			

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV3890090001

Manifest Document No.
WCS43

2. Page 1 of 1

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

3 Generator's Name and Mailing Address

Bechtel Nevada Corporation
P.O. Box 98521
Las Vegas, NV 89193-8521

4 Generator's Phone (702-295-6400)

5 Transporter 1 Company Name

Bechtel Nevada Corporation

6 US EPA ID Number

NV3890090001

7 Transporter 2 Company Name

8 US EPA ID Number

9 Designated Facility Name and Site Address

10 US EPA ID Number

Area 5 RWMS

Mercury, NV

NV3890090001

A. State Manifest Document Number

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's ID

G. State Facility's ID

H. Facility's Phone

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

HM

a. X Hazardous waste, solid, n.o.s, 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)

12 Containers

No. Type

13 Total

Quantity

14 Unit

Wt/Vol

L

Waste No.

14

CM

53.173

K

F002 F003 F005

NAME Diane Mitchell

DATE 9/16/98 BECHTEL NEVADA RWP

J. Additional Descriptions for Materials Listed Above

Emergency Contact 702-295-6400

Emergency Response Guide # 171 (attached)

K. Handling Codes for Wastes Listed Above

15 Special Handling Instructions and Additional Information

The shipment contains the following package numbers; 98-2781,

98-2804, 98-2794, 98-2806, 98-2768, 98-2767, 98-2456, 98-2467, 97-6312, 98-2808, 98-2776, 98-1238, 98-2458, 98-2473.

SHIPMENT No. DPM98010

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

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

Printed/Typed Name

Stacey L. Alderson

Signature

Month Day Year

9/14/98

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

9/17/98

19 Discrepancy Indication Space

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

Printed/Typed Name

Karen E. Williams

Signature

Karen E. Williams

Month Day Year

9/17/98

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV3890090001

Manifest Document No.
WCS46

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3 Generator's Name and Mailing Address

Bechtel Nevada Corporation
P.O. Box 98521
Las Vegas, NV 89193-8521

4 Generator's Phone (702-295-6400)

5 Transporter 1 Company Name

Bechtel Nevada Corporation

6 US EPA ID Number

NV3890090001

7 Transporter 2 Company Name

8 US EPA ID Number

9 Designated Facility Name and Site Address

Area 5 RWMS

Mercury, NV

10 US EPA ID Number

NV3890090001

1 US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)

HM

a. X Hazardous waste, solid, n.o.s, 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)

12 Containers

No. Type

13 Total

Quantity

14 Unit

Wt/Vol

I.

Waste No.

14

CM

52.951

K

F002, F003, F005

Additional Descriptions for Materials Listed Above

Emergency Contact 702-295-6400

Emergency Response Guide # 171 (attached)

K. Handling Codes for Wastes Listed Above

5 Special Handling Instructions and Additional Information

98-1235, 98-1236, 98-1218, 98-1222, 98-1227, 98-1213, 98-1223, 98-1237, 98-2469, 98-2460, 98-1215, 98-1228, 98-1224.

SHIPMENT No. DPM98013

The shipment contains the following package numbers; 98-1242,

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

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable

and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;

OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Stacey L. Alderson

Signature

Month Day Year

9/14/98

Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

9-17-98

Discrepancy Indication Space

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

Printed/Typed Name

Signature

Month Day Year

Karen E. Williams

Karen E. Williams

9/17/98

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
NV3890090001

Manifest Document No.
WCS45

2. Page 1 of 1

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

3 Generator's Name and Mailing Address

Bechtel Nevada Corporation
P.O. Box 98521
Las Vegas, NV 89193-8521

A. State Manifest Document Number

B. State Generator's ID

4 Generator's Phone (702-295-6400)

5 Transporter 1 Company Name

Bechtel Nevada Corporation

6 US EPA ID Number

NV3890090001

C. State Transporter's ID

D. Transporter's Phone

7 Transporter 2 Company Name

8 US EPA ID Number

E. State Transporter's ID

F. Transporter's ID

9 Designated Facility Name and Site Address

Area 5 RWMS
Mercury, NV

10 US EPA ID Number

NV3890090001

G. State Facility's ID

H. Facility's Phone

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

12 Containers

13 Total

14 Unit

I.

No.

Type

Quantity

Wt/Vol

Waste No.

a. ☒ HM Hazardous waste, solid, n.o.s, 9, PG III, NA3077 (acetone, methylene chloride, tetrachloroethene, 2-butanone, toluene)

14

CM

51.191

K

F002, F003, F005

b.

c.

d. NAME Diane Mitchell
DATE 9-15-98 BECHTEL NEVADA RWP

J. Additional Descriptions for Materials Listed Above

Emergency Contact 702-295-6400

Emergency Response Guide # 171 (attached)

K. Handling Codes for Wastes Listed Above

15 Special Handling Instructions and Additional Information

The shipment contains the following package numbers; 98-2465,

97-6324, 98-2464, 97-6315, 98-2459, 98-2826, 97-6326, 98-1234, 98-1221, 97-6322, 97-6320, 98-1216, 98-1225, 98-1226.

SHIPMENT No. DPM98012

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

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

Printed/Typed Name

Stacey L. Alderson

Signature

Month Day Year

9/14/98

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

CURTIS STEVENS

Signature

Curtis Stevens

Month Day Year

9/16/98

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19 Discrepancy Indication Space

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

Printed/Typed Name

Karen E. Williams

Signature

Karen E. Williams

Month Day Year

9/15/98

APPENDIX C

TEST RESULTS

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Bechtel Nevada

Interoffice Memorandum

To: S. J. Nacht Date: August 10, 1998
From: T. P. Van Sittert No.: 2150-AL-98-0371
Analytical Services Laboratory, 295-7472
Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V451**
Project No. 04001

Nevada Environmental Laboratory's results have been reported to J. F. Bonn for the volatile organics analyses of six soil samples and one trip blank collected on June 23, 1998. Preliminary data were faxed to the client on July 6, 1998.

Included was a statement of services which indicated the charge number associated with the SDG.

Radiological analyses were also requested for these samples. Those determinations were entered under SDG B515 and were reported under separate cover dated July 23, 1998.

SPECIFIC:

Volatile Organics:

Method associated quality assurance and quality control criteria were met.

The "Js" flagged data for 1) 650DB-8N are due to unacceptable pentafluorobenzene internal standard and 4-bromofluorobenzene surrogate recoveries in the initial analysis and pentafluorobenzene in the reanalysis, and for 2) 650DB-8.5E are due to unacceptable pentafluorobenzene internal standard recoveries from the initial and reanalysis of the sample. The "Jm" flag for 650NEXC-1 was due to the unacceptable recovery of that component in the sample's matrix spike and matrix spike duplicate.

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

T. P. Van Sittert

TPV:pma
Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG B515, NTS273
ASL SDG V451, (results enc.) NTS273

LABORATORY

CASE

NARRATIVE

NEL LABO. .TORIES

Reno • Las Vegas
Phoenix • Irvine

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: V451
PROJECT NUMBER: 17777

NEL ORDER ID: L9806330

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 6/24/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

The internal standard Pentafluorobenzene for the VOA analyses of samples 650DB-8N and 650DB-8.5E failed acceptance criteria. The samples were re-analyzed and the internal standard failed low again.

Some results have been flagged as follows:

Jm - This concentration should be considered an estimate due to probable matrix effects.
Js - Estimated concentration due to probable matrix effects. Sample QC outside acceptance criteria in duplicate analyses.

Stan Van Wagenen
Laboratory Manager

7/1/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Arizona	AZ0520	AZ0518	AZ0583
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: 650DB-8N
DATE SAMPLED: 6/23/98
NEL SAMPLE ID: L9806330-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/27/98
ANALYZED: 6/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND Js	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND Js	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND Js	5. µg/kg	Ethylbenzene	ND Js	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND Js	5. µg/kg
Bromoform	ND Js	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND Js	5. µg/kg	Iodomethane	ND Js	5. µg/kg
2-Butanone	ND Js	20 µg/kg	Isopropylbenzene	ND Js	5. µg/kg
n-Butylbenzene	ND Js	5. µg/kg	p-Isopropyltoluene	ND Js	5. µg/kg
sec-Butylbenzene	ND Js	5. µg/kg	Methylene chloride (Dichloromethane)	6 Js	5. µg/kg
tert-Butylbenzene	ND Js	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND Js	5. µg/kg	MTBE	ND Js	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND Js	5. µg/kg
Chlorobenzene	ND Js	5. µg/kg	n-Propylbenzene	ND Js	5. µg/kg
Chloroethane	ND Js	5. µg/kg	Styrene	ND Js	5. µg/kg
Chloroform	ND Js	5. µg/kg	1,1,1,2-Tetrachloroethane	ND Js	5. µg/kg
Chloromethane	ND Js	5. µg/kg	1,1,2,2-Tetrachloroethane	ND Js	5. µg/kg
2-Chlorotoluene	ND Js	5. µg/kg	Tetrachloroethene (PCE)	ND Js	5. µg/kg
4-Chlorotoluene	ND Js	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND Js	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND Js	5. µg/kg	1,2,4-Trichlorobenzene	ND Js	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND Js	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND Js	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND Js	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND Js	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND Js	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND Js	5. µg/kg	1,2,4-Trimethylbenzene	ND Js	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND Js	5. µg/kg	1,3,5-Trimethylbenzene	ND Js	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND Js	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND Js	5. µg/kg	o-Xylene	ND Js	5. µg/kg
cis-1,2-Dichloroethene	ND Js	5. µg/kg	m,p-Xylene	ND Js	5. µg/kg
trans-1,2-Dichloroethene	ND Js	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND Js	5. µg/kg			
2,2-Dichloropropane	ND Js	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	72	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	101	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: 650DB-9S
DATE SAMPLED: 6/23/98
NEL SAMPLE ID: L9806330-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/27/98
ANALYZED: 6/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	74	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	89	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: 650DB-8.5E
DATE SAMPLED: 6/23/98
NEL SAMPLE ID: L9806330-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/27/98
ANALYZED: 6/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	Js 20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	Js 5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	Js 5. µg/kg	Iodomethane	ND	Js 5. µg/kg
2-Butanone	ND	Js 20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	7	Js 5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	Js 5. µg/kg	MTBE	ND	Js 5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	Js 5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	Js 5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	Js 5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	Js 5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	Js 10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	Js 5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	Js 5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	Js 6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	Js 5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	Js 5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	Js 5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	Js 10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	75	74 - 121
Dibromofluoromethane	107	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: 650DB-9W
DATE SAMPLED: 6/23/98
NEL SAMPLE ID: L9806330-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/27/98
ANALYZED: 6/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	86	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	97	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: 650NEXC-1
DATE SAMPLED: 6/23/98
NEL SAMPLE ID: L9806330-05

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/27/98
ANALYZED: 6/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
o-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
o-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	96	80 - 120
Toluene-d8	95	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: 650NEXC-2
DATE SAMPLED: 6/23/98
NEL SAMPLE ID: L9806330-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 6/27/98
ANALYZED: 6/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	91	74 - 121
Dibromofluoromethane	95	80 - 120
Toluene-d8	99	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: TB-062398
DATE SAMPLED: 6/23/98
NEL SAMPLE ID: L9806330-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/27/98
ANALYZED: 6/27/98

ANALYST: Scott

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L	1,1-Dichloropropene	ND	5. µg/L
Benzene	ND	5. µg/L	cis-1,3-Dichloropropene	ND	5. µg/L
Bromobenzene	ND	5. µg/L	trans-1,3-Dichloropropene	ND	5. µg/L
Bromochloromethane	ND	5. µg/L	Ethylbenzene	ND	5. µg/L
Bromodichloromethane	ND	5. µg/L	Hexachlorobutadiene	ND	5. µg/L
Bromoform	ND	5. µg/L	2-Hexanone	ND	20 µg/L
Bromomethane	ND	5. µg/L	Iodomethane	ND	5. µg/L
2-Butanone	ND	20 µg/L	Isopropylbenzene	ND	5. µg/L
n-Butylbenzene	ND	5. µg/L	p-Isopropyltoluene	ND	5. µg/L
sec-Butylbenzene	ND	5. µg/L	Methylene chloride (Dichloromethane)	ND	5. µg/L
tert-Butylbenzene	ND	5. µg/L	4-Methyl-2-pentanone	ND	20 µg/L
Carbon disulfide	ND	5. µg/L	MTBE	ND	5. µg/L
Carbon tetrachloride	ND	5. µg/L	Naphthalene	ND	5. µg/L
Chlorobenzene	ND	5. µg/L	n-Propylbenzene	ND	5. µg/L
Chloroethane	ND	5. µg/L	Styrene	ND	5. µg/L
Chloroform	ND	5. µg/L	1,1,1,2-Tetrachloroethane	ND	5. µg/L
Chloromethane	ND	5. µg/L	1,1,2,2-Tetrachloroethane	ND	5. µg/L
2-Chlorotoluene	ND	5. µg/L	Tetrachloroethene (PCE)	ND	5. µg/L
4-Chlorotoluene	ND	5. µg/L	Toluene	ND	5. µg/L
Dibromochloromethane	ND	5. µg/L	1,2,3-Trichlorobenzene	ND	5. µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/L	1,2,4-Trichlorobenzene	ND	5. µg/L
1,2-Dibromoethane (EDB)	ND	5. µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L
Dibromomethane	ND	5. µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/L	Trichloroethene (TCE)	ND	5. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/L	Trichlorofluoromethane (Freon 11)	ND	10. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/L	1,2,3-Trichloropropane	ND	5. µg/L
Dichlorodifluoromethane (Freon 12)	ND	5. µg/L	1,2,4-Trimethylbenzene	ND	5. µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L	1,3,5-Trimethylbenzene	ND	5. µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L	Vinyl chloride	ND	5. µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L	o-Xylene	ND	5. µg/L
cis-1,2-Dichloroethene	ND	5. µg/L	m,p-Xylene	ND	5. µg/L
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
1,3-Dichloropropane	ND	5. µg/L			
2,2-Dichloropropane	ND	10. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	94	70 - 130
Dibromofluoromethane	97	70 - 130
Toluene-d8	102	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806271S60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994
MATRIX: Solid
EXTRACTED: 6/27/98
ANALYZED: 6/27/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg	1,1-Dichloropropene	ND	5 µg/kg
Benzene	ND	5 µg/kg	cis-1,3-Dichloropropene	ND	5 µg/kg
Bromobenzene	ND	5 µg/kg	trans-1,3-Dichloropropene	ND	5 µg/kg
Bromochloromethane	ND	5 µg/kg	Ethylbenzene	ND	5 µg/kg
Bromodichloromethane	ND	5 µg/kg	Hexachlorobutadiene	ND	5 µg/kg
Bromoform	ND	5 µg/kg	2-Hexanone	ND	25 µg/kg
Bromomethane	ND	5 µg/kg	Iodomethane	ND	5 µg/kg
2-Butanone	ND	25 µg/kg	Isopropylbenzene	ND	5 µg/kg
n-Butylbenzene	ND	5 µg/kg	p-Isopropyltoluene	ND	5 µg/kg
sec-Butylbenzene	ND	5 µg/kg	Methylene chloride (Dichloromethane)	ND	5 µg/kg
tert-Butylbenzene	ND	5 µg/kg	4-Methyl-2-pentanone	ND	25 µg/kg
Carbon disulfide	ND	5 µg/kg	MTBE	ND	5 µg/kg
Carbon tetrachloride	ND	5 µg/kg	Naphthalene	ND	5 µg/kg
Chlorobenzene	ND	5 µg/kg	n-Propylbenzene	ND	5 µg/kg
Chloroethane	ND	5 µg/kg	Styrene	ND	5 µg/kg
Chloroform	ND	5 µg/kg	1,1,1,2-Tetrachloroethane	ND	5 µg/kg
Chloromethane	ND	5 µg/kg	1,1,2,2-Tetrachloroethane	ND	5 µg/kg
2-Chlorotoluene	ND	5 µg/kg	Tetrachloroethene (PCE)	ND	5 µg/kg
4-Chlorotoluene	ND	5 µg/kg	Toluene	ND	5 µg/kg
Dibromochloromethane	ND	5 µg/kg	1,2,3-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/kg	1,2,4-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromoethane (EDB)	ND	5 µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg
Dibromomethane	ND	5 µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/kg	Trichloroethene (TCE)	ND	5 µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/kg	Trichlorofluoromethane (Freon 11)	ND	10 µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/kg	1,2,3-Trichloropropane	ND	5 µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5 µg/kg	1,2,4-Trimethylbenzene	ND	5 µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg	1,3,5-Trimethylbenzene	ND	5 µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg	Vinyl chloride	ND	6 µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg	o-Xylene	ND	5 µg/kg
cis-1,2-Dichloroethene	ND	5 µg/kg	m,p-Xylene	ND	5 µg/kg
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
1,3-Dichloropropane	ND	5 µg/kg			
2,2-Dichloropropane	ND	10 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	99	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	97	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V451
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806272W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Aqueous
EXTRACTED: 6/27/98
ANALYZED: 6/27/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L	1,1-Dichloropropene	ND	5 µg/L
Benzene	ND	5 µg/L	cis-1,3-Dichloropropene	ND	5 µg/L
Bromobenzene	ND	5 µg/L	trans-1,3-Dichloropropene	ND	5 µg/L
Bromochloromethane	ND	5 µg/L	Ethylbenzene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L	Hexachlorobutadiene	ND	5 µg/L
Bromoform	ND	5 µg/L	2-Hexanone	ND	25 µg/L
Bromomethane	ND	5 µg/L	Iodomethane	ND	5 µg/L
2-Butanone	ND	25 µg/L	Isopropylbenzene	ND	5 µg/L
n-Butylbenzene	ND	5 µg/L	p-Isopropyltoluene	ND	5 µg/L
sec-Butylbenzene	ND	5 µg/L	Methylene chloride (Dichloromethane)	ND	5 µg/L
tert-Butylbenzene	ND	5 µg/L	4-Methyl-2-pentanone	ND	25 µg/L
Carbon disulfide	ND	5 µg/L	MTBE	ND	5 µg/L
Carbon tetrachloride	ND	5 µg/L	Naphthalene	ND	5 µg/L
Chlorobenzene	ND	5 µg/L	n-Propylbenzene	ND	5 µg/L
Chloroethane	ND	5 µg/L	Styrene	ND	5 µg/L
Chloroform	ND	5 µg/L	1,1,1,2-Tetrachloroethane	ND	5 µg/L
Chloromethane	ND	5 µg/L	1,1,2,2-Tetrachloroethane	ND	5 µg/L
2-Chlorotoluene	ND	5 µg/L	Tetrachloroethene (PCE)	ND	5 µg/L
4-Chlorotoluene	ND	5 µg/L	Toluene	ND	5 µg/L
Dibromochloromethane	ND	5 µg/L	1,2,3-Trichlorobenzene	ND	5 µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/L	1,2,4-Trichlorobenzene	ND	5 µg/L
1,2-Dibromoethane (EDB)	ND	5 µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L
Dibromomethane	ND	5 µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/L	Trichloroethene (TCE)	ND	5 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/L	Trichlorofluoromethane (Freon 11)	ND	10 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/L	1,2,3-Trichloropropane	ND	5 µg/L
Dichlorodifluoromethane (Freon 12)	ND	5 µg/L	1,2,4-Trimethylbenzene	ND	5 µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L	1,3,5-Trimethylbenzene	ND	5 µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L	Vinyl chloride	ND	5 µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L	o-Xylene	ND	5 µg/L
cis-1,2-Dichloroethene	ND	5 µg/L	m,p-Xylene	ND	5 µg/L
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
1,3-Dichloropropane	ND	5 µg/L			
2,2-Dichloropropane	ND	10 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	98	70 - 130
Dibromofluoromethane	102	70 - 130
Toluene-d8	102	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V451/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9806271S60-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/27/98

ANALYZED: 6/27/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	102	80 - 120
Chlorobenzene	100	80 - 120
1,1-Dichloroethene (1,1-DCE)	98	80 - 120
Toluene	104	80 - 120
Trichloroethene (TCE)	104	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	101	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	97	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V451/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9806330-05-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/27/98

ANALYZED: 6/27/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	110	76 - 127
Chlorobenzene	102	75 - 130
1,1-Dichloroethene (1,1-DCE)	150	61 - 145
Toluene	106	76 - 125
Trichloroethene (TCE)	106	71 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	84	74 - 121
Dibromofluoromethane	94	80 - 120
Toluene-d8	95	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V451/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9806330-05-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 6/27/98

ANALYZED: 6/27/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	108	76 - 127	1.8
Chlorobenzene	100	75 - 130	2.
1,1-Dichloroethene (1,1-DCE)	156	61 - 145	3.9
Toluene	104	76 - 125	1.9
Trichloroethene (TCE)	104	71 - 120	1.9

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	83	74 - 121
Dibromofluoromethane	97	80 - 120
Toluene-d8	93	81 - 117

SUPPORTING DATA

SAMPLE DELIVERY GROUP: V457CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 7/8/98DATE REVIEWED: 7/19/98REVIEWED BY:

VOLATILES:

MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>VOA2</u>	<u>6/24/98</u>	<u>1212</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>6/24/98</u>	<u>1735</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1202</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL</u>	<u>VOA2</u>	<u>6/24/98</u>		<u>YES</u>
	<u>VSTD050</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1251</u>	<u>YES</u>
3. METHOD BLANK	<u>VBLK980627A</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1334</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>			<u>N/A</u>
5. LAB CONTROL	<u>VSTD050</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1251</u>	<u>YES</u>
6. TRIP BLANK	<u>TB-062398</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1343</u>	<u>YES</u>
7. SAMPLES	<u>650DB-8N(RE)</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>2312</u>	<u>YES</u>
	<u>650DB-9S(RE)</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>2357</u>	<u>YES</u>
	<u>650DB-8.5E</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1559</u>	<u>YES</u>
	<u>650DB-9W</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1651</u>	<u>YES</u>
	<u>650NEXC-1</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1742</u>	<u>YES</u>
	<u>650NEXC-2</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>1831</u>	<u>YES</u>
	<u>650NEXC-1MS</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>2055</u>	<u>YES</u>
	<u>650NEXC-1MSD</u>	<u>VOA2</u>	<u>6/27/98</u>	<u>2140</u>	<u>YES</u>
8. SURROGATE RECOVERY ACCEPTABLE:	<u>YES</u>				
9. MS/MSD RECOVERY ACCEPTABLE:	<u>SEE COMMENTS</u>				
10. METHOD BLANK ACCEPTABLE:	<u>YES</u>				
11. HOLDING TIMES ACCEPTABLE:	<u>YES</u>				

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled	<u>6/23/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>6/23/98</u>	<u>0</u>	<u>1</u>
c. Date Contract Lab Received:	<u>6/24/98</u>	<u>1</u>	<u>5</u>
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Date Analyzed:	<u>6/27/98</u>	<u>4</u>	<u>14</u>

12. Correct Conc units used:	<u>YES</u>
13. CALCULATIONS ACCEPTABLE:	<u>YES</u>
14. ARE AREAS ACCEPTABLE:	<u>YES</u>
15. RRT IS ACCEPTABLE:	<u>YES</u>
16. FORMS ACCEPTABLE:	<u>YES</u>
17. Chain-of-Custody agrees:	<u>YES</u>

COMMENTS: Method associated quality assurance and control criteria were met. Preliminary data were faxed to the client on 7/6/98. The "Js" flagged data for 1) 650DB-8N are due to unacceptable pentafluorobenzene internal standard and 4-bromofluorobenzene surrogate recoveries in the initial

analysis and pentafluorobenzene in the reanalysis. 2) 650DB-8.5E are due to unacceptable pentafluorobenzene internal standard recoveries from the initial and reanalysis of the sample. The "Jm" flag for 650NEXC-1 was due to the unacceptable recovery of that component in the sample's MS and MSD.

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION							
Project: <u>650 LEACHFIELD</u> BN Org#: <u>2150</u>				Send Report to: <u>JERRY BORN</u>				Sampling Site: <u>Bldg 650 LEACHFIELD</u>							
Charge No.: <u>C4U-6B0DE</u> ASL Prog.: _____				Phone: <u>5-7341</u>		Fax: <u>5-7761</u>		M/S: <u>NTS306</u>		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.					
Project Manager: <u>STEVE NACHT</u>				Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: _____ ☒ Rush Preliminary by: <u>JULY 6 (VOC)</u> Final by: _____											
Phone: <u>5-7234</u> Fax: <u>5-7761</u> M/S: <u>NTS306</u>				Final report format: ☒ Standard () NTS-WAC () Other: <u>7/29 for RAD</u>											
LAB USE ONLY				ANALYSES & METHOD								SAMPLE RECEIPT INFORMATION			
Rad SGD: <u>B515</u> Non-Rad SGD: <u>V451</u>				<div style="display: flex; flex-direction: column; align-items: center;"><div>TOTAL VOC</div><div>EPA 8260</div><div>GAMMA SCAN</div><div>L-EIO. 602. PC</div><div>ISO TOP. PC - L-EIO. 601. PC</div><div>L-EIO. 612. PC</div><div>GROSS ALPHA/BETA</div></div>								Are all sample containers received intact () Yes () No			
Rad Packet: <u>G9249</u> Non-Rad Packet: <u>W1482</u>												Comments: _____			
Client Services Representative: _____												Do the labels agree with this form? () Yes () No			
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: <u>TR</u> Date: <u>6/24/98</u>												Was a Material Clearance Tag submitted? () Yes () No			
												Comments: _____			
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX									COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)		
		DATE	TIME												
0	650DB-BN.	6/23/98	1450	Soil	X	X	X	X							ALL RAD SAMPLES IN 500ml NALC 61
1	650DB-9S		1420		X	X	X	X							653g
2	650DB-8.5E		1429		X	X	X	X							636g
3	650DB-9W		1440		X	X	X	X							612g
4	650NEXC-1		1110		X										MS/MSD SAMPLE
5	650NEXC-2		1120	↓	X										
6	TB-062398		0945	WATER	X										
7	650NEXC-1#2	↓	1120	SOIL		X									Did not REC. this sample 6/24/98 Composite 20 minutes CT 614
8															
9															
Transfer of samples submitted for analyses										Complete for samples shipped to an OFF-SITE Subcontract Laboratory					
Sample Relinquished (Signature/Organization)				DATE / TIME		Received by (Signature/Organization)				Relinquished (BN Representative Signature)		DATE / TIME		Received (Courier & Tracking Info.)	
<u>[Signature]</u> IBN				6/23/98/1600		<u>CD Contruenda</u>				<u>CD Contruenda</u>		6/24/98/BN		BN COURIER	
<u>BN COURIER</u>				6/24/98/1500		<u>M. M. NEL</u>				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 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 (02/98)

DATE: 6-23-98 NO. A003398

Bechtel Nevada

Radiological Control Department- Ramatrol

Material Clearance

MONITOR: WHITE
 ISSUING ORGANIZATION: BNICR
 REQUESTING ORGANIZATION: BN
 SURVEY LOCATION: Area 27
 FROM: Bldg 650 Corral Field
 TO: Area 23 LAB

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

INITIAL

con

DESCRIPTION:

1 Soil Sample
2 Top Blanks

REMARKS: Exp. 6-30-98

THIS TAG EXPIRES 7 DAYS FROM
 ISSUE DATE

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980627\V0627-14.D
Acq On : 27 Jun 98 11:12 pm
Sample : L9806330-01(re)
Misc : 5.0 gr sample analyzed
Quant Time: Jun 27 23:47 1998

Vial: 14
Operator: Scott/Suz
Inst : 5972 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METHODS\8260SW.M
Title : 8260-Soil/Water Calibration: 07/01/98
Last Update : Thu Jul 02 12:19:48 1998
Response via : Multiple Level Calibration

TIC: V0627-14.D

(12) Methylene chloride

10.20min 5.81ug/L

response 9357

Ion	Exp%	Act%
83.95	100	100
85.95	63.30	61.84
48.95	140.00	149.19
0.00	0.00	0.00

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980627\V0627-05.D
 Acq On : 27 Jun 98 3:59 pm
 Sample : L9806330-03
 Misc : 5.0 gr sample analyzed
 Quant Time: Jun 27 16:34 1998

Vial: 5
 Operator: Scott/Suz
 Inst : 5972 - In
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\METHODS\8260SW.M
 Title : 8260-Soil/Water Calibration: 07/01/98
 Last Update : Thu Jul 02 12:19:48 1998
 Response via : Multiple Level Calibration

TIC: V0627-05.D

(12) Methylene chloride

10.26min 7.07ug/L

response 12392

Ion	Exp%	Act%
83.95	100	100
85.95	63.30	60.70
48.95	140.00	94.29#
0.00	0.00	0.00

Interoffice Memorandum

To: S. J. Nacht

Date: July 23, 1998

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

No.: 2150-AL-98-0325

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) B515**
Project No. 04001

Analytical Services Laboratory's results have been reported to J. F. Bonn for the 20 minute gamma spectroscopy, gross alpha, gross beta, and plutonium analyses of five samples collected on June 23, 1998. Also included was a statement of services which indicated the charge number associated with the SDG.

Analysis of the samples for volatile organic compounds was also requested. That analysis was entered under SDG V451. Preliminary data were faxed to the client on July 2, 1998. The final report will be submitted when the final data are received and reviewed.

SPECIFIC:

20 Minute Gamma Spectroscopy;

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

Gross Alpha & Gross Beta;

Method associated QA/QC criteria were met.

Small sample aliquots are processed for these determinations. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

Plutonium;

Method associated QA/QC criteria were met.

Small sample aliquots are processed for this determination. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

2150-AL-98-0325

S. J. Nacht

Page 2 of 2

July 23, 1998

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

T. P. Van Bittert

TPV:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008

EM correspondence, NLV080

J. F. Bonn, (results enc.) NTS306

ASL SDG B515, (results enc.) NTS273

ASL SDG V451, NTS273

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B515
Batch: 0826
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	Detection Limit	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-8.5E	K 40	GAM20	3.06E+00	4.8E+01		1.4E+00	pCi/g	06-23-98	06-23-98	6.36E+02	gm	SOIL G			05-01	G9249-2-75117
650DB-8.5E	RA226	GAM20	4.81E-01	4.0E+01		1.6E-01	pCi/g	06-23-98	06-23-98	6.36E+02	gm	SOIL G			05-01	G9249-2-75117
650DB-8.5E	TH228	GAM20	5.17E-01	3.1E+01		9.9E-02	pCi/g	06-23-98	06-23-98	6.36E+02	gm	SOIL G			05-01	G9249-2-75117
650DB-8N	K 40	GAM20	3.67E+00	4.3E+01		1.4E+00	pCi/g	06-23-98	06-23-98	6.35E+02	gm	SOIL G			05-01	G9249-0-75111
650DB-8N	RA226	GAM20	4.82E-01	3.9E+01		1.5E-01	pCi/g	06-23-98	06-23-98	6.35E+02	gm	SOIL G			05-01	G9249-0-75111
650DB-8N	TH228	GAM20	5.12E-01	3.3E+01		1.2E-01	pCi/g	06-23-98	06-23-98	6.35E+02	gm	SOIL G			05-01	G9249-0-75111
650DB-9S	K 40	GAM20	2.78E+00	4.9E+01		1.3E+00	pCi/g	06-23-98	06-23-98	6.53E+02	gm	SOIL G			05-01	G9249-1-75114
650DB-9S	RA226	GAM20	4.53E-01	4.0E+01		1.4E-01	pCi/g	06-23-98	06-23-98	6.53E+02	gm	SOIL G			05-01	G9249-1-75114
650DB-9S	TH228	GAM20	4.35E-01	3.8E+01		1.4E-01	pCi/g	06-23-98	06-23-98	6.53E+02	gm	SOIL G			05-01	G9249-1-75114
650DB-9W	AM241	GAM20	9.65E-01	4.2E+01		3.6E-01	pCi/g	06-23-98	06-23-98	6.12E+02	gm	SOIL G			05-01	G9249-3-75120

Comment:

Data generated from analyses of samples submitted on 6/13/98.
Gross alpha/beta and plutonium analyses use small sample
aliquots. Results may not apply to the sample as a whole.

Prepared by: Date: 7/21/98

Approved by: Date: 7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 2

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B515
Batch: 0826
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	Detection Limit	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-9W	CO60	GAM20	9.26E-01	2.7E+01		1.3E-01	pCi/g	06-23-98	06-23-98	6.12E+02	gm	SOIL G			05-01	G9249-3-75120
650DB-9W	CS137	GAM20	1.61E+00	2.0E+01		9.9E-02	pCi/g	06-23-98	06-23-98	6.12E+02	gm	SOIL G			05-01	G9249-3-75120
650DB-9W	K 40	GAM20	3.62E+00	4.4E+01		1.4E+00	pCi/g	06-23-98	06-23-98	6.12E+02	gm	SOIL G			05-01	G9249-3-75120
650DB-9W	RA226	GAM20	4.06E-01	5.1E+01		2.0E-01	pCi/g	06-23-98	06-23-98	6.12E+02	gm	SOIL G			05-01	G9249-3-75120
650NEXC-1&2	K 40	GAM20	4.32E+00	4.1E+01		1.5E+00	pCi/g	06-23-98	06-23-98	6.14E+02	gm	SOIL G			05-01	G9249-4-75122
650NEXC-1&2	RA226	GAM20	6.26E-01	3.5E+01		1.6E-01	pCi/g	06-23-98	06-23-98	6.14E+02	gm	SOIL G			05-01	G9249-4-75122
650NEXC-1&2	TH228	GAM20	6.88E-01	2.7E+01		9.0E-02	pCi/g	06-23-98	06-23-98	6.14E+02	gm	SOIL G			05-01	G9249-4-75122
QA BKG EMPTY BTL U05	No peaks	GAM20	0.00E+00	0.0E+00		0.0E+00	NA	06-23-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00228
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	0.0E+00	pCi	06-23-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00228
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	0.0E+00	pCi	06-23-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00228

Comment:

Data generated from analyses of samples submitted on 6/13/98.
Gross alpha/beta and plutonium analyses use small sample aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B515
Batch: 0826
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	Detection Limit	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	0.0E+00	pCi	06-23-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00228
QA SP:NAS-A0271	AM241	GAM20	1.70E+05	8.8E+00		2.1E+03	pCi	06-23-98	04-01-92	1.00E+00	sm	QUAL		105.1	05-01	Q0534-3-14729
QA SP:NAS-A0271	CO60	GAM20	3.02E+05	8.5E+00		1.5E+03	pCi	06-23-98	04-01-92	1.00E+00	sm	QUAL		101.3	05-01	Q0534-3-14729
QA SP:NAS-A0271	CS137	GAM20	2.06E+05	8.1E+00		7.6E+02	pCi	06-23-98	04-01-92	1.00E+00	sm	QUAL		101.5	05-01	Q0534-3-14729

Comment:

Data generated from analyses of samples submitted on 6/13/98.
Gross alpha/beta and plutonium analyses use small sample
aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B515
Batch: M600
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	Detection Limit	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-8.5E	Gross Alpha	Gross A	5.07E+00	5.0E+01		2.2E+00	pCi/g	07-17-98	06-23-98	4.90E-01	gm	SOIL G			14-01	G9249-2-75116
650DB-8N	Gross Alpha	Gross A	4.40E+00	5.2E+01		2.0E+00	pCi/g	07-17-98	06-23-98	5.50E-01	gm	SOIL G			14-01	G9249-0-75110
650DB-9S	Gross Alpha	Gross A	4.48E+00	5.7E+01		2.3E+00	pCi/g	07-17-98	06-23-98	4.80E-01	gm	SOIL G			14-01	G9249-1-75113
650DB-9W	Gross Alpha	Gross A	1.32E+01	2.4E+01		2.1E+00	pCi/g	07-17-98	06-23-98	5.20E-01	gm	SOIL G			14-01	G9249-3-75119
QA REA	Gross Alpha	Gross A	6.72E-02	3.6E+02	U	2.7E-01	pCi	07-17-98	06-23-98	1.00E+00	sm	QUAL			14-01	G9250-0-06784
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.73E+00	1.5E+01	<i>R₄₄</i>	2.7E-01	pCi	07-17-98	01-06-98	1.00E+00	sm	QUAL		108.9	14-01	G9250-1-06785
650DB-8.5E	Gross Beta	Gross B	3.98E+00	3.7E+01		1.4E+00	pCi/g	07-17-98	06-23-98	4.90E-01	gm	SOIL G			14-01	G9249-2-75116
650DB-8N	Gross Beta	Gross B	3.01E+00	4.2E+01		1.2E+00	pCi/g	07-17-98	06-23-98	5.50E-01	gm	SOIL G			14-01	G9249-0-75110
650DB-9S	Gross Beta	Gross B	1.46E+00	9.6E+01	U	1.4E+00	pCi/g	07-17-98	06-23-98	4.80E-01	gm	SOIL G			14-01	G9249-1-75113
650DB-9W	Gross Beta	Gross B	5.68E+00	2.5E+01		1.3E+00	pCi/g	07-17-98	06-23-98	5.20E-01	gm	SOIL G			14-01	G9249-3-75119

Comment:

Data generated from analyses of samples submitted on 6/13/98.
Gross alpha/beta and plutonium analyses use small sample
aliquots. Results may not apply to the sample as a whole.

Prepared by: *[Signature]* Date: 7/21/98

Approved by: *[Signature]* Date: 7/22/98

Qualification Flags:

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Bechtel Nevada Corporation

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P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B515
Batch: M600
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	Detection Limit	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA REA	Gross Beta	Gross B	-6.51E-02	8.9E+02	U	6.0E-01	pCi	07-17-98	06-23-98	1.00E+00	sm	QUAL			14-01	G9250-0-06784
QA SP:GROSSAB 05	Gross Beta	Gross B	5.75E+00	1.3E+01		6.0E-01	pCi	07-17-98	01-06-98	1.00E+00	sm	QUAL		110.0	14-01	G9250-1-06785

Comment:

Data generated from analyses of samples submitted on 6/13/98.
Gross alpha/beta and plutonium analyses use small sample
aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date: 7/21/98

Approved by:

Date: 7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
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Bechtel Nevada Corporation

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P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B515
Batch: M601
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	Detection Limit	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-8.5E	PU239	Pu	4.75E-02	6.2E+01		2.2E-02	pCi/g	07-09-98	06-23-98	4.90E-01	gm	SOIL G	72.2		30-18	G9249-2-75118
650DB-8.5E	PU238	Pu	6.20E-03	1.9E+02	U	1.7E-02	pCi/g	07-09-98	06-23-98	4.90E-01	gm	SOIL G	72.2		30-18	G9249-2-75118
650DB-8N	PU239	Pu	1.90E-02	1.2E+02	U	2.4E-02	pCi/g	07-09-98	06-23-98	4.90E-01	gm	SOIL G	75.4		30-12	G9249-0-75112
650DB-8N	PU238	Pu	6.73E-03	1.9E+02	U	1.9E-02	pCi/g	07-09-98	06-23-98	4.90E-01	gm	SOIL G	75.4		30-12	G9249-0-75112
650DB-9S	PU239	Pu	3.70E-03	5.3E+02	U	3.2E-02	pCi/g	07-09-98	06-23-98	4.90E-01	gm	SOIL G	54.8		30-16	G9249-1-75115
650DB-9S	PU238	Pu	-1.87E-03	3.4E+02	U	2.5E-02	pCi/g	07-09-98	06-23-98	4.90E-01	gm	SOIL G	54.8		30-16	G9249-1-75115
650DB-9W	PU239	Pu	2.01E+00	1.9E+01		8.9E-02	pCi/g	07-09-98	06-23-98	1.27E-01	gm	SOIL G	72.2		30-19	G9249-3-75121
650DB-9W	PU238	Pu	2.53E-02	1.9E+02	U	7.1E-02	pCi/g	07-09-98	06-23-98	1.27E-01	gm	SOIL G	72.2		30-19	G9249-3-75121
QA REA	PU239	Pu	3.72E-03	2.5E+02	U	1.3E-02	pCi	07-09-98	06-23-98	1.00E+00	sm	QUAL	61.9		30-11	G9251-0-06310
QA REA	PU238	Pu	3.65E-03	1.9E+02	U	1.0E-02	pCi	07-09-98	06-23-98	1.00E+00	sm	QUAL	61.9		30-11	G9251-0-06310

Comment:

Data generated from analyses of samples submitted on 6/13/98.
Gross alpha/beta and plutonium analyses use small sample
aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/2/98

Approved by:

Date:

7/22/98

Qualification Flags:

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Bechtel Nevada Corporation

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P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B515
Batch: M601
Program: 888

Report No. ;

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	Detection Limit	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:PU.25 01	PU239	Pu	9.49E-01	1.5E+01		1.7E-02	pCi	07-09-98	10-22-92	1.00E+00	sm	QUAL	53.3	111.0	30-17	G9251-1-06311
QA SP:PU.25 01	PU238	Pu	-9.76E-04	3.4E+02	U	1.3E-02	pCi	07-09-98	10-22-92	1.00E+00	sm	QUAL	53.3		30-17	G9251-1-06311

Comment:

Data generated from analyses of samples submitted on 6/13/98.
Gross alpha/beta and plutonium analyses use small sample
aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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P = Preliminary Results
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U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

BN-0732 (02/98)

Bechtel Nevada

Interoffice Memorandum

To: S. J. Nacht **Date:** August 10, 1998
From: T. P. Van Sittert **No.:** 2150-AL-98-0372
Analytical Services Laboratory, 295-7472
Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V457**
Project No. 04001

Nevada Environmental Laboratory's results have been reported to J. F. Bonn for the volatile organics analyses of ten soil samples and one trip blank collected on June 27 and 28, 1998. Preliminary data were faxed to the client on July 7, 1998.

Included was a statement of services which indicated the charge number associated with the SDG.

Radiological analyses were also requested for these samples. Those determinations were entered under SDG B525 and were reported under separate cover dated July 23, 1998.

SPECIFIC:

Volatile Organics:

Method associated quality assurance and quality control criteria were met.

The "Extracted" and "Analyzed" dates on the report forms for samples 650DB-25E, -25W, -25N, and -25S were incorrect when compared to the raw data. The dates were corrected with those included in the raw data and initialed.

NEL did not submit the matrix spike and matrix spike duplicate (MS/MSD) report forms for sample 650DB-15NE. The MS/MSD data will be submitted when received.

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

T. P. Van Sittert

TPV:pma
Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG B525, NTS273
ASL SDG V457, (results enc.) NTS273

LABORATORY

CASE

NARRATIVE

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

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: V457
PROJECT NUMBER: 17777

NEL ORDER ID: L9806386

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 6/30/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

Stan Van Wageningen
Laboratory Manager

7/6/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Arizona	AZ0520	AZ0518	AZ0583
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

**VOLATILE
ORGANICS
DATA**

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-15E
DATE SAMPLED: 6/27/98
NEL SAMPLE ID: L9806386-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/2/98
ANALYZED: 7/2/98

ANALYST: Stan

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
1,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
1-Bromofluorobenzene	95	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	101	81 - 117

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

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-15W
DATE SAMPLED: 6/27/98
NEL SAMPLE ID: L9806386-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/2/98
ANALYZED: 7/2/98

ANALYST: Stan

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	98	74 - 121
Dibromofluoromethane	85	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-15N
DATE SAMPLED: 6/27/98
NEL SAMPLE ID: L9806386-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/2/98
ANALYZED: 7/2/98

ANALYST: Stan

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
p-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
m-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
1,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
1-Bromofluorobenzene	89	74 - 121
Dibromofluoromethane	88	80 - 120
Toluene-d8	101	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-15NE
DATE SAMPLED: 6/27/98
NEL SAMPLE ID: L9806386-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/2/98
ANALYZED: 7/2/98

ANALYST: Stan

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	74 - 121
Dibromofluoromethane	101	80 - 120
Toluene-d8	94	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-15S
DATE SAMPLED: 6/27/98
NEL SAMPLE ID: L9806386-05

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/2/98
ANALYZED: 7/2/98

ANALYST: Stan

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	98	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: TB-062798
DATE SAMPLED: 6/27/98
NEL SAMPLE ID: L9806386-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 6/30/98
ANALYZED: 6/30/98

ANALYST: Stan

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L	1,1-Dichloropropene	ND	5. µg/L
Benzene	ND	5. µg/L	cis-1,3-Dichloropropene	ND	5. µg/L
Bromobenzene	ND	5. µg/L	trans-1,3-Dichloropropene	ND	5. µg/L
Bromochloromethane	ND	5. µg/L	Ethylbenzene	ND	5. µg/L
Bromodichloromethane	ND	5. µg/L	Hexachlorobutadiene	ND	5. µg/L
Bromoform	ND	5. µg/L	2-Hexanone	ND	20 µg/L
Bromomethane	ND	5. µg/L	Iodomethane	ND	5. µg/L
2-Butanone	ND	20 µg/L	Isopropylbenzene	ND	5. µg/L
n-Butylbenzene	ND	5. µg/L	p-Isopropyltoluene	ND	5. µg/L
sec-Butylbenzene	ND	5. µg/L	Methylene chloride (Dichloromethane)	ND	5. µg/L
tert-Butylbenzene	ND	5. µg/L	4-Methyl-2-pentanone	ND	20 µg/L
Carbon disulfide	ND	5. µg/L	MTBE	ND	5. µg/L
Carbon tetrachloride	ND	5. µg/L	Naphthalene	ND	5. µg/L
Chlorobenzene	ND	5. µg/L	n-Propylbenzene	ND	5. µg/L
Chloroethane	ND	5. µg/L	Styrene	ND	5. µg/L
Chloroform	6	5. µg/L	1,1,1,2-Tetrachloroethane	ND	5. µg/L
Chloromethane	ND	5. µg/L	1,1,2,2-Tetrachloroethane	ND	5. µg/L
2-Chlorotoluene	ND	5. µg/L	Tetrachloroethene (PCE)	ND	5. µg/L
4-Chlorotoluene	ND	5. µg/L	Toluene	ND	5. µg/L
Dibromochloromethane	ND	5. µg/L	1,2,3-Trichlorobenzene	ND	5. µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/L	1,2,4-Trichlorobenzene	ND	5. µg/L
1,2-Dibromoethane (EDB)	ND	5. µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L
Dibromomethane	ND	5. µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/L	Trichloroethene (TCE)	ND	5. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/L	Trichlorofluoromethane (Freon 11)	ND	10. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/L	1,2,3-Trichloropropane	ND	5. µg/L
Dichlorodifluoromethane (Freon 12)	ND	5. µg/L	1,2,4-Trimethylbenzene	ND	5. µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L	1,3,5-Trimethylbenzene	ND	5. µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L	Vinyl chloride	ND	5. µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L	o-Xylene	ND	5. µg/L
cis-1,2-Dichloroethene	ND	5. µg/L	m,p-Xylene	ND	5. µg/L
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
1,3-Dichloropropane	ND	5. µg/L			
2,2-Dichloropropane	ND	10. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	109	86 - 115
Dibromofluoromethane	101	86 - 118
Toluene-d8	110	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-25Bottom
DATE SAMPLED: 6/28/98
NEL SAMPLE ID: L9806386-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/2/98
ANALYZED: 7/2/98

ANALYST: Stan

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	91	74 - 121
Dibromofluoromethane	109	80 - 120
Toluene-d8	102	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-25E
DATE SAMPLED: 6/28/98
NEL SAMPLE ID: L9806386-08

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: ~~7/2/98~~ 7/3/98 *TR* ANALYST: Stan
ANALYZED: ~~7/2/98~~ 7/3/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	83	74 - 121
Dibromofluoromethane	104	80 - 120
Toluene-d8	98	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-25W
DATE SAMPLED: 6/28/98
NEL SAMPLE ID: L9806386-09

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: ~~7/2/98~~ 7/3/98 ANALYST: Stan
ANALYZED: ~~7/2/98~~ 7/3/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	107	80 - 120
Toluene-d8	102	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-25N
DATE SAMPLED: 6/28/98
NEL SAMPLE ID: L9806386-10

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: ~~7/2/98~~ 7/3/98 T72 ANALYST: Stan
ANALYZED: ~~7/2/98~~ 7/3/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	99	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: 650DB-255
DATE SAMPLED: 6/28/98
NEL SAMPLE ID: L9806386-11

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: ~~7/2/98~~ 7/3/98
ANALYZED: ~~7/2/98~~ 7/3/98 TK

ANALYST: Stan

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	20 µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	20 µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	20 µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5. µg/kg	Naphthalene	ND	5. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5. µg/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	6. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	5. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	112	80 - 120
Toluene-d8	100	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9806302W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Aqueous

EXTRACTED: 6/30/98
ANALYZED: 6/30/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L	1,1-Dichloropropene	ND	5 µg/L
Benzene	ND	5 µg/L	cis-1,3-Dichloropropene	ND	5 µg/L
Bromobenzene	ND	5 µg/L	trans-1,3-Dichloropropene	ND	5 µg/L
Bromochloromethane	ND	5 µg/L	Ethylbenzene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L	Hexachlorobutadiene	ND	5 µg/L
Bromoform	ND	5 µg/L	2-Hexanone	ND	25 µg/L
Bromomethane	ND	5 µg/L	Iodomethane	ND	5 µg/L
2-Butanone	ND	25 µg/L	Isopropylbenzene	ND	5 µg/L
n-Butylbenzene	ND	5 µg/L	p-Isopropyltoluene	ND	5 µg/L
sec-Butylbenzene	ND	5 µg/L	Methylene chloride (Dichloromethane)	ND	5 µg/L
tert-Butylbenzene	ND	5 µg/L	4-Methyl-2-pentanone	ND	25 µg/L
Carbon disulfide	ND	5 µg/L	MTBE	ND	5 µg/L
Carbon tetrachloride	ND	5 µg/L	Naphthalene	ND	5 µg/L
Chlorobenzene	ND	5 µg/L	n-Propylbenzene	ND	5 µg/L
Chloroethane	ND	5 µg/L	Styrene	ND	5 µg/L
Chloroform	ND	5 µg/L	1,1,1,2-Tetrachloroethane	ND	5 µg/L
Chloromethane	ND	5 µg/L	1,1,2,2-Tetrachloroethane	ND	5 µg/L
2-Chlorotoluene	ND	5 µg/L	Tetrachloroethene (PCE)	ND	5 µg/L
4-Chlorotoluene	ND	5 µg/L	Toluene	ND	5 µg/L
Dibromochloromethane	ND	5 µg/L	1,2,3-Trichlorobenzene	ND	5 µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/L	1,2,4-Trichlorobenzene	ND	5 µg/L
1,2-Dibromoethane (EDB)	ND	5 µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L
Dibromomethane	ND	5 µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/L	Trichloroethene (TCE)	ND	5 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/L	Trichlorofluoromethane (Freon 11)	ND	10 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/L	1,2,3-Trichloropropane	ND	5 µg/L
Dichlorodifluoromethane (Freon 12)	ND	5 µg/L	1,2,4-Trimethylbenzene	ND	5 µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L	1,3,5-Trimethylbenzene	ND	5 µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L	Vinyl chloride	ND	5 µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L	o-Xylene	ND	5 µg/L
cis-1,2-Dichloroethene	ND	5 µg/L	m,p-Xylene	ND	5 µg/L
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
1,3-Dichloropropane	ND	5 µg/L			
2,2-Dichloropropane	ND	10 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	94	86 - 115
Dibromofluoromethane	94	86 - 118
Toluene-d8	96	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V457
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9807022S60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
EXTRACTED: 7/2/98
ANALYZED: 7/2/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg	1,1-Dichloropropene	ND	5 µg/kg
Benzene	ND	5 µg/kg	cis-1,3-Dichloropropene	ND	5 µg/kg
Bromobenzene	ND	5 µg/kg	trans-1,3-Dichloropropene	ND	5 µg/kg
Bromochloromethane	ND	5 µg/kg	Ethylbenzene	ND	5 µg/kg
Bromodichloromethane	ND	5 µg/kg	Hexachlorobutadiene	ND	5 µg/kg
Bromoform	ND	5 µg/kg	2-Hexanone	ND	25 µg/kg
Bromomethane	ND	5 µg/kg	Iodomethane	ND	5 µg/kg
2-Butanone	ND	25 µg/kg	Isopropylbenzene	ND	5 µg/kg
n-Butylbenzene	ND	5 µg/kg	p-Isopropyltoluene	ND	5 µg/kg
sec-Butylbenzene	ND	5 µg/kg	Methylene chloride (Dichloromethane)	ND	5 µg/kg
tert-Butylbenzene	ND	5 µg/kg	4-Methyl-2-pentanone	ND	25 µg/kg
Carbon disulfide	ND	5 µg/kg	MTBE	ND	5 µg/kg
Carbon tetrachloride	ND	5 µg/kg	Naphthalene	ND	5 µg/kg
Chlorobenzene	ND	5 µg/kg	n-Propylbenzene	ND	5 µg/kg
Chloroethane	ND	5 µg/kg	Styrene	ND	5 µg/kg
Chloroform	ND	5 µg/kg	1,1,1,2-Tetrachloroethane	ND	5 µg/kg
Chloromethane	ND	5 µg/kg	1,1,2,2-Tetrachloroethane	ND	5 µg/kg
2-Chlorotoluene	ND	5 µg/kg	Tetrachloroethene (PCE)	ND	5 µg/kg
4-Chlorotoluene	ND	5 µg/kg	Toluene	ND	5 µg/kg
Dibromochloromethane	ND	5 µg/kg	1,2,3-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/kg	1,2,4-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromoethane (EDB)	ND	5 µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg
Dibromomethane	ND	5 µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/kg	Trichloroethene (TCE)	ND	5 µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/kg	Trichlorofluoromethane (Freon 11)	ND	10 µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/kg	1,2,3-Trichloropropane	ND	5 µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5 µg/kg	1,2,4-Trimethylbenzene	ND	5 µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg	1,3,5-Trimethylbenzene	ND	5 µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg	Vinyl chloride	ND	6 µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg	o-Xylene	ND	5 µg/kg
cis-1,2-Dichloroethene	ND	5 µg/kg	m,p-Xylene	ND	5 µg/kg
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
1,3-Dichloropropane	ND	5 µg/kg			
2,2-Dichloropropane	ND	10 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	74 - 121
Dibromofluoromethane	94	80 - 120
Toluene-d8	98	81 - 117

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

SUPPORTING DATA

SAMPLE DELIVERY GROUP: V457CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 7/9/98DATE REVIEWED: 7/20/98REVIEWED BY: **VOLATILES:**MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	BFB	VOA2	6/24/98	1215	YES
	BFB	VOA2	6/30/98	0733	YES
	BFB	VOA2	7/1/98	0732	YES
	BFB	VOA2	7/1/98	1754	YES
	BFB	VOA2	7/2/98	0714	YES
	BFB	VOA2	7/2/98	1738	YES
2. CALIBRATION	INITIAL	VOA2	6/24/98		YES
	VSTD050	VOA2	6/30/98	0757	YES
	INITIAL	VOA2	7/1/98		YES
	VSTD050	VOA2	7/2/98	0811	YES
	VSTD050	VOA2	7/2/98	1814	YES
3. METHOD BLANK	VBK980630A	VOA2	6/30/98	0831	YES
	VBK980630B	VOA2	6/30/98	1644	YES
	VBK980702A	VOA2	7/2/98	0846	YES
	VBK980702B	VOA2	7/2/98	1906	YES
4. EXT. BLANK	N/A	N/A	N/A	N/A	N/A
5. LAB CONTROL	VSTD050	VOA2	6/30/98	0757	YES
	VSTD050	VOA2	7/2/98	0811	YES
6. TRIP BLANK	TB-062798	VOA2	6/30/98	1850	YES
7. SAMPLES	650DB-15E	VOA2	7/2/98	1952	YES
	650DB-15W	VOA2	7/2/98	2038	YES
	650DB-15N	VOA2	7/2/98	2125	YES
	650DB-15NE	VOA2	7/2/98	2210	YES
	650DB-15S	VOA2	7/2/98	2257	YES
	650DB-25Bottom	VOA2	7/2/98	2343	YES
	650DB-25E	VOA2	7/3/98	0028	YES
	650DB-25W	VOA2	7/3/98	0115	YES
	650DB-25N	VOA2	7/3/98	0201	YES
	650DB-25S	VOA2	7/3/98	0246	YES
	650DB-15NEMS	VOA2	7/3/98	0418	YES
	650DB-15NEMSD	VOA2	7/3/98	2210	YES
8. SURROGATE RECOVERY ACCEPTABLE:	YES				
9. MS/MSD RECOVERY ACCEPTABLE:	SEE COMMENTS				
10. METHOD BLANK ACCEPTABLE:	YES				
11. HOLDING TIMES ACCEPTABLE:	YES				

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled	6/27/98	0	0
b. Date ASL Received:	6/29/98	2	1
c. Date Contract Lab Received:	6/30/98	3	5
d. Date Extracted:	N/A	N/A	N/A

e. Date Analyzed:

7/3/98614

12. Correct Conc units used: YES
13. CALCULATIONS ACCEPTABLE: YES
14. ARE AREAS ACCEPTABLE: YES
15. RRT IS ACCEPTABLE: YES
16. FORMS ACCEPTABLE: YES
17. Chain-of-Custody agrees: YES

COMMENTS: Method associated quality assurance and control criteria were met. Preliminary data were reported to the client on 7/7/98. The "Extracted" and "Analyzed" dates on the report forms for samples 650DB-25E, -25W, -25N, and -25S were incorrect when compared to the raw data. The dates were corrected and initialed. NEL did not submit the MS/MSD data for sample 650DB-15NE with the report. The MS/MSD data will be submitted when received.

PROJECT/CLIENT INFORMATION

Project: Building 650 Leachfield BN Orig#: 2150
Charge No.: 040-ARODE ASL Prog.:Project Manager: Steve Nachter / Jerry Bonn
Phone: 5-7341 Fax: 5-7341 M/S: NTS306Send Report to: Jerry Bonn
Phone: 5-7341 Fax: 5-7341 M/S: NTS306Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other:
(X) Rush Preliminary by: 11/13/98 (VOC) Final by:
Final report format: (X) Standard () NYS-WAC () Other:

SAMPLE INFORMATION

Sampling Site: Building 650 Leachfield
The samples submitted contain (check):
() Hazardous () Radioactive (X) 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.

LAB USE ONLY

Rad SGD: B525 Non-Rad SDG: V457

Rad Packet: G9276 Non-Rad Packet: W1488

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:

ANALYSES & METHOD

I T E M	ID / DESCRIPTION	SAMPLING		MATRIX
		DATE	TIME	
0	650DB-15E	6/27/98	1325	Soil
1	650DB-15W	6/27/98	1325	Soil
2	650DB-15N	6/27/98	1325	Soil
3	650DB-15NE	6/27/98	1350	Soil
4	650DB-15S	6/27/98	1400	Soil
5	TR-062798	6/27/98	0645	Water
6	650DB-25 Bottom	6/28/98	1040	Soil
7	650DB-25E	6/28/98	1055	Soil
8	650DB-25W	6/28/98	1055	Soil
9	650DB-25N	6/28/98	1110	Soil

Transfer of samples submitted for analyses

Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)	DATE / TIME	Received (Counter & Tracking Info.)
Steve Nachter / Jerry Bonn	6/28/98 0747	CA Castorena	CD Castorena	6/29/98 1400	BN Courier
BN Courier	6/30/98 1400	17	Relinquished (Courier & Tracking Info.)		Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)		Received (2nd tier Subcontractor Rep)

Are all sample containers received intact (X) Yes () No
Comments:Do the labels agree with this form? (X) Yes () No
Comments:Was a Material Clearance Tag submitted? (X) Yes () No
Comments:

COMMENTS

(Preservative, size/volume, MS/MSD,
special analysis, rad matrix code, count time, etc.)All Rad from same 500 ml sample
575g
637g
629g
714g
651g
662g
647g
659g

$\frac{7}{8}$

ANALYTICAL SERVICES LABORATORY
SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 2 of 2

LAB USE ONLY Rad SGD: <u>B525</u> Non-Rad SGD: <u>V457</u> Rad Packet: <u>G9276</u> Non-Rad Packet: <u>W1488</u> 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: _____		ANALYSES & METHOD <div style="display: flex; justify-content: space-between;"> <div style="width: 15%;">Vol C (ERA 8260)</div> <div style="width: 15%;">a Scan (L-E10, 602, PL)</div> <div style="width: 15%;">c Po (L-E10, 601, PL)</div> <div style="width: 15%;">d Bmg (L-E10, 612, PL)</div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> <div style="width: 15%;"></div> </div>										SAMPLE RECEIPT INFORMATION Are all sample containers received intact ☒ Yes () No Comments: _____ _____ Do the labels agree with this form? ☒ Yes () No Comments: _____ _____ Was a Material Clearance Tag submitted? ☒ Yes () No Comments: _____ _____	
---	--	---	--	--	--	--	--	--	--	--	--	---	--

[illegible]

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.)
<i>Shannon M. Brown-Delany</i> BN COURIER	6/29/98 0742 6/30/98/450	<i>CD Castaneda</i>	<i>CD Castaneda</i>	6/30/98/BN	BN Courier
			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 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 [redacted]

BN-0732 (02/98)

From: Theodore Redding
To: NTS2.ACHEM(CASTANCD), ENVIRON.MERC-DORMB(BONNJF)
Date: 2 Jul 1998 (Thu) 09:27
Subject: MS/MSDs -Reply

Jerry,

Catherine has modified the chain of custody for the samples of 7/1.

I contacted NEL and asked them to use 650DB-15NE for the MS/MSD of the 6/27 - 28 set, under the condition that it has not been analyzed. If it has, they were directed to select one which has not been analyzed. They said they would contact me if 650DB-15NE could not be used for the MS/MSD.

Let me know if you have any other questions.

Thanks, Ted

>>> Jerry Bonn 07/02/98 08:21am >>>
Ted, Catherine,

Please have NEL identify a VOC sample which has not been extracted from the batch collected on June 27, and 28 so that a MS/MSD can be analyzed. In addition, please have sample ID NLFEXC-12Bottom1 identified as the MS/MSD sample for the batch collected on July 1. Sorry for the inconvenience.

Thanks,
Jerry

DATE: 6-29-98 NO. A003389

Bechtel Nevada

Radiological Control Department- Ramatrol

Material Clearance

MONITOR: MICHELLE
 ISSUING ORGANIZATION: BN FR
 REQUESTING ORGANIZATION: RN
 SURVEY LOCATION: A-23
 FROM: A-23 BLDG 630 OPERATION
 TO: A-23 LAB

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

INITIAL

gll

DESCRIPTION: _____

30 ea SOIL SAMPLES
Sea TRIP BATHS

REMARKS: Exp 7-6-98

**THIS TAG EXPIRES 7 DAYS FROM
 ISSUE DATE**

Interoffice Memorandum

To: S. J. Nacht

Date: July 23, 1998

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

No.: 2150-AL-98-0326

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) B525**
Project No. 04001

Analytical Services Laboratory's results have been reported to J. F. Bonn for the 20 minute gamma spectroscopy, gross alpha, gross beta, and plutonium analyses of ten samples collected on June 27 and 28, 1998. Also included was a statement of services which indicated the charge number associated with the SDG.

Analysis of the samples for volatile organic compounds was also requested. That analysis was entered under SDG V457. Preliminary data were faxed to the client on July 7, 1998. The final report will be submitted when the final data are received and reviewed.

SPECIFIC:

20 Minute Gamma Spectroscopy:

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

Gross Alpha & Gross Beta:

Method associated QA/QC criteria were met.

Small sample aliquots are processed for these determinations. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

Plutonium:

Method associated QA/QC criteria were met.

Small sample aliquots are processed for this determination. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

2150-AL-98-0326

S. J. Nacht

Page 2 of 2

July 23, 1998

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

T. P. Van Sittert

TPV:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008

EM correspondence, NLV080

J. F. Bonn, (results enc.) NTS306

ASL SDG B525, (results enc.) NTS273

ASL SDG V457, NTS273

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: 0828
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-15E	CS137	GAM20	5.94E-01	2.9E+01		7.7E-02	pCi/g	06-29-98	06-27-98	7.44E+02	gm	SOIL G			05-01	G9276-0-75126
650DB-15E	K 40	GAM20	2.46E+00	5.3E+01		8.1E-01	pCi/g	06-29-98	06-27-98	7.44E+02	gm	SOIL G			05-01	G9276-0-75126
650DB-15E	RA226	GAM20	3.58E-01	4.9E+01		1.7E-01	pCi/g	06-29-98	06-27-98	7.44E+02	gm	SOIL G			05-01	G9276-0-75126
650DB-15E	TH228	GAM20	5.62E-01	3.2E+01		1.7E-01	pCi/g	06-29-98	06-27-98	7.44E+02	gm	SOIL G			05-01	G9276-0-75126
650DB-15E	TH232	GAM20	6.89E-01	7.2E+01		6.4E-01	pCi/g	06-29-98	06-27-98	7.44E+02	gm	SOIL G			05-01	G9276-0-75126
650DB-15N	CS137	GAM20	6.81E-01	2.7E+01		7.9E-02	pCi/g	06-29-98	06-27-98	6.37E+02	gm	SOIL G			05-01	G9276-2-75132
650DB-15N	K 40	GAM20	4.10E+00	4.1E+01		8.4E-01	pCi/g	06-29-98	06-27-98	6.37E+02	gm	SOIL G			05-01	G9276-2-75132
650DB-15N	RA226	GAM20	3.05E-01	5.5E+01		1.7E-01	pCi/g	06-29-98	06-27-98	6.37E+02	gm	SOIL G			05-01	G9276-2-75132
650DB-15N	TH228	GAM20	4.43E-01	4.0E+01		1.7E-01	pCi/g	06-29-98	06-27-98	6.37E+02	gm	SOIL G			05-01	G9276-2-75132
650DB-15NE	CS137	GAM20	7.01E-01	2.7E+01		7.9E-02	pCi/g	06-29-98	06-27-98	6.29E+02	gm	SOIL G			05-01	G9276-3-75135

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/24/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: 0828
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-15NE	K 40	GAM20	2.80E+00	5.0E+01		8.4E-01	pCi/g	06-29-98	06-27-98	6.29E+02	gm	SOIL G			05-01	G9276-3-75135
650DB-15NE	RA226	GAM20	3.85E-01	4.7E+01		1.7E-01	pCi/g	06-29-98	06-27-98	6.29E+02	gm	SOIL G			05-01	G9276-3-75135
650DB-15NE	TH228	GAM20	4.67E-01	3.8E+01		1.7E-01	pCi/g	06-29-98	06-27-98	6.29E+02	gm	SOIL G			05-01	G9276-3-75135
650DB-15S	CS137	GAM20	3.24E-01	3.7E+01		7.7E-02	pCi/g	06-29-98	06-27-98	7.14E+02	gm	SOIL G			05-01	G9276-4-75138
650DB-15S	K 40	GAM20	2.82E+00	4.9E+01		8.2E-01	pCi/g	06-29-98	06-27-98	7.14E+02	gm	SOIL G			05-01	G9276-4-75138
650DB-15S	RA226	GAM20	3.40E-01	4.8E+01		1.8E-01	pCi/g	06-29-98	06-27-98	7.14E+02	gm	SOIL G			05-01	G9276-4-75138
650DB-15S	TH228	GAM20	3.75E-01	4.3E+01		1.7E-01	pCi/g	06-29-98	06-27-98	7.14E+02	gm	SOIL G			05-01	G9276-4-75138
650DB-15W	CS137	GAM20	9.08E-01	2.4E+01		8.1E-02	pCi/g	06-29-98	06-27-98	5.75E+02	gm	SOIL G			05-01	G9276-1-75129
650DB-15W	K 40	GAM20	4.04E+00	4.2E+01		8.6E-01	pCi/g	06-29-98	06-27-98	5.75E+02	gm	SOIL G			05-01	G9276-1-75129
650DB-15W	RA226	GAM20	3.63E-01	5.0E+01		1.8E-01	pCi/g	06-29-98	06-27-98	5.75E+02	gm	SOIL G			05-01	G9276-1-75129

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: 0828
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-15W	TH228	GAM20	5.53E-01	3.4E+01		1.7E-01	pCi/g	06-29-98	06-27-98	5.75E+02	gm	SOIL G			05-01	G9276-1-75129
650DB-15W	TH232	GAM20	5.21E-01	7.0E+01		2.9E-01	pCi/g	06-29-98	06-27-98	5.75E+02	gm	SOIL G			05-01	G9276-1-75129
650DB-25BOTTOM	K 40	GAM20	2.95E+00	4.8E+01		8.3E-01	pCi/g	06-29-98	06-28-98	6.51E+02	gm	SOIL G			05-01	G9276-5-75141
650DB-25BOTTOM	RA226	GAM20	3.83E-01	4.8E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.51E+02	gm	SOIL G			05-01	G9276-5-75141
650DB-25BOTTOM	TH228	GAM20	5.79E-01	3.1E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.51E+02	gm	SOIL G			05-01	G9276-5-75141
650DB-25E	K 40	GAM20	2.60E+00	5.2E+01		8.3E-01	pCi/g	06-29-98	06-28-98	6.62E+02	gm	SOIL G			05-01	G9276-6-75153
650DB-25E	RA226	GAM20	5.48E-01	3.7E+01		2.0E-01	pCi/g	06-29-98	06-28-98	6.62E+02	gm	SOIL G			05-01	G9276-6-75153
650DB-25E	TH228	GAM20	4.29E-01	3.5E+01		2.1E-01	pCi/g	06-29-98	06-28-98	6.62E+02	gm	SOIL G			05-01	G9276-6-75153
650DB-25N	K 40	GAM20	4.07E+00	4.0E+01		8.3E-01	pCi/g	06-29-98	06-28-98	6.59E+02	gm	SOIL G			05-01	G9276-8-75148
650DB-25N	RA226	GAM20	3.62E-01	4.8E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.59E+02	gm	SOIL G			05-01	G9276-8-75148

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: 0828
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-25N	TH228	GAM20	4.41E-01	3.8E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.59E+02	gm	SOIL G			05-01	G9276-8-75148
650DB-25N	TH232	GAM20	2.76E+00	5.9E+01		2.5E+00	pCi/g	06-29-98	06-28-98	6.59E+02	gm	SOIL G			05-01	G9276-8-75148
650DB-25S	K 40	GAM20	2.83E+00	4.9E+01		6.6E-01	pCi/g	06-29-98	06-28-98	6.93E+02	gm	SOIL G			05-01	G9276-9-75151
650DB-25S	RA226	GAM20	4.33E-01	4.0E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.93E+02	gm	SOIL G			05-01	G9276-9-75151
650DB-25S	TH228	GAM20	3.42E-01	4.4E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.93E+02	gm	SOIL G			05-01	G9276-9-75151
650DB-25S	TH232	GAM20	8.52E-01	5.1E+01		6.5E-01	pCi/g	06-29-98	06-28-98	6.93E+02	gm	SOIL G			05-01	G9276-9-75151
650DB-25W	K 40	GAM20	3.04E+00	4.7E+01		8.3E-01	pCi/g	06-29-98	06-28-98	6.47E+02	gm	SOIL G			05-01	G9276-7-75145
650DB-25W	RA226	GAM20	3.14E-01	5.2E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.47E+02	gm	SOIL G			05-01	G9276-7-75145
650DB-25W	TH228	GAM20	5.51E-01	3.2E+01		1.7E-01	pCi/g	06-29-98	06-28-98	6.47E+02	gm	SOIL G			05-01	G9276-7-75145
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	06-29-98	07-01-95	1.00E+00	SM gm IC	QUAL			05-01	Q0539-0-00231

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small
aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: 0828
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	1.7E+01	pCi	06-29-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00231
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	1.3E+01	pCi	06-29-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00231
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	8.8E+00	pCi	06-29-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00231
QA SP:NAS-A0271	AM241	GAM20	1.81E+05	8.8E+00		2.3E+02	pCi	06-29-98	04-01-92	1.00E+00	sm	QUAL		111.8	05-01	Q0534-3-14786
QA SP:NAS-A0271	CO60	GAM20	3.07E+05	8.5E+00		2.2E+02	pCi	06-29-98	04-01-92	1.00E+00	sm	QUAL		103.1	05-01	Q0534-3-14786
QA SP:NAS-A0271	CS137	GAM20	2.05E+05	8.1E+00		8.1E+01	pCi	06-29-98	04-01-92	1.00E+00	sm	QUAL		101.1	05-01	Q0534-3-14786

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small
aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: M600
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-15E	Gross Alpha	Gross A	2.43E+00	6.9E+01	U	2.6E+00	pCi/g	07-17-98	06-27-98	6.90E-01	gm	SOIL G			14-01	G9276-0-75125
650DB-15N	Gross Alpha	Gross A	4.06E+00	5.3E+01		3.0E+00	pCi/g	07-17-98	06-27-98	5.80E-01	gm	SOIL G			14-01	G9276-2-75131
650DB-15NE	Gross Alpha	Gross A	3.85E+00	4.8E+01		2.6E+00	pCi/g	07-17-98	06-27-98	6.80E-01	gm	SOIL G			14-01	G9276-3-75134
650DB-15S	Gross Alpha	Gross A	5.60E+00	4.0E+01		2.9E+00	pCi/g	07-17-98	06-27-98	6.00E-01	gm	SOIL G			14-01	G9276-4-75137
650DB-15W	Gross Alpha	Gross A	6.11E+00	4.0E+01		3.2E+00	pCi/g	07-17-98	06-27-98	5.50E-01	gm	SOIL G			14-01	G9276-1-75128
650DB-25BOTTOM	Gross Alpha	Gross A	1.92E+00	1.0E+02	U	3.2E+00	pCi/g	07-17-98	06-28-98	5.60E-01	gm	SOIL G			14-01	G9276-5-75140
650DB-25E	Gross Alpha	Gross A	2.38E+00	7.7E+01	U	2.8E+00	pCi/g	07-17-98	06-28-98	6.20E-01	gm	SOIL G			14-01	G9276-6-75143
650DB-25N	Gross Alpha	Gross A	4.40E+00	5.2E+01		3.2E+00	pCi/g	07-18-98	06-28-98	5.50E-01	gm	SOIL G			14-01	G9276-8-75147
650DB-25S	Gross Alpha	Gross A	1.40E+00	1.1E+02	U	2.6E+00	pCi/g	07-18-98	06-28-98	6.70E-01	gm	SOIL G			14-01	G9276-9-75150
650DB-25W	Gross Alpha	Gross A	2.17E+00	7.7E+01	U	2.6E+00	pCi/g	07-17-98	06-28-98	6.80E-01	gm	SOIL G			14-01	G9276-7-75144

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: M600
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA REA	Gross Alpha	Gross A	6.72E-02	3.6E+02	U	4.3E-01	pCi	07-17-98	06-23-98	1.00E+00	sm	QUAL			14-01	G9250-0-06784
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.73E+00	1.5E+01	U	4.4E-01	pCi	07-17-98	01-06-98	1.00E+00	sm	QUAL		108.9	14-01	G9250-1-06785
650DB-15E	Gross Beta	Gross B	1.81E+00	5.6E+01		1.6E+00	pCi/g	07-17-98	06-27-98	6.90E-01	gm	SOIL G			14-01	G9276-0-75125
650DB-15N	Gross Beta	Gross B	2.72E+00	4.5E+01		1.9E+00	pCi/g	07-17-98	06-27-98	5.80E-01	gm	SOIL G			14-01	G9276-2-75131
650DB-15NE	Gross Beta	Gross B	2.31E+00	4.5E+01		1.7E+00	pCi/g	07-17-98	06-27-98	6.80E-01	gm	SOIL G			14-01	G9276-3-75134
650DB-15S	Gross Beta	Gross B	2.19E+00	5.3E+01		1.9E+00	pCi/g	07-17-98	06-27-98	6.00E-01	gm	SOIL G			14-01	G9276-4-75137
650DB-15W	Gross Beta	Gross B	3.78E+00	3.4E+01		2.0E+00	pCi/g	07-17-98	06-27-98	5.50E-01	gm	SOIL G			14-01	G9276-1-75128
650DB-25BOTTOM	Gross Beta	Gross B	2.66E+00	4.7E+01		2.0E+00	pCi/g	07-17-98	06-28-98	5.60E-01	gm	SOIL G			14-01	G9276-5-75140
650DB-25E	Gross Beta	Gross B	1.86E+00	6.0E+01		1.8E+00	pCi/g	07-17-98	06-28-98	6.20E-01	gm	SOIL G			14-01	G9276-6-75143
650DB-25N	Gross Beta	Gross B	2.79E+00	4.6E+01		2.0E+00	pCi/g	07-18-98	06-28-98	5.50E-01	gm	SOIL G			14-01	G9276-8-75147

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date: 7/21/98

Approved by:

Date: 7/22/98

Qualification Flags:

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: M600
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-25S	Gross Beta	Gross B	1.35E+00	7.7E+01	U	1.7E+00	pCi/g	07-18-98	06-28-98	6.70E-01	gm	SOIL G			14-01	G9276-9-75150
650DB-25W	Gross Beta	Gross B	2.86E+00	3.7E+01		1.7E+00	pCi/g	07-17-98	06-28-98	6.80E-01	gm	SOIL G			14-01	G9276-7-75144
QA REA	Gross Beta	Gross B	-6.51E-02	8.9E+02	U	9.8E-01	pCi	07-17-98	06-23-98	1.00E+00	sm	QUAL			14-01	G9250-0-06784
QA SP:GROSSAB 05	Gross Beta	Gross B	5.75E+00	1.3E+01		9.8E-01	pCi	07-17-98	01-06-98	1.00E+00	sm	QUAL		110.0	14-01	G9250-1-06785

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small
aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date:

7/21/98

Approved by:

Date:

7/22/98

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: M601
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-15E	PU239	Pu	2.69E-01	2.4E+01		2.8E-02	pCi/g	07-09-98	06-27-98	5.70E-01	gm	SOIL G	76.5		30-20	G9276-0-75127
650DB-15E	PU238	Pu	5.52E-03	1.9E+02	U	1.9E-02	pCi/g	07-09-98	06-27-98	5.70E-01	gm	SOIL G	76.5		30-20	G9276-0-75127
650DB-15N	PU239	Pu	3.33E-01	2.2E+01		2.7E-02	pCi/g	07-09-98	06-27-98	5.80E-01	gm	SOIL G	75.6		30-22	G9276-2-75133
650DB-15N	PU238	Pu	1.50E-02	1.0E+02	U	1.8E-02	pCi/g	07-09-98	06-27-98	5.80E-01	gm	SOIL G	75.6		30-22	G9276-2-75133
650DB-15NE	PU239	Pu	2.86E-01	2.4E+01		2.9E-02	pCi/g	07-09-98	06-27-98	5.10E-01	gm	SOIL G	81.5		30-23	G9276-3-75136
650DB-15NE	PU238	Pu	1.63E-02	1.0E+02	U	2.0E-02	pCi/g	07-09-98	06-27-98	5.10E-01	gm	SOIL G	81.5		30-23	G9276-3-75136
650DB-15S	PU239	Pu	4.57E-01	1.9E+01		2.7E-02	pCi/g	07-09-98	06-27-98	6.70E-01	gm	SOIL G	69.6		30-24	G9276-4-75139
650DB-15S	PU238	Pu	1.18E-02	1.1E+02	U	1.8E-02	pCi/g	07-09-98	06-27-98	6.70E-01	gm	SOIL G	69.6		30-24	G9276-4-75139
650DB-15W	PU239	Pu	2.95E-01	2.4E+01		2.9E-02	pCi/g	07-09-98	06-27-98	6.50E-01	gm	SOIL G	62.9		30-21	G9276-1-75130
650DB-15W	PU238	Pu	1.60E-02	1.0E+02	U	2.0E-02	pCi/g	07-09-98	06-27-98	6.50E-01	gm	SOIL G	62.9		30-21	G9276-1-75130

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date: 7/21/98

Approved by:

Date: 7/22/98

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: M601
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650DB-25BOTTOM	PU239	Pu	7.74E-03	1.7E+02	U	2.4E-02	pCi/g	07-09-98	06-28-98	6.50E-01	gm	SOIL G	75.1		30-33	G9276-5-75142
650DB-25BOTTOM	PU238	Pu	1.89E-03	3.5E+02	U	1.7E-02	pCi/g	07-09-98	06-28-98	6.50E-01	gm	SOIL G	75.1		30-33	G9276-5-75142
650DB-25E	PU239	Pu	4.03E-03	5.3E+02	U	4.9E-02	pCi/g	07-09-98	06-28-98	4.80E-01	gm	SOIL G	45.5		30-39	G9276-6-75154
650DB-25E	PU238	Pu	2.04E-03	3.4E+02	U	3.4E-02	pCi/g	07-09-98	06-28-98	4.80E-01	gm	SOIL G	45.5		30-39	G9276-6-75154
650DB-25N	PU239	Pu	9.54E-03	1.7E+02	U	3.0E-02	pCi/g	07-09-98	06-28-98	5.70E-01	gm	SOIL G	71.8		30-37	G9276-8-75149
650DB-25N	PU238	Pu	2.32E-03	3.5E+02	U	2.0E-02	pCi/g	07-09-98	06-28-98	5.70E-01	gm	SOIL G	71.8		30-37	G9276-8-75149
650DB-25S	PU239	Pu	4.66E-02	6.2E+01		3.1E-02	pCi/g	07-09-98	06-28-98	5.80E-01	gm	SOIL G	66.1		30-38	G9276-9-75152
650DB-25S	PU238	Pu	1.27E-03	3.4E+02	U	2.1E-02	pCi/g	07-09-98	06-28-98	5.80E-01	gm	SOIL G	66.1		30-38	G9276-9-75152
650DB-25W	PU239	Pu	1.65E-02	1.2E+02	U	2.9E-02	pCi/g	07-09-98	06-28-98	5.60E-01	gm	SOIL G	65.1		30-35	G9276-7-75146
650DB-25W	PU238	Pu	2.31E-03	3.5E+02	U	2.0E-02	pCi/g	07-09-98	06-28-98	5.60E-01	gm	SOIL G	65.1		30-35	G9276-7-75146

Comment:

Data generated from analyses of samples submitted on 6/29/98.
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Prepared by:

Date: 7/21/98

Approved by:

Date: 7/22/98

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 21-JUL-98
Sample Delivery Group: B525
Batch: M601
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA REA	PU239	Pu	3.72E-03	2.5E+02	U	1.8E-02	pCi	07-09-98	06-23-98	1.00E+00	sm	QUAL	61.9		30-11	G9251-0-06310
QA REA	PU238	Pu	3.65E-03	1.9E+02	U	1.3E-02	pCi	07-09-98	06-23-98	1.00E+00	sm	QUAL	61.9		30-11	G9251-0-06310
QA SP:PU.25 01	PU239	Pu	9.49E-01	1.5E+01		2.4E-02	pCi	07-09-98	10-22-92	1.00E+00	sm	QUAL	53.3	111.0	30-17	G9251-1-06311
QA SP:PU.25 01	PU238	Pu	-9.76E-04	3.4E+02	U	1.6E-02	pCi	07-09-98	10-22-92	1.00E+00	sm	QUAL	53.3		30-17	G9251-1-06311

Comment:

Data generated from analyses of samples submitted on 6/29/98.
Gross alpha/beta and plutonium analyses are performed on small aliquots. Results may not apply to the sample as a whole.

Prepared by:

Date: 7/21/98

Approved by:

Date: 7/22/98

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***** End of Report *****

(Level 1)

PROJECT/ CLIENT INFORMATION		REPORT INFORMATION		SAMPLE INFORMATION
Project: <u>Building 650 Leachfield</u> BN Org#: <u>2150</u>		Send Report to: <u>Jerry Bonn</u>		Sampling Site: <u>Building 650 Leachfield</u> 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.
Charge No.: <u>CUU-380DE</u>	ASL Prog.:	Phone: <u>5-7341</u>	Fax: <u>5-7761</u>	
Project Manager: <u>Steve Natche / Jerry Bonn</u>		Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: <u>1/3/98 NCC</u>		
Phone: <u>5-7341</u>	Fax: <u>5-7761</u>	M/S: <u>NTS 306</u>		
		Final report format: ☒ Standard () NTS-WAC () Other: <u>1/27/98 (RAD)</u>		

LAB USE ONLY		ANALYSES & METHOD								SAMPLE RECEIPT INFORMATION		
Rad SGD: <u>B525</u>	Non-Rad SGD: <u>V457</u>	<u>Total VOC (EPA 8260)</u> <u>Quinua Sulf (L-EIO, 602, DC)</u> <u>Tricloroethylene (L-EIO, 601, DC)</u> <u>Chloroform (L-EIO, 612, DC)</u>									Are all sample containers received intact? ☒ Yes () No	Comments: Do the labels agree with this form? ☒ Yes () No Comments: Was a Material Clearance Tag submitted? ☒ Yes () No Comments:
Rad Packet: <u>G9276</u>	Non-Rad Packet: <u>W1488</u>											
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: _____												

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	Total	Quinn	ISC-40	Cress Alpha																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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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.)
<u>[Signature]</u>	<u>6/28/98</u>	<u>CD Castorena</u>			
			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

PROJECT/ CLIENT INFORMATION		REPORT INFORMATION			SAMPLE INFORMATION
Project: <u>Building 650 Leachfield</u> BN Org#: <u>2150</u>		Send Report to: <u>Jerry Ron</u>			Sampling Site: <u>Building 650 Leachfield</u>
Charge No.: <u>CHU-380DE</u>	ASL Prog.:	Phone: <u>5-7341</u>	Fax: <u>5-7761</u>	M/S: <u>NTS-306</u>	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.
Project Manager: <u>Steve Nath / Jerry Ron</u>		Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: _____ ☒ Rush Preliminary by: <u>7/15/98</u> Final by: _____			
Phone:	Fax:	M/S:	Final report format: ☒ Standard ☐ NTS-WAC ☐ Other: _____		

LAB USE ONLY		ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION	
Rad SGD: <u>B525</u>	Non-Rad SDG: <u>V457</u>	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> Total Vol (EPA 9260) Contaminant Spec (EPA 9260) Total Vol (EPA 9260) Contaminant Spec (EPA 9260) </div> <div></div> </div>										Are all sample containers received intact ☒ Yes ☐ No	
Rad Packet: <u>G9276</u>	Non-Rad Packet: <u>W1488</u>											Comments: _____	
Client Services Representative: _____												Do the labels agree with this form? ☒ Yes ☐ No	
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: _____												Was a Material Clearance Tag submitted? ☒ Yes ☐ No	

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	Total	Preservative	Size/Volume	MS/MSD	Special Analysis	Rad Matrix Code	Count Time	Etc.	Comments (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
		DATE	TIME										
0	650DB-255	6/20/98	1110	Soil	X	X	X	X					All Rad from same 500 ml sample
1													
2													
3													
4													
5													
6													
7													
8													
9													

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.)
<u>[Signature]</u>		<u>CD Chetwanda</u>			
			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

Interoffice Memorandum

To: S. J. Nacht Date: August 18, 1998

From: T. P. Van Sittert No.: 2150-AL-98-0402
Analytical Services Laboratory, 295-7472

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) B550, V463**
Project No. 04001

Nevada Environmental Laboratory's (NEL) results have been reported to J. F. Bonn for the volatile organics analyses of six soil samples and one trip blank collected on July 1, 1998. Preliminary data were faxed to the client on July 22, 1998.

Analytical Services Laboratory's results from the gamma spectroscopy, plutonium, gross alpha, and gross beta analyses were included in the report, as well as statements of services indicating the analytical costs and charge number associated with the SDGs. Preliminary radiological data were transmitted to the client on July 6, 28, and August 17, 1998.

SPECIFIC:

Volatile Organics:

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

A matrix spike (MS) and matrix spike duplicate (MSD) were requested for sample NLFEXC-12Bottom1. NEL also performed an MS/MSD on sample TB-070198. Since the MS/MSD was not requested on the trip blank, the laboratory did not charge for those analyses.

The "Extracted" and "Analyzed" dates reported for the MS and MSD of the soil sample were incorrect when compared to the raw data. The dates have been corrected and initialed.

20 Minute Gamma Spectroscopy:

Method associated QA/QC criteria were met.

Gross Alpha & Gross Beta:

Method associated QA/QC criteria were met.

Small sample aliquots are processed for these determinations. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

Plutonium:

Method associated QA/QC criteria were met.

2150-AL-98-0402
S. J. Nacht
Page 2 of 2
August 18, 1998

Small sample aliquots are processed for this determination. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

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

T. P. Van Sittert

TPV:pma
Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG B550, (results enc.) NTS273
ASL SDG V463, (results enc.) NTS273

LABORATORY

CASE

NARRATIVE

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

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: V463
PROJECT NUMBER: 17777

NEL ORDER ID: L9807015

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 7/2/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.

Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.

Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

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

Stan Van Wagenen
Laboratory Manager

7/20/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Arizona	AZ0520	AZ0518	AZ0583
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: NLFEXC-12E
DATE SAMPLED: 7/1/98
NEL SAMPLE ID: L9807015-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	97	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: NLFEXC-12W
DATE SAMPLED: 7/1/98
NEL SAMPLE ID: L9807015-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	74 - 121
Dibromofluoromethane	110	80 - 120
Toluene-d8	98	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: NLFEXC-12S
DATE SAMPLED: 7/1/98
NEL SAMPLE ID: L9807015-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	90	74 - 121
Dibromofluoromethane	110	80 - 120
Toluene-d8	101	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: NLFEXC-12 Bottom 1
DATE SAMPLED: 7/1/98
NEL SAMPLE ID: L9807015-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	95	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	104	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: NLFEXC-12 Bottom 2
DATE SAMPLED: 7/1/98
NEL SAMPLE ID: L9807015-05

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	92	74 - 121
Dibromofluoromethane	105	80 - 120
Toluene-d8	100	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: NLFEXC-12 Bottom 3
DATE SAMPLED: 7/1/98
NEL SAMPLE ID: L9807015-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	92	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	97	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: TB-070198
DATE SAMPLED: 7/1/98
NEL SAMPLE ID: L9807015-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 0.8

EXTRACTED: 7/6/98
ANALYZED: 7/6/98

ANALYST: Scott

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	20 µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5. µg/L			
1,1,1,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	95	86 - 115
Dibromofluoromethane	108	86 - 118
Toluene-d8	93	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9807052S60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994
MATRIX: Solid

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L	o-Xylene	ND	5 µg/L
Benzene	ND	5 µg/L	m,p-Xylene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	25 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	25 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	25 µg/L			
Styrene	ND	5 µg/L			
1,1,1,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Trichlorofluoromethane (Freon 11)	ND	10 µg/L			
1,2,3-Trichloropropane	ND	5 µg/L			
Vinyl chloride	ND	6 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	100	86 - 115
Dibromofluoromethane	103	86 - 118
Toluene-d8	98	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V463
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9807062W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/6/98

ANALYZED: 7/6/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L	o-Xylene	ND	5 µg/L
Benzene	ND	5 µg/L	m,p-Xylene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	25 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	25 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	25 µg/L			
Styrene	ND	5 µg/L			
1,1,1,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Trichlorofluoromethane (Freon 11)	ND	10 µg/L			
1,2,3-Trichloropropane	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	105	86 - 115
Dibromofluoromethane	102	86 - 118
Toluene-d8	98	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V463/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9807052S60-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 7/5/98

ANALYZED: 7/5/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	93	80 - 120
Chlorobenzene	90	80 - 120
1,1-Dichloroethene (1,1-DCE)	93	80 - 120
Toluene	84	80 - 120
Trichloroethene (TCE)	91	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	102	86 - 115
Dibromofluoromethane	110	86 - 118
Toluene-d8	93	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V463/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9807015-04-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: ~~7/5/98~~ 7/6/98

ANALYZED: ~~7/5/98~~ 7/6/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	88	76 - 127
Chlorobenzene	88	75 - 130
1,1-Dichloroethene (1,1-DCE)	100	61 - 145
Toluene	84	76 - 125
Trichloroethene (TCE)	80	71 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	101	86 - 115
Dibromofluoromethane	110	86 - 118
Toluene-d8	103	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V463/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9807015-04-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: ~~7/5/98~~ 7/6/98

ANALYZED: ~~7/5/98~~ 7/6/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	92	76 - 127	4.4
Chlorobenzene	86	75 - 130	2.3
1,1-Dichloroethene (1,1-DCE)	108	61 - 145	7.7
Toluene	80	76 - 125	4.9
Trichloroethene (TCE)	86	71 - 120	7.2

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	97	86 - 115
Dibromofluoromethane	105	86 - 118
Toluene-d8	94	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V463/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9807015-07-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/6/98

ANALYZED: 7/6/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	102	76 - 127
Chlorobenzene	100	75 - 130
1,1-Dichloroethene (1,1-DCE)	122	61 - 145
Toluene	104	76 - 125
Trichloroethene (TCE)	106	71 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	106	86 - 115
Dibromofluoromethane	103	86 - 118
Toluene-d8	103	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V463/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9807015-07-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/6/98

ANALYZED: 7/6/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	108	76 - 127	5.7
Chlorobenzene	106	75 - 130	5.8
1,1-Dichloroethene (1,1-DCE)	120	61 - 145	1.7
Toluene	110	76 - 125	5.6
Trichloroethene (TCE)	106	71 - 120	0.

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	109	86 - 115
Dibromofluoromethane	107	86 - 118
Toluene-d8	105	88 - 110

**RADIOANALYTICAL
DATA**

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B550
Batch: 0829
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
NLFEXC-12 BOTTOM 1	RA226	GAM20	2.84E-01	5.5E+01		1.8E-01	pCi/g	07-01-98	07-01-98	6.54E+02	gm	SOIL G			05-01	G9313-3-75165
NLFEXC-12 BOTTOM 1	TH228	GAM20	3.95E-01	3.9E+01		1.5E-01	pCi/g	07-01-98	07-01-98	6.54E+02	gm	SOIL G			05-01	G9313-3-75165
NLFEXC-12 BOTTOM 2	K 40	GAM20	3.40E+00	4.5E+01		1.2E+00	pCi/g	07-01-98	07-01-98	5.82E+02	gm	SOIL G			05-01	G9313-4-75168
NLFEXC-12 BOTTOM 2	RA226	GAM20	3.52E-01	5.1E+01		1.9E-01	pCi/g	07-01-98	07-01-98	5.82E+02	gm	SOIL G			05-01	G9313-4-75168
NLFEXC-12 BOTTOM 2	TH228	GAM20	3.98E-01	3.7E+01		1.8E-01	pCi/g	07-01-98	07-01-98	5.82E+02	gm	SOIL G			05-01	G9313-4-75168
NLFEXC-12 BOTTOM 3	K 40	GAM20	4.30E+00	4.0E+01		1.3E+00	pCi/g	07-01-98	07-01-98	6.24E+02	gm	SOIL G			05-01	G9313-5-75171
NLFEXC-12 BOTTOM 3	RA226	GAM20	4.25E-01	4.3E+01		1.6E-01	pCi/g	07-01-98	07-01-98	6.24E+02	gm	SOIL G			05-01	G9313-5-75171
NLFEXC-12 BOTTOM 3	TH228	GAM20	3.81E-01	4.3E+01		1.3E-01	pCi/g	07-01-98	07-01-98	6.24E+02	gm	SOIL G			05-01	G9313-5-75171
NLFEXC-12E	K 40	GAM20	3.78E+00	4.4E+01		1.2E+00	pCi/g	07-01-98	07-01-98	5.72E+02	gm	SOIL G			05-01	G9313-0-75156
NLFEXC-12E	RA226	GAM20	3.23E-01	5.4E+01		1.6E-01	pCi/g	07-01-98	07-01-98	5.72E+02	gm	SOIL G			05-01	G9313-0-75156

Comment:

Data for samples received on 7/1/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date:

8-6-98

Approved by:

Date:

8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B550
Batch: 0829
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
NLFEXC-12E	TH228	GAM20	5.35E-01	3.3E+01		1.6E-01	pCi/g	07-01-98	07-01-98	5.72E+02	gm	SOIL G			05-01	G9313-0-75156
NLFEXC-12E	TH232	GAM20	9.09E-01	5.3E+01		8.2E-01	pCi/g	07-01-98	07-01-98	5.72E+02	gm	SOIL G			05-01	G9313-0-75156
NLFEXC-12S	CS137	GAM20	1.00E+00	2.3E+01		9.2E-02	pCi/g	07-01-98	07-01-98	5.68E+02	gm	SOIL G			05-01	G9313-2-75162
NLFEXC-12S	K 40	GAM20	5.14E+00	3.7E+01		1.2E+00	pCi/g	07-01-98	07-01-98	5.68E+02	gm	SOIL G			05-01	G9313-2-75162
NLFEXC-12S	RA226	GAM20	3.23E-01	5.3E+01		1.6E-01	pCi/g	07-01-98	07-01-98	5.68E+02	gm	SOIL G			05-01	G9313-2-75162
NLFEXC-12S	TH228	GAM20	5.47E-01	3.6E+01		1.6E-01	pCi/g	07-01-98	07-01-98	5.68E+02	gm	SOIL G			05-01	G9313-2-75162
NLFEXC-12W	K 40	GAM20	2.87E+00	5.0E+01		9.6E-01	pCi/g	07-01-98	07-01-98	6.48E+02	gm	SOIL G			05-01	G9313-1-75159
NLFEXC-12W	RA226	GAM20	4.19E-01	4.5E+01		1.8E-01	pCi/g	07-01-98	07-01-98	6.48E+02	gm	SOIL G			05-01	G9313-1-75159
NLFEXC-12W	TH228	GAM20	4.58E-01	3.3E+01		2.0E-01	pCi/g	07-01-98	07-01-98	6.48E+02	gm	SOIL G			05-01	G9313-1-75159
QA BKG EMPTY BTL U05	No peaks	GAM20	0.00E+00	0.0E+00		0.0E+00	NA	07-01-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00233

Comment:

Data for samples received on 7/1/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B550
Batch: 0829
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.1E+01	pCi	07-01-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00233
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	7.9E+00	pCi	07-01-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00233
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	9.4E+00	pCi	07-01-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00233
QA SP:NAS-A0271	AM241	GAM20	1.83E+05	8.8E+00		2.8E+02	pCi	07-01-98	04-01-92	1.00E+00	sm	QUAL		113.0	05-01	Q0534-3-14798
QA SP:NAS-A0271	CO60	GAM20	3.03E+05	8.5E+00		1.6E+02	pCi	07-01-98	04-01-92	1.00E+00	sm	QUAL		101.8	05-01	Q0534-3-14798
QA SP:NAS-A0271	CS137	GAM20	2.08E+05	8.1E+00		9.3E+01	pCi	07-01-98	04-01-92	1.00E+00	sm	QUAL		102.5	05-01	Q0534-3-14798

Comment:

Data for samples received on 7/1/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by: [Signature] Date: 8-6-98

Approved by: [Signature] Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B550
Batch: M614
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
NLFEXC-12 BOTTOM 1	Gross Alpha	Gross A	1.52E+00	1.4E+02	U	3.4E+00	pCi/g	07-31-98	07-01-98	5.30E-01	gm	SOIL G			14-01	G9313-3-75164
NLFEXC-12 BOTTOM 2	Gross Alpha	Gross A	2.52E+00	7.4E+01	U	2.9E+00	pCi/g	07-31-98	07-01-98	6.40E-01	gm	SOIL G			14-01	G9313-4-75167
NLFEXC-12 BOTTOM 3	Gross Alpha	Gross A	3.69E+00	6.1E+01		3.3E+00	pCi/g	07-31-98	07-01-98	5.00E-01	gm	SOIL G			14-01	G9313-5-75170
NLFEXC-12E	Gross Alpha	Gross A	4.45E+00	4.4E+01		2.7E+00	pCi/g	07-30-98	07-01-98	6.80E-01	gm	SOIL G			14-01	G9313-0-75155
NLFEXC-12S	Gross Alpha	Gross A	7.41E+00	3.8E+01		3.7E+00	pCi/g	07-31-98	07-01-98	4.90E-01	gm	SOIL G			14-01	G9313-2-75161
NLFEXC-12W	Gross Alpha	Gross A	3.58E+00	5.8E+01		3.0E+00	pCi/g	07-30-98	07-01-98	6.00E-01	gm	SOIL G			14-01	G9313-1-75158
QA REA	Gross Alpha	Gross A	6.59E-02	3.5E+02	U	4.5E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.84E+00	1.5E+01		4.5E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		112.1	14-01	G9314-1-06789
NLFEXC-12 BOTTOM 1	Gross Beta	Gross B	1.78E+00	7.3E+01	U	2.1E+00	pCi/g	07-31-98	07-01-98	5.30E-01	gm	SOIL G			14-01	G9313-3-75164
NLFEXC-12 BOTTOM 2	Gross Beta	Gross B	2.63E+00	4.2E+01		1.8E+00	pCi/g	07-31-98	07-01-98	6.40E-01	gm	SOIL G			14-01	G9313-4-75167

Comment:

Data for samples received on 7/1/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B550
Batch: M614
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
NLFEXC-12 BOTTOM 3	Gross Beta	Gross B	2.12E+00	6.4E+01	U	2.2E+00	pCi/g	07-31-98	07-01-98	5.00E-01	gm	SOIL G			14-01	G9313-5-75170
NLFEXC-12E	Gross Beta	Gross B	5.89E+00	1.9E+01		1.7E+00	pCi/g	07-30-98	07-01-98	6.80E-01	gm	SOIL G			14-01	G9313-0-75155
NLFEXC-12S	Gross Beta	Gross B	3.41E+00	4.2E+01		2.3E+00	pCi/g	07-31-98	07-01-98	4.90E-01	gm	SOIL G			14-01	G9313-2-75161
NLFEXC-12W	Gross Beta	Gross B	3.40E+00	3.5E+01		1.9E+00	pCi/g	07-30-98	07-01-98	6.00E-01	gm	SOIL G			14-01	G9313-1-75158
QA REA	Gross Beta	Gross B	9.72E-02	5.9E+02	U	9.7E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Beta	Gross B	4.93E+00	1.4E+01		9.7E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		94.2	14-01	G9314-1-06789

Comment:

Data for samples received on 7/1/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

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Bechtel Nevada Corporation

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P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B550
Batch: M615
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
NLFEXC-12 BOTTOM 1	PU239	Pu	5.58E-02	5.8E+01		3.2E-02	pCi/g	07-22-98	07-01-98	6.00E-01	gm	SOIL G	59.8		30-07	G9313-3-75166
NLFEXC-12 BOTTOM 1	PU238	Pu	-1.27E-03	3.5E+02	U	2.2E-02	pCi/g	07-22-98	07-01-98	6.00E-01	gm	SOIL G	59.8		30-07	G9313-3-75166
NLFEXC-12 BOTTOM 2	PU239	Pu	2.65E-03	5.5E+02	U	3.4E-02	pCi/g	07-22-98	07-01-98	4.90E-01	gm	SOIL G	69.6		30-08	G9313-4-75169
NLFEXC-12 BOTTOM 2	PU238	Pu	-1.34E-03	3.5E+02	U	2.3E-02	pCi/g	07-22-98	07-01-98	4.90E-01	gm	SOIL G	69.6		30-08	G9313-4-75169
NLFEXC-12 BOTTOM 3	PU239	Pu	2.93E-02	8.4E+01	U	3.2E-02	pCi/g	07-22-98	07-01-98	4.90E-01	gm	SOIL G	70.8		30-09	G9313-5-75172
NLFEXC-12 BOTTOM 3	PU238	Pu	-1.28E-03	3.5E+02	U	2.2E-02	pCi/g	07-22-98	07-01-98	4.90E-01	gm	SOIL G	70.8		30-09	G9313-5-75172
NLFEXC-12E	PU239	Pu	1.43E-02	1.4E+02	U	3.2E-02	pCi/g	07-22-98	07-01-98	5.40E-01	gm	SOIL G	63.2		30-02	G9313-0-75157
NLFEXC-12E	PU238	Pu	-1.34E-03	3.4E+02	U	2.2E-02	pCi/g	07-22-98	07-01-98	5.40E-01	gm	SOIL G	63.2		30-02	G9313-0-75157
NLFEXC-12S	PU239	Pu	4.15E-01	2.3E+01		3.7E-02	pCi/g	07-22-98	07-01-98	4.70E-01	gm	SOIL G	70.6		30-06	G9313-2-75163
NLFEXC-12S	PU238	Pu	7.31E-03	1.8E+02	U	2.5E-02	pCi/g	07-22-98	07-01-98	4.70E-01	gm	SOIL G	70.6		30-06	G9313-2-75163

Comment:

Data for samples received on 7/1/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B550
Batch: M615
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
NLFEXC-12W	PU239	Pu	1.58E-01	3.4E+01		3.3E-02	pCi/g	07-22-98	07-01-98	4.90E-01	gm	SOIL G	74.3		30-03	G9313-1-75160
NLFEXC-12W	PU238	Pu	-1.38E-03	3.4E+02	U	2.3E-02	pCi/g	07-22-98	07-01-98	4.90E-01	gm	SOIL G	74.3		30-03	G9313-1-75160
QA REA	PU239	Pu	1.23E-03	5.5E+02	U	1.6E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314
QA REA	PU238	Pu	-6.24E-04	3.5E+02	U	1.1E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314
QA SP:PU.25 01	PU239	Pu	7.75E-01	1.3E+01		1.5E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3	90.6	30-05	G9315-1-06315
QA SP:PU.25 01	PU238	Pu	1.19E-03	3.5E+02	U	1.0E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3		30-05	G9315-1-06315

Comment:

Data for samples received on 7/1/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

SUPPORTING DATA

SAMPLE DELIVERY GROUP: V463CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 8/10/98DATE REVIEWED: 8/14/98REVIEWED BY:

VOLATILES:

MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>VOA2</u>	<u>6/24/98</u>	<u>1215</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/1/98</u>	<u>0732</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/1/98</u>	<u>1754</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/1/98</u>	<u>1916</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>1526</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/6/98</u>	<u>0723</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL - WATER</u>	<u>VOA2</u>	<u>6/24/98</u>		<u>YES</u>
	<u>INITIAL - SOIL</u>	<u>VOA2</u>	<u>7/1/98</u>		<u>YES</u>
	<u>VSTD050</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>1557</u>	<u>YES</u>
	<u>VSTD050</u>	<u>VOA2</u>	<u>7/6/98</u>	<u>0848</u>	<u>YES</u>
3. METHOD BLANK	<u>VBLK980705A</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>1640</u>	<u>YES</u>
	<u>VBLK980706B</u>	<u>VOA2</u>	<u>7/6/98</u>	<u>1311</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
5. LAB CONTROL	<u>VSTD050</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>1557</u>	<u>YES</u>
	<u>VSTD050</u>	<u>VOA2</u>	<u>7/6/98</u>	<u>0848</u>	<u>YES</u>
6. TRIP BLANK	<u>TB-070198</u>	<u>VOA2</u>	<u>7/6/98</u>	<u>1345</u>	<u>YES</u>
7. SAMPLES	<u>NLFEXC-12E</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>2009</u>	<u>YES</u>
	<u>NLFEXC-12W</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>2051</u>	<u>YES</u>
	<u>NLFEXC-12S</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>2133</u>	<u>YES</u>
	<u>NLFEXC-12Bottom1</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>2215</u>	<u>YES</u>
	<u>NLFEXC-12Bottom1MS</u>	<u>VOA2</u>	<u>7/6/98</u>	<u>0226</u>	<u>YES</u>
	<u>NLFEXC-12Bottom1MSD</u>	<u>VOA2</u>	<u>7/6/98</u>	<u>0308</u>	<u>YES</u>
	<u>NLFEXC-12Bottom2</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>2257</u>	<u>YES</u>
	<u>NLFEXC-12Bottom3</u>	<u>VOA2</u>	<u>7/5/98</u>	<u>2339</u>	<u>YES</u>

8. SURROGATE RECOVERY ACCEPTABLE: YES9. MS/MSD RECOVERY ACCEPTABLE: YES10. METHOD BLANK ACCEPTABLE: YES11. HOLDING TIMES ACCEPTABLE: YES

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Date Sampled	<u>7/1/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>7/1/98</u>	<u>0</u>	<u>1</u>
c. Date Contract Lab Received:	<u>7/2/98</u>	<u>1</u>	<u>5</u>
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Latest Date Analyzed:	<u>7/6/98</u>	<u>5</u>	<u>14</u>
12. Correct Conc units used:	<u>YES</u>		
13. CALCULATIONS ACCEPTABLE:	<u>YES</u>		
14. ARE AREAS ACCEPTABLE:	<u>YES</u>		
15. RRT IS ACCEPTABLE:	<u>YES</u>		
16. FORMS ACCEPTABLE:	<u>YES</u>		
17. Chain-of-Custody agrees:	<u>YES</u>		

COMMENTS: Method associated quality assurance and control criteria were met. Preliminary data were faxed to the client on July 22, 1998. MS and MSDs were requested for sample NLFEXC-12Bottom1 but were performed on that sample and TB-070198. The laboratory did not charge for the MS/MSD on the trip blank. The "Extracted" and "Analyzed" dates reported for the soil sample were incorrect when compared to the raw data. The dates have been corrected and initialed.

PROJECT/ CLIENT INFORMATION		REPORT INFORMATION		SAMPLE INFORMATION
Project: <u>Bld 650 Leachfield</u>	BN Org#: <u>2150</u>	Send Report to: <u>Jerry Bonn</u>		Sampling Site: <u>Building 650 Leachfield</u> The samples submitted contain (check); () Hazardous () Radioactive (X) 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.
Charge No.: <u>C40-680DE</u>	ASL Prog.: _____	Phone: <u>5-7341</u>	Fax: <u>5-7741</u>	
Project Manager: <u>Steve Nucht / Jerry Bonn</u>		Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: _____		
Phone: _____	Fax: _____	M/S: <u>NTS-306</u>		
Final report format: ☒ Standard () NTS-WAC () Other: _____		Final by: _____		

LAB USE ONLY		ANALYSES & METHOD				SAMPLE RECEIPT INFORMATION	
Rad SGD: <u>B550</u>	Non-Rad SDG: <u>B552</u>	<u>VOC Total / EPA 8260</u> <u>Gamma Spec (L-Ela. 602 PL)</u> <u>Isotopic Pu (L-Ela. 601 PL)</u> <u>Alpha/Beta (L-Ela. 602 PL)</u>				Are all sample containers received intact () Yes () No	
Rad Packet: <u>G9313</u>	Non-Rad Packet: <u>W1494</u>					Comments: _____	
Client Services Representative: <u>V463</u>						Do the labels agree with this form? () Yes () No	
Will these analyses be performed under a signed SOW? () YES () NO						Comments: _____	
If so, do analyses entered here agree with the SOW? () YES () NO () N/A		Was a Material Clearance Tag submitted? () Yes () No					
If not, identify the variation _____		Comments: _____					
CSR initials indicating review and approval: _____ Date: _____							

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX													COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
		DATE	TIME														
0	NLFEXC-12 E	7/1/98	1335	Soil	X	X	X	X									All Rad Samples from same 500 ml sample
1	NLFEXC-12 W	7/1/98	1345	Soil	X	X	X	X									648g
2	NLFEXC-12 S	7/1/98	1355	Soil	X	X	X	X									568g
3	NLFEXC-12 Bottom 1	7/1/98	1305	Soil	X	X	X	X									654g
4	NLFEXC-12 Bottom 2	7/1/98	1317	Soil	X	X	X	X									582g
5	NLFEXC-12 Bottom 3	7/1/98	1324	Soil	X	X	X	X									624g
6	TR-063098	6/30/98	1410	Water	X												
7	TR-070198	7/1/98	0714	Water	X												
8																	
9																	

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.)
<u>Sherry M. Pearson - Bld 650</u>	<u>7/1/98/1449</u>	<u>CD Castaneda</u>	<u>CD Castaneda</u>	<u>7/2/98/1300</u>	<u>BN COURIER</u>
<u>VIA COURIER</u>			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			<u>VIA COURIER</u>	<u>7-2-98/1500</u>	<u>MR</u>
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

From: Theodore Redding
To: NTS2.ACHEM(CASTANCD), ENVIRON.MERC-DORMB(BONNJF)
Date: 7/2/98 9:27am
Subject: MS/MSDs -Reply

Jerry,

Catherine has modified the chain of custody for the samples of 7/1.

I contacted NEL and asked them to use 650DB-15NE for the MS/MSD of the 6/27 - 28 set, under the condition that it has not been analyzed. If it has, they were directed to select one which has not been analyzed. They said they would contact me if 650DB-15NE could not be used for the MS/MSD.

Let me know if you have any other questions.

Thanks, Ted

>>> Jerry Bonn 07/02/98 08:21am >>>
Ted, Catherine,

Please have NEL identify a VOC sample which has not been extracted from the batch collected on June 27, and 28 so that a MS/MSD can be analyzed. In addition, please have sample ID NLFEXC-12Bottom1 identified as the MS/MSD sample for the batch collected on July 1. Sorry for the inconvenience.

Thanks,
Jerry

Run Date: 7/02/1998 MATERIALS/EQUIPMENT MOVEMENT Page 1
Run Time: 09:55 REQUEST

EFF. Date: 7/02/1998
Request #: NTS 068808 Movement to a non BN location

A2

From: CASTANEDA,C To: NEL
ORGN/MS: F14D / NTS273 4208 ARCATA WAY
BLDG/RM: 650 41 SUITE A
PHONE: 295-7884 LAS VEGAS
NV 89030
BRUCE CUNNINGHAM
(702) 657-1010

Item PROP # Serial # QTY U/M ACCT Job/ISO/ACT ORGN
1 SOIL SAMPLES 13 EA 6241 C4U6B0DE 2150
Not a Hazardous Material

Creation Date: 7/02/1998 Transmit Date: 7/02/1998
Required at DESTN: 7/02/1998 Return Date:
Reason for Shipment: LAB ANALYSIS
Method of Shipment: WAREHOUSING SERVICES NEEDED
Stores Request NBR: OLD PO:
Warehouse Response: PR:
WHSE Response date: PO:
Delivery Date: BUYER:
Number of pieces: 1 Buyer Approval Date:
Date Shipped: RMA #

Department managers signature required
on AIR SHIPMENTS and TRANSFERS.
Released By CS Castaneda Date 07/02/98
Received By _____ Date _____

***** END OF REQUEST *****

34/b5

DATE 7-1-98 NO. A005901

Bechtel Nevada

Radiological Control Department- Ramatrol

Material Clearance

MONITOR: [Signature]
 ISSUING ORGANIZATION: BN EN
 REQUESTING ORGANIZATION: BN
 SURVEY LOCATION: A-73
 FROM: 1-73 1-501 1-46-517
 TO: 1-73 1-AB

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

INITIAL

[Signature]

DESCRIPTION:

18 ea MISC SOIL
SAMPLES
2 ea TRIP BLANKS

REMARKS: EXP 7-8-98

THIS TAG EXPIRES 7 DAYS FROM
 ISSUE DATE

Interoffice Memorandum

To: S. J. Nacht

Date: October 06, 1998

From: L. W. Hatcher
Analytical Services Laboratory, 295-7109

No.: 2150-AL-99-0003

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V465**
Project No. 04001

Nevada Environmental Laboratory's results for the volatile organics analyses of four soil samples and one trip blank collected on July 2, 1998 are included with a copy of this memorandum to J. F. Bonn. Preliminary data were faxed to the client on July 8, 1998. Included is a statement of services which identifies the charge number associated with the SDG.

The samples were also submitted for gamma spectroscopy, plutonium, gross alpha, and gross beta analyses and were entered under SDG B554. The radiological data report was submitted under separate cover.

SPECIFIC:

Volatile Organics:

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

Sample 650PIPERES data are qualified with a "Js" which indicates the components are to be considered estimated due to unacceptable QC results. In this case, internal standard and surrogate recoveries were the cause for the flags. The outliers were duplicated in the reanalysis of the sample on 7/6.

A matrix spike (MS) and matrix spike duplicate (MSD) were performed on sample 650LFWOUT-1, however, a report form was not submitted. The raw data form, which reflects acceptable recoveries, has been included with the other report forms.

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

L. W. Hatcher

LWH:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG V465, (results enc.) NTS273
ASL SDG B554, NTS273

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

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: NA
PROJECT NUMBER: 17777

NEL ORDER ID: L9807013

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 7/2/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

Some results have been flagged as follows:

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

Stan Van Wagenen
Laboratory Manager

07/07/98
Date

CERTIFICATIONS:

	Reno	Las Vegas	So. Calif
Arizona	AZ0520	AZ0518	AZ0583
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	Reno	Las Vegas	So. Calif
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: NA
PROJECT NUMBER: 17777

CLIENT ID: 650 PIPERES
DATE SAMPLED: 7/2/98
NEL SAMPLE ID: L9807013-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	130 Js	20 µg/kg			
Benzene	ND Js	5. µg/kg			
Bromodichloromethane	ND Js	5. µg/kg			
Bromoform	ND Js	5. µg/kg			
Bromomethane	ND Js	5. µg/kg			
2-Butanone	ND Js	20 µg/kg			
Carbon disulfide	ND Js	5. µg/kg			
Carbon tetrachloride	ND Js	5. µg/kg			
Chlorobenzene	ND Js	5. µg/kg			
Chloroethane	ND Js	5. µg/kg			
Chloroform	ND Js	5. µg/kg			
Chloromethane	ND Js	5. µg/kg			
Dibromochloromethane	ND Js	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND Js	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND Js	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND Js	5. µg/kg			
cis-1,2-Dichloroethene	ND Js	5. µg/kg			
trans-1,2-Dichloroethene	ND Js	5. µg/kg			
1,2-Dichloropropane	ND Js	5. µg/kg			
cis-1,3-Dichloropropene	ND Js	5. µg/kg			
trans-1,3-Dichloropropene	ND Js	5. µg/kg			
Ethylbenzene	ND Js	5. µg/kg			
2-Hexanone	ND Js	20 µg/kg			
Methylene chloride (Dichloromethane)	ND Js	5. µg/kg			
4-Methyl-2-pentanone	ND Js	20 µg/kg			
Styrene	ND Js	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND Js	5. µg/kg			
Tetrachloroethene (PCE)	ND Js	5. µg/kg			
Toluene	ND Js	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND Js	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND Js	5. µg/kg			
Trichloroethene (TCE)	ND Js	5. µg/kg			
Vinyl chloride	ND Js	6. µg/kg			
o-Xylene	ND Js	5. µg/kg			
m,p-Xylene	ND Js	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	60	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	84	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: NA
PROJECT NUMBER: 17777

CLIENT ID: 650 LPWOUT-1
DATE SAMPLED: 7/2/98
NEL SAMPLE ID: L9807013-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	93	80 - 120
Toluene-d8	100	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: NA
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEIN-1
DATE SAMPLED: 7/2/98
NEL SAMPLE ID: L9807013-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	103	74 - 121
Dibromofluoromethane	105	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: NA
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEIN-2
DATE SAMPLED: 7/2/98
NEL SAMPLE ID: L9807013-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/5/98
ANALYZED: 7/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	91	74 - 121
Dibromofluoromethane	105	80 - 120
Toluene-d8	100	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada

CLIENT ID: TB-070298

PROJECT NAME: NA

DATE SAMPLED: 7/2/98

PROJECT NUMBER: 17777

NEL SAMPLE ID: L9807013-05

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/2/98

ANALYST: Scott

DILUTION: 1

ANALYZED: 7/2/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	20 µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	111	86 - 115
Dibromofluoromethane	96	86 - 118
Toluene-d8	100	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: NA
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980702-2w60bnv-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/2/98

ANALYZED: 7/5/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5 µg/L			
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	20 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
o-Xylene	ND	5 µg/L			
m,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	101	86 - 115
Dibromofluoromethane	109	86 - 118
Toluene-d8	99	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada

PROJECT NAME: NA

PROJECT NUMBER: 17777

CLIENT ID: Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 980705-2s60bnv-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 7/5/98

ANALYZED: 7/5/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	25 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	100	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	98	81 - 117

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Method : C:\HPCHEM\1\METHODS\8260S.M
 Title : 8260-Soil Calibration: 7/1/98
 Last Update : Thu Jul 02 18:46:15 1998
 Response via : Initial Calibration

Non-Spiked Sample: V0705-04.D

Spike Sample	Spike Duplicate Sample
File ID : V0705-13.D	V0705-14.D
Sample : L9807013-02-ms	L9807013-02-msd
Acq Time: 6 Jul 98 12:20 am	6 Jul 98 1:02 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	% Rec
1,1-Dichloroethene	0.0	50	49	51	97	102	5	22	59-172
Benzene	0.0	50	40	41	80	81	2	21	66-142
Trichloroethene	0.0	50	36	35	72	70	3	24	62-137
Toluene	0.0	50	33	34	66	66	1	21	59-139
Chlorobenzene	0.0	50	35	35	70	71	1	21	60-133

8260S.M

Mon Jul 06 07:17:12 1998

SAMPLE DELIVERY GROUP: V465

CLIENT: RP - JERRY BONN

LABORATORY: NEL

FINAL REPORT RECEIVED: 7/13/98

DATE REVIEWED: 8/3/98

REVIEWED BY:

VOLATILES:

MATRIX: SOIL

ARE VOA DATA ACCEPTABLE: YES

	SAMPLE ID	INSTRUMENT ID	DATE	TIME	ACCEPTABLE?
1. TUNE	BFB	VOA2	6/24/98	1215	YES
	BFB	VOA2	6/30/98	1916	YES
	BFB	VOA2	7/1/98	0732	YES
	BFB	VOA2	7/1/98	1754	YES
	BFB	VOA2	7/2/98	0714	YES
	BFB	VOA2	7/2/98	1738	YES
	BFB	VOA2	7/5/98	1526	YES
	BFB	VOA2	7/6/98	0723	YES
	BFB	VOA2	7/6/98	1756	YES
	BFB	VOA2	7/6/98	1756	YES
2. CALIBRATION	INITIAL-WATER	VOA2	6/24/98		YES
	INITIAL-SOIL	VOA2	6/30-7/1		YES
	VSTD050 CC980702	VOA2	7/2/98	0811	YES
	VSTD050 CC980702	VOA2	7/5/98	1557	YES
	VSTD050 CC980706	VOA2	7/6/98	0848	YES
	VSTD050 CC980706	VOA2	7/6/98	1909	YES
3. METHOD BLANK	VBLK980702A	VOA2	7/2/98	0846	YES
	VBLK980705A	VOA2	7/5/98	1640	YES
	VBLK980706A	VOA2	7/6/98	0813	YES
	VBLK980706B	VOA2	7/6/98	1311	YES
	VBLK980706C-SOIL	VOA2	7/6/98	1951	YES
4. EXT. BLANK	N/A	N/A	N/A	N/A	N/A
5. LAB CONTROL	VSTD050 CC980702	VOA2	7/2/98	0811	YES
	VSTD050 CC980702	VOA2	7/5/98	1557	YES
	VSTD050 CC980706	VOA2	7/6/98	0848	YES
	VSTD050 CC980706	VOA2	7/6/98	1909	YES
6. TRIP BLANK	TB-070298	VOA2	7/2/98	1710	YES
7. SAMPLES	650PIPERES	VOA2	7/5/98	1722	YES
	650PIPERES-RE	VOA2	7/6/98	2033	YES
	650LFWOUT-1	VOA2	7/5/98	1804	YES
	650LFWOUT-1 MS	VOA2	7/6/98	0020	YES
	650LFWOUT-1 MSD	VOA2	7/6/98	0102	YES
	650LFEIN-1	VOA2	7/5/98	1846	YES
	650LFEIN-2	VOA2	7/5/98	1928	YES
8. SURROGATE RECOVERY ACCEPTABLE:	YES				
9. MS/MSD RECOVERY ACCEPTABLE:	N/A YES				
10. METHOD BLANK ACCEPTABLE:	YES				
11. HOLDING TIMES ACCEPTABLE:	YES				

a. Date Sampled

7/2/98

DAYS

0

ACCEPTABLE

0

b. Date ASL Received:

N/A

N/A

1

		<u># DAYS</u>	<u>ACCEPTABLE</u>
c. Date Contract Lab Received:	<u>7/2/98</u>	<u>0</u>	<u>5</u>
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Latest Date Analyzed:	<u>7/6/98</u>	<u>4</u>	<u>14</u>
12. Correct Conc units used:	<u>YES</u>		
13. CALCULATIONS ACCEPTABLE:	<u>YES</u>		
14. ARE AREAS ACCEPTABLE:	<u>YES</u>		
15. RRT IS ACCEPTABLE:	<u>YES</u>		
16. FORMS ACCEPTABLE:	<u>YES</u>		
17. Chain-of-Custody agrees:	<u>YES</u>		

COMMENTS: Method associated quality assurance and control criteria were met. Sample 650PIPERES data are qualified with a "Js" which indicates the components are to be considered estimated due to unacceptable QC results. In this case, internal standard and surrogate recoveries were the cause for the flags. The outliers were duplicated in the reanalysis of the sample on 7/6.

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION			
Project: <u>Building 650</u>		BN Org#: <u>2150</u>		Send Report to: <u>Jerry Bonn / TED REDDING</u>				Sampling Site: <u>Bld. 650</u>			
Charge No.: <u>CHV-6BODE</u>		ASL Prog.: _____		Phone: <u>5-7341</u>		Fax: <u>5-7761</u>		M/S: <u>NTS-306</u>		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.	
Project Manager: <u>Steve Nacht / Jerry Bonn</u>				Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: _____ ☒ Rush Preliminary by <u>ASAP 7/1/98</u> Final by: _____							
Phone: <u>5-7341</u>		Fax: <u>5-7761</u>		M/S: <u>NTS 306</u>		Final report format: ☒ Standard () NTS-WAC () Other: _____					
LAB USE ONLY				ANALYSES & METHOD				SAMPLE RECEIPT INFORMATION			
Rad SGD: <u>B554</u>		Non-Rad SGD: <u>1465</u>		VOC Totals EPA 8260				Are all sample containers received intact () Yes () No Comments: _____			
Rad Packet: <u>G9318</u>		Non-Rad Packet: <u>W1496</u>						Do the labels agree with this form? () Yes () No Comments: _____			
Client Services Representative: _____								Was a Material Clearance Tag submitted? () Yes () No Comments: _____			
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: _____								COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)			
ITEM	ID / DESCRIPTION	SAMPLING DATE	TIME	MATRIX							
0	650 PIPERES	7/2/98	1255	Solid	X						
1	650 LFWOUT-1	7/2/98	1235	Soil	X						
2	650 LFEIN-1	7/2/98	1210	Soil	X						
3	650 LFEIN-2	7/2/98	1222	Soil	X						
4	TR-070298	7/2/98	1145	Water	X						
5											
6											
7											
8											
9											
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.)	
<u>Jerry Bonn / BNER</u>		<u>7-2-98/1430</u>		<u>[Signature] NREL</u>							
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)	
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)	

Bechtel Nevada

Interoffice Memorandum

To: S. J. Nacht

Date: August 24, 1998

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

No.: 2150-AL-98-0404

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) B554**
Project No. 04001

Analytical Services Laboratory's results have been reported to J. F. Bonn for the 20 minute gamma spectroscopy, gross alpha, gross beta, and plutonium analyses of four samples collected on July 2, 1998. Also included was a statement of services which indicated the charge number associated with the SDG.

SPECIFIC:

20 Minute Gamma Spectroscopy:

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

Gross Alpha & Gross Beta:

Method associated QA/QC criteria were met.

Small sample aliquots are processed for these determinations. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

Plutonium:

Method associated QA/QC criteria were met.

Small sample aliquots are processed for this determination. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

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

T. P. Van Sittert

TPV:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG B554, (results enc.) NTS273

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B554
Batch: 0831
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
65OLFEN-1	CO60	GAM20	1.33E-01	8.0E+01		9.2E-02	pCi/g	07-06-98	07-02-98	6.01E+02	gm	SOIL G			05-01	G9318-0-75176
65OLFEN-1	CS137	GAM20	1.61E-01	5.6E+01		7.3E-02	pCi/g	07-06-98	07-02-98	6.01E+02	gm	SOIL G			05-01	G9318-0-75176
65OLFEN-1	K 40	GAM20	4.34E+00	4.0E+01		1.1E+00	pCi/g	07-06-98	07-02-98	6.01E+02	gm	SOIL G			05-01	G9318-0-75176
65OLFEN-1	RA226	GAM20	6.20E-01	3.5E+01		2.3E-01	pCi/g	07-06-98	07-02-98	6.01E+02	gm	SOIL G			05-01	G9318-0-75176
65OLFEN-1	TH228	GAM20	5.48E-01	3.3E+01		1.5E-01	pCi/g	07-06-98	07-02-98	6.01E+02	gm	SOIL G			05-01	G9318-0-75176
65OLFEN-2	K 40	GAM20	3.24E+00	4.7E+01		1.1E+00	pCi/g	07-06-98	07-02-98	5.72E+02	gm	SOIL G			05-01	G9318-1-75179
65OLFEN-2	RA226	GAM20	3.33E-01	5.2E+01		1.6E-01	pCi/g	07-06-98	07-02-98	5.72E+02	gm	SOIL G			05-01	G9318-1-75179
65OLFEN-2	TH228	GAM20	4.42E-01	3.7E+01		1.5E-01	pCi/g	07-06-98	07-02-98	5.72E+02	gm	SOIL G			05-01	G9318-1-75179
65OLFWOUT-1	K 40	GAM20	3.21E+00	4.6E+01		1.1E+00	pCi/g	07-06-98	07-02-98	6.56E+02	gm	SOIL G			05-01	G9318-2-75182
65OLFWOUT-1	RA226	GAM20	3.23E-01	5.1E+01		1.7E-01	pCi/g	07-06-98	07-02-98	6.56E+02	gm	SOIL G			05-01	G9318-2-75182

Comment:

Data for samples received on 7/2/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by: Date: 8-6-98

Approved by: Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B554
Batch: 0831
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFWOUT-1	TH228	GAM20	5.00E-01	3.4E+01		1.2E-01	pCi/g	07-06-98	07-02-98	6.56E+02	gm	SOIL G			05-01	G9318-2-75182
650LFWOUT-1	TH232	GAM20	3.78E-01	8.3E+01		2.8E-01	pCi/g	07-06-98	07-02-98	6.56E+02	gm	SOIL G			05-01	G9318-2-75182
650PIPERES	AM241	GAM20	2.05E+02	9.9E+00		1.1E+00	pCi/g	07-06-98	07-02-98	7.10E+01	gm	SOIL G			05-01	G9318-3-75185
650PIPERES	CO57	GAM20	7.25E-01	4.7E+01		3.0E-01	pCi/g	07-06-98	07-02-98	7.10E+01	gm	SOIL G			05-01	G9318-3-75185
650PIPERES	CO60	GAM20	2.94E+00	3.5E+01		4.9E-01	pCi/g	07-06-98	07-02-98	7.10E+01	gm	SOIL G			05-01	G9318-3-75185
650PIPERES	CS137	GAM20	1.06E+01	1.8E+01		3.7E-01	pCi/g	07-06-98	07-02-98	7.10E+01	gm	SOIL G			05-01	G9318-3-75185
650PIPERES	RA226	GAM20	2.13E+00	5.1E+01		9.2E-01	pCi/g	07-06-98	07-02-98	7.10E+01	gm	SOIL G			05-01	G9318-3-75185
650PIPERES	TH228	GAM20	5.52E+00	2.3E+01		7.5E-01	pCi/g	07-06-98	07-02-98	7.10E+01	gm	SOIL G			05-01	G9318-3-75185
650PIPERES	TH232	GAM20	2.27E+00	8.0E+01		1.8E+00	pCi/g	07-06-98	07-02-98	7.10E+01	gm	SOIL G			05-01	G9318-3-75185
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-06-98	07-01-95	1.00E+00	gm	QUAL			05-01	Q0539-0-00238

Comment:

Data for samples received on 7/2/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by: [Signature] Date: 8-6-98

Approved by: [Signature] Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B554
Batch: 0831
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.0E+01	pCi	07-06-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00238
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	9.9E+00	pCi	07-06-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00238
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	6.2E+00	pCi	07-06-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00238
QA SP:NAS-A0271	AM241	GAM20	1.79E+05	8.8E+00		2.5E+02	pCi	07-06-98	04-01-92	1.00E+00	sm	QUAL		110.6	05-01	Q0534-3-14816
QA SP:NAS-A0271	CO60	GAM20	3.02E+05	8.5E+00		1.8E+02	pCi	07-06-98	04-01-92	1.00E+00	sm	QUAL		101.2	05-01	Q0534-3-14816
QA SP:NAS-A0271	CS137	GAM20	2.06E+05	8.1E+00		7.4E+01	pCi	07-06-98	04-01-92	1.00E+00	sm	QUAL		101.4	05-01	Q0534-3-14816

Comment:

Data for samples received on 7/2/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date:

8-6-98

Approved by:

Date:

8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B554
Batch: M614
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
65OLF EIN-1	Gross Alpha	Gross A	6.09E+00	4.2E+01		3.4E+00	pCi/g	07-31-98	07-02-98	5.30E-01	gm	SOIL G			14-01	G9318-0-75175
65OLF EIN-2	Gross Alpha	Gross A	3.79E+00	5.9E+01		3.3E+00	pCi/g	07-31-98	07-02-98	5.50E-01	gm	SOIL G			14-01	G9318-1-75178
65OLF WOUT-1	Gross Alpha	Gross A	6.31E+00	4.3E+01		3.7E+00	pCi/g	07-31-98	07-02-98	4.90E-01	gm	SOIL G			14-01	G9318-2-75181
65OPIPERES	Gross Alpha	Gross A	1.32E+03	1.8E+00		2.9E+00	pCi/g	07-31-98	07-02-98	5.30E-01	gm	SOIL G			14-01	G9318-3-75184
QA REA	Gross Alpha	Gross A	-6.59E-02	3.5E+02	U	4.5E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.84E+00	1.5E+01		4.5E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		112.1	14-01	G9314-1-06789
65OLF EIN-1	Gross Beta	Gross B	4.58E+00	3.0E+01		2.1E+00	pCi/g	07-31-98	07-02-98	5.30E-01	gm	SOIL G			14-01	G9318-0-75175
65OLF EIN-2	Gross Beta	Gross B	3.33E+00	3.9E+01		2.0E+00	pCi/g	07-31-98	07-02-98	5.50E-01	gm	SOIL G			14-01	G9318-1-75178
65OLF WOUT-1	Gross Beta	Gross B	3.19E+00	4.5E+01		2.3E+00	pCi/g	07-31-98	07-02-98	4.90E-01	gm	SOIL G			14-01	G9318-2-75181
65OPIPERES	Gross Beta	Gross B	7.72E+01	3.4E+00		2.1E+00	pCi/g	07-31-98	07-02-98	5.30E-01	gm	SOIL G			14-01	G9318-3-75184

Comment:

Data for samples received on 7/2/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B554
Batch: M614
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA REA	Gross Beta	Gross B	9.72E-02	5.9E+02	U	9.7E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Beta	Gross B	4.93E+00	1.4E+01		9.7E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		94.2	14-01	G9314-1-06789

Comment:

Data for samples received on 7/2/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by: [Signature] Date: 8-6-98

Approved by: 44 Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B554
Batch: M615
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFEIN-1	PU239	Pu	2.94E-01	2.5E+01		3.2E-02	pCi/g	07-22-98	07-02-98	5.10E-01	gm	SOIL G	74.5		30-10	G9318-0-75177
650LFEIN-1	PU238	Pu	1.02E-02	1.4E+02	U	2.2E-02	pCi/g	07-22-98	07-02-98	5.10E-01	gm	SOIL G	74.5		30-10	G9318-0-75177
650LFEIN-2	PU239	Pu	-2.46E-03	9.0E+02	U ₄₂	6.1E-02	pCi/g	07-22-98	07-02-98	5.50E-01	gm	SOIL G	34.3		30-11	G9318-1-75180
650LFEIN-2	PU238	Pu	-2.42E-03	3.5E+02	U ₄₂	4.1E-02	pCi/g	07-22-98	07-02-98	5.50E-01	gm	SOIL G	34.3		30-11	G9318-1-75180
650LFWOUT-1	PU239	Pu	3.42E-02	8.4E+01	U	3.7E-02	pCi/g	07-22-98	07-02-98	5.10E-01	gm	SOIL G	62.0		30-14	G9318-2-75183
650LFWOUT-1	PU238	Pu	2.97E-03	3.5E+02	U	2.5E-02	pCi/g	07-22-98	07-02-98	5.10E-01	gm	SOIL G	62.0		30-14	G9318-2-75183
650PIPERES	PU239	Pu	1.47E+03	1.1E+01		1.3E+01	pCi/g	07-22-98	07-02-98	1.22E-03	gm	SOIL G	75.3		30-16	G9318-3-75186
650PIPERES	PU238	Pu	1.21E+01	7.6E+01		9.0E+00	pCi/g	07-22-98	07-02-98	1.22E-03	gm	SOIL G	75.3		30-16	G9318-3-75186
QA REA	PU239	Pu	1.23E-03	5.5E+02	U	1.6E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314
QA REA	PU238	Pu	-6.24E-04	3.5E+02	U	1.1E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314

Comment:

Data for samples received on 7/2/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 7

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B554
Batch: M615
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:PU.25 01	PU239	Pu	7.75E-01	1.3E+01		1.5E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3	90.6	30-05	G9315-1-06315
QA SP:PU.25 01	PU238	Pu	1.19E-03	3.5E+02	U	1.0E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3		30-05	G9315-1-06315

Comment:

Data for samples received on 7/2/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by: Date: 8-6-98

Approved by: Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

PROJECT/ CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION							
Project: <u>Building 650 Leachfield</u>		BN Org#: <u>2150</u>		Send Report to: <u>Jerry Bonn</u>				Sampling Site: <u>Bld 450</u>							
Charge No.: <u>14U-6BODE</u>		ASL Prog.:		Phone: <u>5-7341</u>		Fax: <u>5-7701</u>		M/S: <u>NYS-306</u>		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.					
Project Manager: <u>Steve Nacht / Jerry Bonn</u>				Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: <u>None</u> ☒ Rush Preliminary by: <u>Aug 2</u> Final by: _____											
Phone: _____		Fax: _____		M/S: _____		Final report format: ☒ Standard () NTS-WAC () Other: _____									
LAB USE ONLY				ANALYSES & METHOD											
Rad SGD: <u>B554</u>		Non-Rad SGD:		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">20-min Gamma (L-ED. 602.12)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">ISOPPIC PU (L-ED. 661.12)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CROSS Alpha/Beta (L-ED. 612.12)</div> </div>											
Rad Packet: <u>69318</u>		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: _____				<div> <div>Are all sample containers received intact ☒ Yes () No</div> <div>Comments: _____</div> <div>Do the labels agree with this form? ☒ Yes () No</div> <div>Comments: _____</div> <div>Was a Material Clearance Tag submitted? ☒ Yes () No</div> <div>Comments: _____</div> </div>											
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX									COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)		
		DATE	TIME												
0	650 LFEIN-1	7/2/98	1210	Soil	X	X	X								All rad from one 500 ml sample
1	650 LFEIN-2	7/2/98	1222	Soil	X	X	X								
2	650 LF WOUT-1	7/2/98	1235	Soil	X	X	X								
3	650 PIPE RES	7/2/98	1255	Soil	X										
4															
5															
6															
7															
8															
9															
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.)					
<u>Shannon M. Thomas</u>		<u>7/2/98/1312</u>		<u>CD Costa</u>											
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)					
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)					

Bechtel Nevada

Interoffice Memorandum

To: S. J. Nacht

Date: October 08, 1998

From: L. W. Hatcher
Analytical Services Laboratory, 295-7109

No.: 2150-AL-99-0004

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V467**
Project No. 04001

Nevada Environmental Laboratory's (NEL) results for the volatile organics analyses of six soil samples and one trip blank collected on July 8, 1998 are included with a copy of this memorandum to J. F. Bonn. Preliminary data were faxed to the client on July 22, 1998. Included is a statement of services which identifies the charge number associated with the SDG.

The soil samples, two swipe composite samples, and one water sample were also submitted for gamma spectroscopy, plutonium, gross alpha, and gross beta analyses. These analyses were entered under SDG B595 and reported under separate cover.

SPECIFIC:

Volatile Organics:

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

Several "Extracted" and "Analyzed" dates reported were incorrect in comparison to the raw data printouts. Corrections were made to the report forms and initialed.

The laboratory was requested to perform matrix spike / matrix spike duplicate (MS/MSD) analyses on sample 650LFEOU-4, however, NEL used 650LFWOU-3. NEL also performed MS/MSD analyses on TB-070898. All spike recoveries were within control limits.

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

for L. W. Hatcher

LWH:pma
Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG V467, (results enc.) NTS273
ASL SDG B595, NTS273

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Burbank

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

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

PROJECT NAME: V467
PROJECT NUMBER: 17777

NEL ORDER ID: L9807068

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 7/9/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.

Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.

Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

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

Michael Anas for S.V.W.
Stan Van Wagenen
Laboratory Manager

7/21/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Arizona	AZ0520	AZ0518	AZ0583
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: TB-070898
DATE SAMPLED: 7/8/98
NEL SAMPLE ID: L9807068-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 7/12/98
ANALYZED: ~~7/22/98~~ 7/12/98 *TR 9/5/98*
ANALYST: Scott

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	20 µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5. µg/L			
1,1,1,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	92	86 - 115
Dibromofluoromethane	91	86 - 118
Toluene-d8	95	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEOUT-1
DATE SAMPLED: 7/8/98
NEL SAMPLE ID: L9807068-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/10/98
ANALYZED: 7/10/98

ANALYST: John

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	5	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	97	80 - 120
Toluene-d8	98	81 - 117

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

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEOUT-2
DATE SAMPLED: 7/8/98
NEL SAMPLE ID: L9807068-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/10/98
ANALYZED: 7/10/98

ANALYST: John

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	11	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	84	74 - 121
Dibromofluoromethane	104	80 - 120
Toluene-d8	90	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEOU-3
DATE SAMPLED: 7/8/98
NEL SAMPLE ID: L9807068-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/10/98
ANALYZED: 7/10/98

ANALYST: John

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	5	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	106	80 - 120
Toluene-d8	99	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEOUT-4
DATE SAMPLED: 7/8/98
NEL SAMPLE ID: L9807068-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/14/98
ANALYZED: 7/14/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	90	74 - 121
Dibromofluoromethane	101	80 - 120
Toluene-d8	95	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: 650 LPWOUT-2
DATE SAMPLED: 7/8/98
NEL SAMPLE ID: L9807068-05

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/10/98 7/11/98

ANALYST: John

ANALYZED: 7/10/98 7/11/98 7/27/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	5	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	8	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	92	74 - 121
Dibromofluoromethane	104	80 - 120
Toluene-d8	94	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: 650 LFWOUT-3
DATE SAMPLED: 7/8/98
NEL SAMPLE ID: L9807068-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: ~~7/10/98~~ 7/11/98 ANALYST: John
ANALYZED: ~~7/10/98~~ 7/11/98 R 9/5/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,1,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	83	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	90	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9807102S60BNV-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 7/10/98

ANALYZED: 7/10/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	91	74 - 121
Dibromofluoromethane	104	80 - 120
Toluene-d8	100	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9807122W60BNV-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/12/98

ANALYZED: ~~7/22/98~~ 7/12/98 TR 9/5/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5 µg/L			
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	20 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
o-Xylene	ND	5 µg/L			
m,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	99	86 - 115
Dibromofluoromethane	105	86 - 118
Toluene-d8	97	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V467
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980714sbnv60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Solid

EXTRACTED: 7/14/98
ANALYZED: 7/14/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	93	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V467/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9807122W60BNV-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/12/98

ANALYZED: ~~7/22/98~~ 7/12/98 ~~7/12/98~~ 7/5/98 ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	104	80 - 120
Chlorobenzene	99	80 - 120
1,1-Dichloroethene (1,1-DCE)	101	80 - 120
Toluene	96	80 - 120
Trichloroethene (TCE)	91	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	100	86 - 115
Dibromofluoromethane	97	86 - 118
Toluene-d8	92	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V467/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9807068-07-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/12/98

ANALYZED: ~~7/22/98~~ 7/13/98 TR 9/5/98 ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	98	76 - 127
Chlorobenzene	92	75 - 130
1,1-Dichloroethene (1,1-DCE)	94	61 - 145
Toluene	100	76 - 125
Trichloroethene (TCE)	92	71 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	100	86 - 115
Dibromofluoromethane	103	86 - 118
Toluene-d8	99	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V467/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9807068-07-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: ~~7/12/98~~ 7/13/98

ANALYZED: ~~7/22/98~~ 7/13/98 TR 7/5/98 ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	100	76 - 127	2.
Chlorobenzene	98	75 - 130	6.3
1,1-Dichloroethene (1,1-DCE)	100	61 - 145	6.2
Toluene	94	76 - 125	6.2
Trichloroethene (TCE)	92	71 - 120	0.

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	97	86 - 115
Dibromofluoromethane	99	86 - 118
Toluene-d8	99	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V467/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9807102S60BNV-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 7/10/98

ANALYZED: 7/10/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	117	80 - 120
Chlorobenzene	116	80 - 120
1,1-Dichloroethene (1,1-DCE)	105	80 - 120
Toluene	108	80 - 120
Trichloroethene (TCE)	109	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	92	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	99	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V467/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9807068-06-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: ~~7/10/98~~ 7/11/98 *TR 9/5/98*
ANALYZED: ~~7/10/98~~ 7/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	92	66 - 142
Chlorobenzene	90	60 - 133
1,1-Dichloroethene (1,1-DCE)	108	59 - 172
Toluene	80	59 - 139
Trichloroethene (TCE)	86	62 - 137

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	86	74 - 121
Dibromofluoromethane	104	80 - 120
Toluene-d8	96	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V467/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9807068-06-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: ~~7/10/98~~ 7/11/98 TR 9/5/98
ANALYZED: ~~7/10/98~~ 7/11/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	84	66 - 142	9.1
Chlorobenzene	78	60 - 133	14.3
1,1-Dichloroethene (1,1-DCE)	102	59 - 172	5.7
Toluene	72	59 - 139	10.5
Trichloroethene (TCE)	82	62 - 137	4.8

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	104	80 - 120
Toluene-d8	90	81 - 117

SAMPLE DELIVERY GROUP: V467CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 8/26/98DATE REVIEWED: 9/5/98REVIEWED BY:

VOLATILES:

MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>VOA2</u>	<u>6/24/98</u>	<u>1215</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>0714</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>1713</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>1640</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/12/98</u>	<u>1556</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/14/98</u>	<u>0848</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL</u>	<u>VOA2</u>	<u>6/24/98</u>		<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>0739</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>1740</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>1702</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/12/98</u>	<u>1614</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/14/98</u>	<u>0914</u>	<u>YES</u>
3. METHOD BLANK	<u>VLBK 980710A</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>0817</u>	<u>↓ Surrogate</u>
	<u>VLBK 980710A</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>1303</u>	<u>YES</u>
	<u>VLBK 980710B</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>1855</u>	<u>YES</u>
	<u>VLBK 980711A</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>1737</u>	<u>YES</u>
	<u>VLBK 980712A</u>	<u>VOA2</u>	<u>7/12/98</u>	<u>1648</u>	<u>YES</u>
	<u>VLBK 980714A</u>	<u>VOA2</u>	<u>7/14/98</u>	<u>0949</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
5. LAB CONTROL	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>0739</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>1740</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>1702</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/12/98</u>	<u>1614</u>	<u>YES</u>
	<u>VSTD050 CC980710</u>	<u>VOA2</u>	<u>7/14/98</u>	<u>0914</u>	<u>YES</u>
6. TRIP BLANK	<u>TB-070898</u>	<u>VOA2</u>	<u>7/12/98</u>	<u>2258</u>	<u>YES</u>
	<u>TB-070898 MS</u>	<u>VOA2</u>	<u>7/13/98</u>	<u>0002</u>	<u>YES</u>
	<u>TB-070898 MSD</u>	<u>VOA2</u>	<u>7/13/98</u>	<u>0034</u>	<u>YES</u>
7. SAMPLES	<u>650LFEOU-1</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>2227</u>	<u>YES</u>
	<u>650LFEOU-2</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>2301</u>	<u>YES</u>
	<u>650LFEOU-3</u>	<u>VOA2</u>	<u>7/10/98</u>	<u>2336</u>	<u>YES</u>
	<u>650LFEOU-4</u>	<u>VOA2</u>	<u>7/14/98</u>	<u>1517</u>	<u>YES</u>
	<u>650LFWOUT-2</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>0046</u>	<u>YES</u>
	<u>650LFWOUT-3</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>0121</u>	<u>YES</u>
	<u>650LFWOUT-3MS</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>0306</u>	<u>YES</u>
	<u>650LFWOUT-3MSD</u>	<u>VOA2</u>	<u>7/11/98</u>	<u>0341</u>	<u>YES</u>
8. SURROGATE RECOVERY ACCEPTABLE:	<u>YES</u>				
9. MS/MSD RECOVERY ACCEPTABLE:	<u>YES</u>				
10. METHOD BLANK ACCEPTABLE:	<u>YES</u>				
11. HOLDING TIMES ACCEPTABLE:	<u>YES</u>				

		# DAYS	ACCEPTABLE
a. Date Sampled	<u>7/8/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>7/8/98</u>	<u>0</u>	<u>1</u>
c. Date Contract Lab Received:	<u>7/9/98</u>	<u>1</u>	<u>5</u>
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Latest Date Analyzed:	<u>7/14/98</u>	<u>6</u>	<u>14</u>
12. Correct Conc units used:	<u>YES</u>		
13. CALCULATIONS ACCEPTABLE:	<u>YES</u>		
14. ARE AREAS ACCEPTABLE:	<u>YES</u>		
15. RRT IS ACCEPTABLE:	<u>YES</u>		
16. FORMS ACCEPTABLE:	<u>YES</u>		
17. Chain-of-Custody agrees:	<u>YES</u>		

COMMENTS: Method associated quality assurance and control criteria were met. Several "Extracted" and "Analyzed" were incorrect in comparison to the raw data printouts. Corrections were made to the forms and initialed. The laboratory was requested to perform matrix spike / matrix spike duplicate analyses on sample 650LFEOU-4, however, NEL used 650LFWOU-3. NEL also performed MS/MSD analyses on TB-070898. All recoveries were within control limits. Preliminary data were faxed to the client on 7/22/98.

ANALYTICAL SERVICES LABORATORY
SERVICES REQUEST & CHAIN OF CUSTODY RECORD

PROJECT/CLIENT INFORMATION

Project: Rld. 650 Leachfield BN Orig#: 2150
Charge No.: 64U-6 RODE ASL Prog.:
Project Manager: Steve Nuck+/ Jerry Bonn
Phone: 5-7341 Fax: 5-7361 M/S: 1115-106
Turnaround: 30 days Non-rad, 60 Days Rad, Other.
Final report format: Standard () NTS-WAC () Other

REPORT INFORMATION

Send Report to: Jerry Bonn
Phone: 5-7341 Fax: 5-7361 M/S: 1115-106
Turnaround: 30 days Non-rad, 60 Days Rad, Other.
Final report format: Standard () NTS-WAC () Other

SAMPLE INFORMATION

Sampling Site: Rld. 650 Leachfield
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.

LAB USE ONLY

Rad SGD: B595 Non-Rad SDG: V467
Rad Packet: G9374 Non-Rad Packet: W1498
Client Services Representative: G9375-Under G9376-Swipe
LED REPAIRING

Will these analyses be performed under a signed SOW? (YES () NO ())
If so, do analyses entered here agree with the SOW? (YES () NO ())
If not, identify the variation:
CSR initials indicating review and approval: TR Date: 7/8/98

ANALYSES & METHOD

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX	ANALYSES & METHOD									
		DATE	TIME		Total VOC (EPA 8260)	Gamma Scan (L-EIC. 602A)	Isotope P. (L-EIC. 601PL)	Alpha/Beta (L-EIC. 602 PL)	Gamma Alpha/Beta					
0	650LFEOUT-1	7/8/98	1110	Soil	X	X	X	X	X					
1	650LFEOUT-2	7/8/98	1128	Soil	X	X	X	X	X					
2	650LFEOUT-3	7/8/98	1145	Soil	X	X	X	X	X					
3	650LFEOUT-4	7/8/98	1155	Soil	X	X	X	X	X					
4	650LFEOUT-2	7/8/98	1555	Soil	X	X	X	X	X					
5	650LFEOUT-3	7/8/98	1540	Soil	X	X	X	X	X					
6	TR-070898	7/8/98	0900	Water	X	X	X	X	X					
7	ER-070898	7/8/98	1000	Water	X	X	X	X	X					
8	West Outer Pipe 16-45	7/8/98		Swipes	X	X	X	X	X					
9	East Outer Pipe	7/8/98		Swipes	X	X	X	X	X					

Transfer of samples submitted for analyses

Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)	Relinquished (BN Representative Signature)
<u>Shannon McTearney</u>	<u>7/8/98/1619</u>	<u>JD Castaneda</u>	<u>JD Castaneda</u>

Complete for samples shipped to an OFF-SITE Subcontract Laboratory

DATE / TIME	Received (Counter & Tracking Info.)
<u>7/9/98/1510</u>	<u>Shannon McTearney</u>
<u>7/9/98/1700</u>	<u>JD Castaneda</u>
<u>7/9/98/1700</u>	<u>JD Castaneda</u>

SAMPLE RECEIPT INFORMATION

Are all sample containers received intact () Yes () No
Comments:
Do the labels agree with this form? () Yes () No
Comments:
Was a Material Clearance Tag submitted? () Yes () No
Comments:

COMMENTS

(Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
All rad from one 500ml sample
Use for MS/MSD
VOC received via bubble canister
Composite all swipes in each envelope as one sample

DATE: 7-8-98 NO. A005902

Bechtel Nevada

Radiological Control Department- Ramatrol

Material Clearance

MONITOR: M. C. Cleskey

ISSUING ORGANIZATION: BNFR

REQUESTING ORGANIZATION: BN

SURVEY LOCATION: A-23

FROM: A23 - 1200 W. H. H. H. H. H.

TO: A-23 W. H. H.

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

INITIAL

CH

DESCRIPTION:

18 EA Misc Soil
Samples

5 ea Liquid Containers

2 ea envelopes SW. Res

REMARKS: Exp 7-15-98

THIS TAG EXPIRES 7 DAYS FROM
ISSUE DATE

COPY 1: HPD RECORDS M/S NTS450
COPY 2: WITH ITEMS THAT WERE CLEARED

BN-0488 (10/86)

Interoffice Memorandum

To: S. J. Nacht

Date: August 24, 1998

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

No.: 2150-AL-98-0405

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) B595**
Project No. 04001

Analytical Services Laboratory's results have been reported to J. F. Bonn for the 20 minute gamma spectroscopy, gross alpha, gross beta, and plutonium analyses of six soils, one water, and two swipe samples collected on July 8, 1998. Also included was a statement of services which indicated the charge number associated with the SDG.

Analysis of the soil samples for volatile organic compounds was also requested. That analysis was entered under SDG V467. Preliminary data were faxed to the client on July 22, 1998. The final report will be submitted when the final data are received and reviewed.

SPECIFIC:

20 Minute Gamma Spectroscopy;

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

Gross Alpha & Gross Beta;

Method associated QA/QC criteria were met.

Small sample aliquots are processed for these determinations. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

Plutonium;

Method associated QA/QC criteria were met.

Small sample aliquots are processed for this determination. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

2150-AL-98-0405

S. J. Nacht

Page 2 of 2

August 24, 1998

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

T. P. Van Sittert

TPV:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008

EM correspondence, NLV080

J. F. Bonn, (results enc.) NTS306

ASL SDG B595, (results enc.) NTS273

ASL SDG V467, NTS273

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: 0569
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
EB-070898	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-09-98	07-08-98	4.50E+02	ml	Water			08-01	G9375-0-75205
QA BKG WATER U08	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-09-98	06-01-97	5.00E+02	ml	QUAL			08-01	Q0538-0-00246
QA BKG WATER U08	AM241	GAM20	0.00E+00	0.0E+00	U	7.3E+02	pCi	07-09-98	06-01-97	1.00E+00	sm	QUAL			08-01	Q0538-0-00246
QA BKG WATER U08	CO60	GAM20	0.00E+00	0.0E+00	U	3.8E+01	pCi	07-09-98	06-01-97	1.00E+00	sm	QUAL			08-01	Q0538-0-00246
QA BKG WATER U08	CS137	GAM20	0.00E+00	0.0E+00	U	4.5E+01	pCi	07-09-98	06-01-97	1.00E+00	sm	QUAL			08-01	Q0538-0-00246
QA SP:QAW-8	AM241	GAM20	7.20E+04	9.9E+00		1.3E+03	pCi	07-09-98	08-01-90	1.00E+00	sm	QUAL		102.9	08-01	Q0586-3-14848
QA SP:QAW-8	CO60	GAM20	6.82E+04	8.5E+00		2.5E+02	pCi	07-09-98	08-01-90	1.00E+00	sm	QUAL		94.4	08-01	Q0586-3-14848
QA SP:QAW-8	CS137	GAM20	5.96E+04	7.9E+00		1.1E+02	pCi	07-09-98	08-01-90	1.00E+00	sm	QUAL		96.1	08-01	Q0586-3-14848

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date:

8-6-98

Approved by:

Date:

8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: 0833
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFOUT-1	K 40	GAM20	2.65E+00	5.2E+01		8.5E-01	pCi/g	07-09-98	07-08-98	6.07E+02	gm	SOIL G			05-01	G9374-0-75188
650LFOUT-1	RA226	GAM20	3.88E-01	4.7E+01		1.6E-01	pCi/g	07-09-98	07-08-98	6.07E+02	gm	SOIL G			05-01	G9374-0-75188
650LFOUT-1	TH228	GAM20	3.83E-01	3.8E+01		1.6E-01	pCi/g	07-09-98	07-08-98	6.07E+02	gm	SOIL G			05-01	G9374-0-75188
650LFOUT-2	CS137	GAM20	2.67E-01	4.0E+01		9.8E-02	pCi/g	07-09-98	07-08-98	6.95E+02	gm	SOIL G			05-01	G9374-1-75191
650LFOUT-2	K 40	GAM20	1.54E+00	6.9E+01		8.2E-01	pCi/g	07-09-98	07-08-98	6.95E+02	gm	SOIL G			05-01	G9374-1-75191
650LFOUT-2	RA226	GAM20	5.16E-01	3.9E+01		1.6E-01	pCi/g	07-09-98	07-08-98	6.95E+02	gm	SOIL G			05-01	G9374-1-75191
650LFOUT-2	TH228	GAM20	2.90E-01	5.0E+01		1.8E-01	pCi/g	07-09-98	07-08-98	6.95E+02	gm	SOIL G			05-01	G9374-1-75191
650LFOUT-3	K 40	GAM20	2.20E+00	5.8E+01		8.4E-01	pCi/g	07-09-98	07-08-98	6.20E+02	gm	SOIL G			05-01	G9374-2-75194
650LFOUT-3	RA226	GAM20	5.54E-01	3.7E+01		1.4E-01	pCi/g	07-09-98	07-08-98	6.20E+02	gm	SOIL G			05-01	G9374-2-75194
650LFOUT-3	TH228	GAM20	2.77E-01	5.0E+01		1.6E-01	pCi/g	07-09-98	07-08-98	6.20E+02	gm	SOIL G			05-01	G9374-2-75194

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by: Date: 8-6-98

Approved by: Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: 0833
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFEOUT-4	K 40	GAM20	3.82E+00	4.3E+01		1.1E+00	pCi/g	07-09-98	07-08-98	6.50E+02	gm	SOIL G			05-01	G9374-3-75197
650LFEOUT-4	RA226	GAM20	4.42E-01	4.3E+01		1.6E-01	pCi/g	07-09-98	07-08-98	6.50E+02	gm	SOIL G			05-01	G9374-3-75197
650LFWOUT-2	K 40	GAM20	4.22E+00	4.1E+01		1.1E+00	pCi/g	07-09-98	07-08-98	5.77E+02	gm	SOIL G			05-01	G9374-4-75200
650LFWOUT-2	RA226	GAM20	4.63E-01	4.2E+01		1.6E-01	pCi/g	07-09-98	07-08-98	5.77E+02	gm	SOIL G			05-01	G9374-4-75200
650LFWOUT-2	TH228	GAM20	5.52E-01	3.4E+01		1.4E-01	pCi/g	07-09-98	07-08-98	5.77E+02	gm	SOIL G			05-01	G9374-4-75200
650LFWOUT-3	K 40	GAM20	4.19E+00	4.2E+01		1.1E+00	pCi/g	07-09-98	07-08-98	5.52E+02	gm	SOIL G			05-01	G9374-5-75203
650LFWOUT-3	RA226	GAM20	3.26E-01	5.0E+01		1.6E-01	pCi/g	07-09-98	07-08-98	5.52E+02	gm	SOIL G			05-01	G9374-5-75203
650LFWOUT-3	TH228	GAM20	5.10E-01	3.5E+01		1.6E-01	pCi/g	07-09-98	07-08-98	5.52E+02	gm	SOIL G			05-01	G9374-5-75203
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-09-98	07-01-95	1.00E+00	gm	QUAL			05-01	Q0539-0-00242
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	1.9E+01	pCi	07-09-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00242

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: 0833
Program: 500

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	7.9E+00	pCi	07-09-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00242
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	1.1E+01	pCi	07-09-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00242
QA SP:NAS-A0271	AM241	GAM20	1.80E+05	8.8E+00		2.5E+02	pCi	07-09-98	04-01-92	1.00E+00	sm	QUAL		110.9	05-01	Q0534-3-14844
QA SP:NAS-A0271	CO60	GAM20	3.04E+05	8.5E+00		2.2E+02	pCi	07-09-98	04-01-92	1.00E+00	sm	QUAL		102.1	05-01	Q0534-3-14844
QA SP:NAS-A0271	CS137	GAM20	2.06E+05	8.1E+00		1.0E+02	pCi	07-09-98	04-01-92	1.00E+00	sm	QUAL		101.5	05-01	Q0534-3-14844

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: 0834
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
EAST OUTER PIPE	No peaks	GAMPF	0.00E+00	0.0E+00		0.0E+00	NA	07-09-98	07-08-98	1.00E+00	sm	Surfac			05-01	G9376-1-75207
WEST OUTER PIPE	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	07-09-98	07-08-98	1.00E+00	sm	Surfac			05-01	G9376-0-75206
QA BKG GF/A U05	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	07-09-98	10-01-97	1.00E+00	cc	QUAL			05-01	Q0605-0-00243
QA BKG GF/A U05	AM241	GAMPF	0.00E+00	0.0E+00	U	3.7E+01	pCi	07-09-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00243
QA BKG GF/A U05	CO60	GAMPF	0.00E+00	0.0E+00	U	1.4E+01	pCi	07-09-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00243
QA BKG GF/A U05	CS137	GAMPF	0.00E+00	0.0E+00	U	1.2E+01	pCi	07-09-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00243
QA SP:NAS-A1459	AM241	GAMPF	3.12E+04	8.4E+00		4.0E+01	pCi	07-09-98	08-01-93	1.00E+00	sm	QUAL		115.9	05-01	Q0590-5-14851
QA SP:NAS-A1459	CO60	GAMPF	3.40E+04	8.7E+00		3.0E+01	pCi	07-09-98	08-01-93	1.00E+00	sm	QUAL		100.8	05-01	Q0590-5-14851
QA SP:NAS-A1459	CS137	GAMPF	3.42E+04	8.0E+00		1.3E+01	pCi	07-09-98	08-01-93	1.00E+00	sm	QUAL		101.0	05-01	Q0590-5-14851

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: M614
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFEOUT-1	Gross Alpha	Gross A	2.08E+00	9.9E+01	U	3.3E+00	pCi/g	07-31-98	07-08-98	5.50E-01	gm	SOIL G			14-01	G9374-0-75187
650LFEOUT-2	Gross Alpha	Gross A	2.71E+00	8.2E+01	U	3.5E+00	pCi/g	07-31-98	07-08-98	5.20E-01	gm	SOIL G			14-01	G9374-1-75190
650LFEOUT-3	Gross Alpha	Gross A	3.57E+00	7.1E+01	U	3.9E+00	pCi/g	07-31-98	07-08-98	4.70E-01	gm	SOIL G			14-01	G9374-2-75193
650LFEOUT-4	Gross Alpha	Gross A	6.59E+00	4.0E+01		3.5E+00	pCi/g	07-31-98	07-08-98	5.20E-01	gm	SOIL G			14-01	G9374-3-75196
650LFWOUT-2	Gross Alpha	Gross A	4.99E+00	4.3E+01		2.9E+00	pCi/g	07-31-98	07-08-98	6.20E-01	gm	SOIL G			14-01	G9374-4-75199
650LFWOUT-3	Gross Alpha	Gross A	6.85E+00	3.9E+01		3.5E+00	pCi/g	07-31-98	07-08-98	5.20E-01	gm	SOIL G			14-01	G9374-5-75202
QA REA	Gross Alpha	Gross A	6.59E-02	3.5E+02	U	4.5E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.84E+00	1.5E+01		4.5E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		112.1	14-01	G9314-1-06789
650LFEOUT-1	Gross Beta	Gross B	1.96E+00	6.4E+01	U	2.0E+00	pCi/g	07-31-98	07-08-98	5.50E-01	gm	SOIL G			14-01	G9374-0-75187
650LFEOUT-2	Gross Beta	Gross B	1.98E+00	6.7E+01	U	2.2E+00	pCi/g	07-31-98	07-08-98	5.20E-01	gm	SOIL G			14-01	G9374-1-75190

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: M614
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFEOU-3	Gross Beta	Gross B	1.74E+00	8.3E+01	U	2.4E+00	pCi/g	07-31-98	07-08-98	4.70E-01	gm	SOIL G			14-01	G9374-2-75193
650LFEOU-4	Gross Beta	Gross B	2.81E+00	4.8E+01		2.1E+00	pCi/g	07-31-98	07-08-98	5.20E-01	gm	SOIL G			14-01	G9374-3-75196
650LFWOU-2	Gross Beta	Gross B	4.32E+00	2.7E+01		1.8E+00	pCi/g	07-31-98	07-08-98	6.20E-01	gm	SOIL G			14-01	G9374-4-75199
650LFWOU-3	Gross Beta	Gross B	5.23E+00	2.7E+01		2.1E+00	pCi/g	07-31-98	07-08-98	5.20E-01	gm	SOIL G			14-01	G9374-5-75202
QA REA	Gross Beta	Gross B	9.72E-02	5.9E+02	U	9.7E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Beta	Gross B	4.93E+00	1.4E+01		9.7E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		94.2	14-01	G9314-1-06789

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by: [Signature] Date: 8-6-98

Approved by: [Signature] Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: M615
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFEOUT-1	PU239	Pu	4.67E-02	1.7E+02	R	1.5E-01	pCi/g	07-22-98	07-08-98	5.70E-01	gm	SOIL G	15.1		30-17	G9374-0-75189
650LFEOUT-1	PU238	Pu	-5.86E-03	3.5E+02	R	1.0E-01	pCi/g	07-22-98	07-08-98	5.70E-01	gm	SOIL G	15.1		30-17	G9374-0-75189
650LFEOUT-2	PU239	Pu	3.33E-02	1.2E+02	4x 4x	6.0E-02	pCi/g	07-22-98	07-08-98	5.00E-01	gm	SOIL G	37.1		30-18	G9374-1-75192
650LFEOUT-2	PU238	Pu	-2.39E-03	3.5E+02	4x 4x	4.1E-02	pCi/g	07-22-98	07-08-98	5.00E-01	gm	SOIL G	37.1		30-18	G9374-1-75192
650LFEOUT-3	PU239	Pu	1.02E-01	4.9E+01		4.3E-02	pCi/g	07-22-98	07-08-98	5.20E-01	gm	SOIL G	52.3		30-21	G9374-2-75195
650LFEOUT-3	PU238	Pu	1.38E-02	1.4E+02	U	2.9E-02	pCi/g	07-22-98	07-08-98	5.20E-01	gm	SOIL G	52.3		30-21	G9374-2-75195
650LFEOUT-4	PU239	Pu	-2.48E-02	1.7E+02	R	1.6E-01	pCi/g	07-22-98	07-08-98	5.30E-01	gm	SOIL G	14.5		30-22	G9374-3-75198
650LFEOUT-4	PU238	Pu	-6.19E-03	3.5E+02	R	1.1E-01	pCi/g	07-22-98	07-08-98	5.30E-01	gm	SOIL G	14.5		30-22	G9374-3-75198
650LFWOUT-2	PU239	Pu	3.26E-02	9.2E+01	U	4.1E-02	pCi/g	07-22-98	07-08-98	5.60E-01	gm	SOIL G	53.1		30-23	G9374-4-75201
650LFWOUT-2	PU238	Pu	8.15E-03	1.8E+02	U	2.8E-02	pCi/g	07-22-98	07-08-98	5.60E-01	gm	SOIL G	53.1		30-23	G9374-4-75201

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by: [Signature]

Date: 8-6-98

Approved by: 42

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Bechtel Nevada Corporation

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P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B595
Batch: M615
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFWOUT-3	PU239	Pu	6.21E-02	6.3E+01		4.1E-02	pCi/g	07-22-98	07-08-98	5.00E-01	gm	SOIL G	61.3		30-24	G9374-5-75204
650LFWOUT-3	PU238	Pu	-1.64E-03	3.5E+02	U	2.8E-02	pCi/g	07-22-98	07-08-98	5.00E-01	gm	SOIL G	61.3		30-24	G9374-5-75204
QA REA	PU239	Pu	1.23E-03	5.5E+02	U	1.6E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314
QA REA	PU238	Pu	-6.24E-04	3.5E+02	U	1.1E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314
QA SP:PU.25 01	PU239	Pu	7.75E-01	1.3E+01		1.5E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3	90.6	30-05	G9315-1-06315
QA SP:PU.25 01	PU238	Pu	1.19E-03	3.5E+02	U	1.0E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3		30-05	G9315-1-06315

Comment:

Data for samples received on 7/8/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
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***** End of Report *****

(Level 1)

Bechtel Nevada

Interoffice Memorandum

To: S. J. Nacht

Date: August 24, 1998

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

No.: 2150-AL-98-0406

Subject: DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) B597
Project No. 04001

Analytical Services Laboratory's results have been reported to J. F. Bonn for the 20 minute gamma spectroscopy, gross alpha, gross beta, and plutonium analyses of one soil sample collected on July 9, 1998. Also included was a statement of services which indicated the charge number associated with the SDG.

SPECIFIC:

20 Minute Gamma Spectroscopy;

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

Gross Alpha & Gross Beta;

Method associated QA/QC criteria were met.

Small sample aliquots are processed for these determinations. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

Plutonium;

Method associated QA/QC criteria were met.

Small sample aliquots are processed for this determination. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

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

T. P. Van Sittert

TPV:pma
Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG B597, (results enc.) NTS273

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1

Reported to: Remediation Projects
Building 650 Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B597
Batch: 0835
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFWOUT-4	CS137	GAM20	1.71E-01	5.5E+01		7.2E-02	pCi/g	07-14-98	07-09-98	6.30E+02	gm	SOIL G			05-01	G9389-0-75211
650LFWOUT-4	K 40	GAM20	1.75E+00	6.7E+01		9.7E-01	pCi/g	07-14-98	07-09-98	6.30E+02	gm	SOIL G			05-01	G9389-0-75211
650LFWOUT-4	RA226	GAM20	4.64E-01	4.2E+01		1.8E-01	pCi/g	07-14-98	07-09-98	6.30E+02	gm	SOIL G			05-01	G9389-0-75211
650LFWOUT-4	TH228	GAM20	4.11E-01	3.7E+01		1.5E-01	pCi/g	07-14-98	07-09-98	6.30E+02	gm	SOIL G			05-01	G9389-0-75211
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-14-98	07-01-95	1.00E+00	gm	QUAL			05-01	Q0539-0-00247
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.5E+01	pCi	07-14-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00247
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	7.9E+00	pCi	07-14-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00247
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	8.8E+00	pCi	07-14-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00247
QA SP:NAS-A0271	AM241	GAM20	1.80E+05	8.8E+00		3.2E+02	pCi	07-14-98	04-01-92	1.00E+00	sm	QUAL		111.3	05-01	Q0534-3-14856
QA SP:NAS-A0271	CO60	GAM20	3.02E+05	8.5E+00		1.3E+02	pCi	07-14-98	04-01-92	1.00E+00	sm	QUAL		101.3	05-01	Q0534-3-14856

Comment:

Data for one sample received on 7/9/98. Gross alpha/beta and plutonium analyses were performed on a small sample aliquot. The data may not represent the sample as a whole.

Prepared by: [Signature] Date: 8-6-98

Approved by: [Signature] Date: 8/11/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY

P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B597
Batch: 0835
Program: 117

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:NAS-A0271	CS137	GAM20	2.06E+05	8.1E+00		8.1E+01	pCi	07-14-98	04-01-92	1.00E+00	sm	QUAL		101.6	05-01	Q0534-3-14856

Comment:

Data for one sample received on 7/9/98. Gross alpha/beta and plutonium analyses were performed on a small sample aliquot. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 3

Reported to: Remediation Projects
Building 650 Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B597
Batch: M614
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFWOUT-4	Gross Alpha	Gross A	6.45E+00	4.3E+01		3.7E+00	pCi/g	08-01-98	07-09-98	4.90E-01	gm	SOIL G			14-01	G9389-0-75210
QA REA	Gross Alpha	Gross A	-6.59E-02	3.5E+02	U	4.5E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.84E+00	1.5E+01		4.5E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		112.1	14-01	G9314-1-06789
650LFWOUT-4	Gross Beta	Gross B	3.57E+00	4.0E+01		2.3E+00	pCi/g	08-01-98	07-09-98	4.90E-01	gm	SOIL G			14-01	G9389-0-75210
QA REA	Gross Beta	Gross B	9.72E-02	5.9E+02	U	9.7E-01	pCi	07-30-98	07-01-98	1.00E+00	sm	QUAL			14-01	G9314-0-06788
QA SP:GROSSAB 05	Gross Beta	Gross B	4.93E+00	1.4E+01		9.7E-01	pCi	07-30-98	01-06-98	1.00E+00	sm	QUAL		94.2	14-01	G9314-1-06789

Comment:

Data for one sample received on 7/9/98. Gross alpha/beta and plutonium analyses were performed on a small sample aliquot.
The data may not represent the sample as a whole.

Prepared by: [Signature] Date: 8-6-98

Approved by: [Signature] Date: 8/10/98

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
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Page 4

Reported to: Remediation Projects
Building 650 Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B597
Batch: M615
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFWOUT-4	PU239	Pu	4.47E-01	2.2E+01		3.7E-02	pCi/g	07-22-98	07-09-98	5.60E-01	gm	SOIL G	55.6		30-26	G9389-0-75212
650LFWOUT-4	PU238	Pu	2.49E-02	8.9E+01	U	2.5E-02	pCi/g	07-22-98	07-09-98	5.60E-01	gm	SOIL G	55.6		30-26	G9389-0-75212
QA REA	PU239	Pu	1.23E-03	5.5E+02	U	1.6E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314
QA REA	PU238	Pu	6.24E-04	3.5E+02	U	1.1E-02	pCi	07-22-98	07-01-98	1.00E+00	sm	QUAL	71.0		30-04	G9315-0-06314
QA SP:PU.25 01	PU239	Pu	7.75E-01	1.3E+01		1.5E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3	90.6	30-05	G9315-1-06315
QA SP:PU.25 01	PU238	Pu	1.19E-03	3.5E+02	U	1.0E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	76.3		30-05	G9315-1-06315

Comment:

Data for one sample received on 7/9/98. Gross alpha/beta and plutonium analyses were performed on a small sample aliquot.
The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

PROJECT/CLIENT INFORMATION				REPORT INFORMATION				SAMPLE INFORMATION						
Project: <u>Bld 650 Leachfield</u> BN Org#: <u>2150</u>				Send Report to: <u>Jerry Bonn</u>				Sampling Site: <u>Bld 650 Leachfield</u>						
Charge No.: <u>64U-6RDE</u>		ASL Prog.:		Phone: <u>5-7341</u>		Fax: <u>5-7761</u>		M/S: <u>NIS 306</u>		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.				
Project Manager: <u>Steve Nacht / Jerry Bonn</u>				Turnaround: ☐ Standard - 30 days Non-rad, 60 Days Rad, Other: <u>9/9/98 (RAD)</u>										
Phone:		Fax:		M/S:		Final report format: ☒ Standard ☐ NIS-WAC ☐ Other: <u>None</u>								
LAB USE ONLY				ANALYSES & METHOD				SAMPLE RECEIPT INFORMATION						
Rad SGD: <u>B597</u> Non-Rad SGD:				<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Total Vol (EPA 821-D)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">20-min gamma (L-EIO, 602 PL)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Cross alpha/beta (L-EIO, 601 PL)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Isotop. Pu (L-EIO, 602 PL)</div> </div>				Are all sample containers received intact ☐ Yes ☐ No Comments: _____						
Rad Packet: <u>G9389</u> Non-Rad Packet:								Do the labels agree with this form? ☐ Yes ☐ No Comments: _____						
Client Services Representative:								Was a Material Clearance Tag submitted? ☐ Yes ☐ No Comments: _____						
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: _____														
ITEM	ID / DESCRIPTION	SAMPLING		MATRIX										
		DATE	TIME											
0	<u>650LFUOUT-4</u>	<u>7/19/98</u>	<u>0922</u>	<u>Soil</u>	☒	☒	☒	☒						
1														
2														
3														
4														
5														
6														
7														
8														
9														
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.)				
<u>Shannon M. Payson - DePue</u>		<u>7/19/98 / 1502</u>		<u>R. P. Elise</u>										
						Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st tier Subcontractor Rep)				
						Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Received (2nd tier Subcontractor Rep)				

DATE: 7-9-96 No. A005909

Bechtel Nevada

Radiological Control Department- Ramatrol

Material Clearance

MONITOR: M. C. C. C. C.
ISSUING ORGANIZATION: B. N. I. I. I.
REQUESTING ORGANIZATION: K. U.
SURVEY LOCATION: A-23
FROM: 723 B. D. G. 450 104-1-1-1
TO: A-23 L. A. B.

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

INITIAL

DESCRIPTION:

Lea Cate Sample

REMARKS: *GAO 7-16-98*

**THIS TAG EXPIRES 7 DAYS FROM
ISSUE DATE**

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Burbank

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

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

ATTN: Ted Redding

PROJECT NAME: V469
PROJECT NUMBER: 17777

NEL ORDER ID: L9807154

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 7/16/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

Some results have been flagged as follows:

- Jm - This concentration should be considered an estimate due to probable matrix effects.
- Js - Estimated concentration due to probable matrix effects. Sample QC outside acceptance criteria in duplicate analyses.

Stan Van Wagenen
Laboratory Manager

7/23/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Arizona	AZ0520	AZ0518	AZ0583
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: 650 LFWIN-1
DATE SAMPLED: 7/13/98
NEL SAMPLE ID: L9807154-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/21/98
ANALYZED: 7/21/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	200	20 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	66	20 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	5	5 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	5	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	85	70 - 130
Dibromofluoromethane	99	70 - 130
Toluene-d8	99	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: 650 LFWIN-2
DATE SAMPLED: 7/13/98
NEL SAMPLE ID: L9807154-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/21/98
ANALYZED: 7/21/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	63	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	61	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	6	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	80	70 - 130
Dibromofluoromethane	99	70 - 130
Toluene-d8	100	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: 650 LFWIN-3
DATE SAMPLED: 7/13/98
NEL SAMPLE ID: L9807154-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/21/98
ANALYZED: 7/21/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	160	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND Js	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	120	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND Js	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND Js	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND Js	5. µg/kg			
Ethylbenzene	ND Js	5. µg/kg			
2-Hexanone	ND Js	20 µg/kg			
Methylene chloride (Dichloromethane)	11	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND Js	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND Js	5. µg/kg			
Tetrachloroethene (PCE)	ND Js	5. µg/kg			
Toluene	6 Js	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND Js	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND Js	5. µg/kg			
m,p-Xylene	ND Js	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	63	70 - 130
Dibromofluoromethane	104	70 - 130
Toluene-d8	101	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: 650 LFWIN-4
DATE SAMPLED: 7/13/98
NEL SAMPLE ID: L9807154-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid
DILUTION: 1

EXTRACTED: 7/21/98
ANALYZED: 7/21/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	84	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	33	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	7	5. µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	6	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	78	70 - 130
Dibromofluoromethane	101	70 - 130
Toluene-d8	99	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: TB071398
DATE SAMPLED: 7/13/98
NEL SAMPLE ID: L9807154-05

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 7/16/98
ANALYZED: 7/16/98

ANALYST: Scott

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L	1,1-Dichloropropene	ND	5. µg/L
Benzene	ND	5. µg/L	cis-1,3-Dichloropropene	ND	5. µg/L
Bromobenzene	ND	5. µg/L	trans-1,3-Dichloropropene	ND	5. µg/L
Bromochloromethane	ND	5. µg/L	Ethylbenzene	ND	5. µg/L
Bromodichloromethane	ND	5. µg/L	Hexachlorobutadiene	ND	5. µg/L
Bromoform	ND	5. µg/L	2-Hexanone	ND	20 µg/L
Bromomethane	ND	5. µg/L	Iodomethane	ND	5. µg/L
2-Butanone	ND	20 µg/L	Isopropylbenzene	ND	5. µg/L
n-Butylbenzene	ND	5. µg/L	p-Isopropyltoluene	ND	5. µg/L
sec-Butylbenzene	ND	5. µg/L	Methylene chloride (Dichloromethane)	ND	5. µg/L
tert-Butylbenzene	ND	5. µg/L	4-Methyl-2-pentanone	ND	20 µg/L
Carbon disulfide	ND	5. µg/L	MTBE	ND	5. µg/L
Carbon tetrachloride	ND	5. µg/L	Naphthalene	ND	5. µg/L
Chlorobenzene	ND	5. µg/L	n-Propylbenzene	ND	5. µg/L
Chloroethane	ND	5. µg/L	Styrene	ND	5. µg/L
Chloroform	ND	5. µg/L	1,1,1,2-Tetrachloroethane	ND	5. µg/L
Chloromethane	ND	5. µg/L	1,1,2,2-Tetrachloroethane	ND	5. µg/L
2-Chlorotoluene	ND	5. µg/L	Tetrachloroethene (PCE)	ND	5. µg/L
4-Chlorotoluene	ND	5. µg/L	Toluene	ND	5. µg/L
Dibromochloromethane	ND	5. µg/L	1,2,3-Trichlorobenzene	ND	5. µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/L	1,2,4-Trichlorobenzene	ND	5. µg/L
1,2-Dibromoethane (EDB)	ND	5. µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L
Dibromomethane	ND	5. µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/L	Trichloroethene (TCE)	ND	5. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/L	Trichlorofluoromethane (Freon 11)	ND	10. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/L	1,2,3-Trichloropropane	ND	5. µg/L
Dichlorodifluoromethane (Freon 12)	ND	5. µg/L	1,2,4-Trimethylbenzene	ND	5. µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L	1,3,5-Trimethylbenzene	ND	5. µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L	Vinyl chloride	ND	5. µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L	o-Xylene	ND	5. µg/L
cis-1,2-Dichloroethene	ND	5. µg/L	m,p-Xylene	ND	5. µg/L
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
1,3-Dichloropropane	ND	5. µg/L			
2,2-Dichloropropane	ND	10. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	86 - 115
Dibromofluoromethane	94	86 - 118
Toluene-d8	97	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: EB071398
DATE SAMPLED: 7/13/98
NEL SAMPLE ID: L9807154-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 7/16/98
ANALYZED: 7/16/98

ANALYST: Scott

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L	1,1-Dichloropropene	ND	5 µg/L
Benzene	ND	5 µg/L	cis-1,3-Dichloropropene	ND	5 µg/L
Bromobenzene	ND	5 µg/L	trans-1,3-Dichloropropene	ND	5 µg/L
Bromochloromethane	ND	5 µg/L	Ethylbenzene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L	Hexachlorobutadiene	ND	5 µg/L
Bromoform	ND	5 µg/L	2-Hexanone	ND	20 µg/L
Bromomethane	ND	5 µg/L	Iodomethane	ND	5 µg/L
2-Butanone	ND	20 µg/L	Isopropylbenzene	ND	5 µg/L
n-Butylbenzene	ND	5 µg/L	p-Isopropyltoluene	ND	5 µg/L
sec-Butylbenzene	ND	5 µg/L	Methylene chloride (Dichloromethane)	ND	5 µg/L
tert-Butylbenzene	ND	5 µg/L	4-Methyl-2-pentanone	ND	20 µg/L
Carbon disulfide	ND	5 µg/L	MTBE	ND	5 µg/L
Carbon tetrachloride	ND	5 µg/L	Naphthalene	ND	5 µg/L
Chlorobenzene	ND	5 µg/L	n-Propylbenzene	ND	5 µg/L
Chloroethane	ND	5 µg/L	Styrene	ND	5 µg/L
Chloroform	ND	5 µg/L	1,1,1,2-Tetrachloroethane	ND	5 µg/L
Chloromethane	ND	5 µg/L	1,1,2,2-Tetrachloroethane	ND	5 µg/L
2-Chlorotoluene	ND	5 µg/L	Tetrachloroethene (PCE)	ND	5 µg/L
1-Chlorotoluene	ND	5 µg/L	Toluene	ND	5 µg/L
Dibromochloromethane	ND	5 µg/L	1,2,3-Trichlorobenzene	ND	5 µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/L	1,2,4-Trichlorobenzene	ND	5 µg/L
1,2-Dibromoethane (EDB)	ND	5 µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L
Dibromomethane	ND	5 µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/L	Trichloroethene (TCE)	ND	5 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/L	Trichlorofluoromethane (Freon 11)	ND	10 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/L	1,2,3-Trichloropropane	ND	5 µg/L
Dichlorodifluoromethane (Freon 12)	ND	5 µg/L	1,2,4-Trimethylbenzene	ND	5 µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L	1,3,5-Trimethylbenzene	ND	5 µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L	Vinyl chloride	ND	5 µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L	o-Xylene	ND	5 µg/L
cis-1,2-Dichloroethene	ND	5 µg/L	m,p-Xylene	ND	5 µg/L
trans-1,2-Dichloroethene	ND	5 µg/L			
2,2-Dichloropropane	ND	5 µg/L			
1,3-Dichloropropane	ND	5 µg/L			
2,2-Dichloropropane	ND	10 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
Bromofluorobenzene	100	86 - 115
Dibromofluoromethane	98	86 - 118
Toluene-d8	98	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9807211S60B-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 7/21/98

ANALYZED: 7/21/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	97	70 - 130
Dibromofluoromethane	93	70 - 130
Toluene-d8	98	70 - 130

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V469
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9807161W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/16/98

ANALYZED: 7/16/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L	1,1-Dichloropropene	ND	5 µg/L
Benzene	ND	5 µg/L	cis-1,3-Dichloropropene	ND	5 µg/L
Bromobenzene	ND	5 µg/L	trans-1,3-Dichloropropene	ND	5 µg/L
Bromochloromethane	ND	5 µg/L	Ethylbenzene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L	Hexachlorobutadiene	ND	5 µg/L
Bromoform	ND	5 µg/L	2-Hexanone	ND	25 µg/L
Bromomethane	ND	5 µg/L	Iodomethane	ND	5 µg/L
2-Butanone	ND	25 µg/L	Isopropylbenzene	ND	5 µg/L
n-Butylbenzene	ND	5 µg/L	p-Isopropyltoluene	ND	5 µg/L
sec-Butylbenzene	ND	5 µg/L	Methylene chloride (Dichloromethane)	ND	5 µg/L
tert-Butylbenzene	ND	5 µg/L	4-Methyl-2-pentanone	ND	25 µg/L
Carbon disulfide	ND	5 µg/L	MTBE	ND	5 µg/L
Carbon tetrachloride	ND	5 µg/L	Naphthalene	ND	5 µg/L
Chlorobenzene	ND	5 µg/L	n-Propylbenzene	ND	5 µg/L
Chloroethane	ND	5 µg/L	Styrene	ND	5 µg/L
Chloroform	ND	5 µg/L	1,1,1,2-Tetrachloroethane	ND	5 µg/L
Chloromethane	ND	5 µg/L	1,1,2,2-Tetrachloroethane	ND	5 µg/L
2-Chlorotoluene	ND	5 µg/L	Tetrachloroethene (PCE)	ND	5 µg/L
4-Chlorotoluene	ND	5 µg/L	Toluene	ND	5 µg/L
Dibromochloromethane	ND	5 µg/L	1,2,3-Trichlorobenzene	ND	5 µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/L	1,2,4-Trichlorobenzene	ND	5 µg/L
1,2-Dibromoethane (EDB)	ND	5 µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L
Dibromomethane	ND	5 µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/L	Trichloroethene (TCE)	ND	5 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/L	Trichlorofluoromethane (Freon 11)	ND	10 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/L	1,2,3-Trichloropropane	ND	5 µg/L
Dichlorodifluoromethane (Freon 12)	ND	5 µg/L	1,2,4-Trimethylbenzene	ND	5 µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L	1,3,5-Trimethylbenzene	ND	5 µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L	Vinyl chloride	ND	5 µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L	o-Xylene	ND	5 µg/L
cis-1,2-Dichloroethene	ND	5 µg/L	m,p-Xylene	ND	5 µg/L
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
1,3-Dichloropropane	ND	5 µg/L			
2,2-Dichloropropane	ND	10 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	96	86 - 115
Dibromofluoromethane	96	86 - 118
Toluene-d8	99	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V469/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9807161W60-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/16/98

ANALYZED: 7/16/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	94	80 - 120
Chlorobenzene	97	80 - 120
1,1-Dichloroethene (1,1-DCE)	98	80 - 120
Toluene	96	80 - 120
Trichloroethene (TCE)	96	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	92	86 - 115
Dibromofluoromethane	98	86 - 118
Toluene-d8	98	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V469/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9807154-06-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/16/98

ANALYZED: 7/16/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	88	76 - 127
Chlorobenzene	98	75 - 130
1,1-Dichloroethene (1,1-DCE)	102	61 - 145
Toluene	96	76 - 125
Trichloroethene (TCE)	98	71 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
1-Bromofluorobenzene	97	86 - 115
Dibromofluoromethane	100	86 - 118
Toluene-d8	96	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V469/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9807154-06-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 7/16/98

ANALYZED: 7/16/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	82	76 - 127	7.1
Chlorobenzene	86	75 - 130	13.
1,1-Dichloroethene (1,1-DCE)	92	61 - 145	10.3
Toluene	84	76 - 125	13.3
Trichloroethene (TCE)	88	71 - 120	10.8

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	98	86 - 115
Dibromofluoromethane	100	86 - 118
Toluene-d8	97	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V469/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9807211S60B-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260A, Sept. 1994

MATRIX: Solid

EXTRACTED: 7/21/98

ANALYZED: 7/21/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	82	70 - 130
Chlorobenzene	88	70 - 130
1,1-Dichloroethene (1,1-DCE)	86	70 - 130
Toluene	89	70 - 130
Trichloroethene (TCE)	87	70 - 130

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
1-Bromofluorobenzene	100	70 - 130
Dibromofluoromethane	93	70 - 130
Toluene-d8	99	70 - 130

L9807154

Bechtel NevadaANALYTICAL SERVICES LABORATORY
SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT/CLIENT INFORMATION					REPORT INFORMATION				SAMPLE INFORMATION						
Project: <u>Bld. 650 Leachfield</u> BN Org: <u>2150</u>					Send Report to: <u>Jerry Bonn</u>				Sampling Site: <u>Bld 650 Leachfield</u>						
Charge No.: <u>640-6 RODE</u> ASL Prog: _____					Phone: <u>5-7341</u> Fax: <u>5-7761</u> MS: <u>NTS-306</u>				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.						
Project Manager: <u>Steve Nacht / Jerry Bonn</u>					Turnaround: ☒ Standard - 30 days Non-rad, 60 Days Rad, Other: _____ ☒ Rush Preliminary by: <u>7/27/98 (VOC)</u> Final by: _____										
Phone: _____ Fac: _____ NIS: _____					Final report format: ☒ Standard () NTS-WAC () Other: _____										
LAB USE ONLY					ANALYSES & METHOD				SAMPLE RECEIPT INFORMATION						
Rad SGD: <u>B600</u> Non-Rad SGD: <u>V469</u>					<u>Total VOC (EPA 8260)</u> <u>Leaching Scan (L-EIP. 602. PC)</u> <u>Isotop. Du (L-EIP. 601. PC)</u> <u>Gross Alpha/Beta (L-EIP. 602. PC)</u>				Are all sample containers received intact? ☒ Yes () No						
Rad Packet: <u>G4399 - Soil</u> <u>G4400 - Water</u> <u>G4401 - Swipe</u> Non-Rad Packet: <u>W1500</u>									Comments: _____						
Client Services Representative: _____									Do the labels agree with this form? ☒ Yes () No						
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: _____									Was a Material Clearance Tag submitted? ☒ Yes () No						
ITEM		ID / DESCRIPTION		SAMPLING DATE TIME		MATRIX		COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)							
01	0	650LFWIN-1		7/13/98	1023	Soil		X	X	X	X	All Rad From 500 ml nalgene MS/MSD ↓ Composite all swipes as one sample			
02	1	650LFWIN-2		7/13/98	1020	Soil		X	X	X	X				
03	2	650LFWIN-3		7/13/98	1002	Soil		X	X	X	X				
04	3	650LFWIN-4		7/13/98	1025	Soil		X	X	X	X				
05	4	TR 071398		7/13/98	0922	Water		X	X	X	X				
06	5	TR 071398		7/13/98	1015	Water		X	X	X	X				
	6	Wes + Inner Pipe 0-3.3'		7/13/98		Swipes		X				500m			
	7														
	8														
	9														
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.)	
<u>Theresa M. Kline - Bldg</u>				7/13/98 / 1441		<u>CACastorena</u>				<u>CACastorena</u>		7/14/98 / 1441		<u>BN Courier</u>	
										Relinquished (Courier & Tracking Info.)		DATE / TIME		Received (1st Subcontractor Rep)	
										<u>BN Courier</u>		7/14/98 / 1441		<u>BN Courier</u>	
										Relinquished (1st Subcontractor Rep)		DATE / TIME		Received (2nd Subcontractor Rep)	

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 sample

014-0732 (02/98)

Interoffice Memorandum

To: S. J. Nacht

Date: August 24, 1998

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

No.: 2150-AL-98-0407

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) B600**
Project No. 04001

Analytical Services Laboratory's (ASL) results have been reported to J. F. Bonn for the 20 minute gamma spectroscopy, gross alpha, gross beta, and plutonium analyses of four soils, one water, and one swipe sample collected on July 13, 1998. Also included was a statement of services which indicated the charge number associated with the SDG.

Analysis of the soil samples for volatile organic compounds was also requested. That analysis was entered under SDG V469. Preliminary data were faxed to the client on July 27, 1998. The final report will be submitted when the final data are received and reviewed.

SPECIFIC:

20 Minute Gamma Spectroscopy;

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

Gross Alpha & Gross Beta;

Method associated QA/QC criteria were met.

Soil samples are processed for these determinations using small aliquots. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

Plutonium;

Method associated QA/QC criteria were met.

Soil samples are processed for these determinations using small aliquots. Accordingly, the data reflect strictly the activity present in those aliquots and may not represent the samples as a whole.

2150-AL-98-0407
S. J. Nacht
Page 2 of 2
August 24, 1998

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

T. P. Van Sittert

TPV:pma
Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG B600, (results enc.) NTS273
ASL SDG V469, NTS273

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: 0570
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
EB071398	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-14-98	07-13-98	5.00E+02	ml	Water			08-01	G9400-0-75226
QA BKG WATER U08	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-14-98	06-01-97	5.00E+02	ml	QUAL			08-01	Q0538-0-00248
QA BKG WATER U08	AM241	GAM20	0.00E+00	0.0E+00	U	7.0E+02	pCi	07-14-98	06-01-97	1.00E+00	sm	QUAL			08-01	Q0538-0-00248
QA BKG WATER U08	CO60	GAM20	0.00E+00	0.0E+00	U	2.9E+01	pCi	07-14-98	06-01-97	1.00E+00	sm	QUAL			08-01	Q0538-0-00248
QA BKG WATER U08	CS137	GAM20	0.00E+00	0.0E+00	U	4.2E+01	pCi	07-14-98	06-01-97	1.00E+00	sm	QUAL			08-01	Q0538-0-00248
QA SP:QAW-8	AM241	GAM20	6.98E+04	1.0E+01		1.4E+03	pCi	07-14-98	08-01-90	1.00E+00	sm	QUAL		99.8	08-01	Q0586-3-14974
QA SP:QAW-8	CO60	GAM20	7.03E+04	8.5E+00		2.2E+02	pCi	07-14-98	08-01-90	1.00E+00	sm	QUAL		97.4	08-01	Q0586-3-14974
QA SP:QAW-8	CS137	GAM20	6.05E+04	7.9E+00		1.1E+02	pCi	07-14-98	08-01-90	1.00E+00	sm	QUAL		97.5	08-01	Q0586-3-14974

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by: Date: 8-6-98

Approved by: Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: 0835
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFWIN-1	K 40	GAM20	3.70E+00	4.3E+01		9.7E-01	pCi/g	07-14-98	07-13-98	6.16E+02	gm	SOIL G			05-01	G9399-0-75214
650LFWIN-1	RA226	GAM20	4.26E-01	4.4E+01		2.2E-01	pCi/g	07-14-98	07-13-98	6.16E+02	gm	SOIL G			05-01	G9399-0-75214
650LFWIN-1	TH228	GAM20	6.02E-01	3.1E+01		1.5E-01	pCi/g	07-14-98	07-13-98	6.16E+02	gm	SOIL G			05-01	G9399-0-75214
650LFWIN-2	CS137	GAM20	1.69E-01	5.7E+01		8.4E-02	pCi/g	07-14-98	07-13-98	6.77E+02	gm	SOIL G			05-01	G9399-1-75217
650LFWIN-2	K 40	GAM20	2.33E+00	5.4E+01		8.3E-01	pCi/g	07-14-98	07-13-98	6.77E+02	gm	SOIL G			05-01	G9399-1-75217
650LFWIN-2	RA226	GAM20	3.81E-01	4.6E+01		2.2E-01	pCi/g	07-14-98	07-13-98	6.77E+02	gm	SOIL G			05-01	G9399-1-75217
650LFWIN-2	TH228	GAM20	5.19E-01	3.3E+01		1.5E-01	pCi/g	07-14-98	07-13-98	6.77E+02	gm	SOIL G			05-01	G9399-1-75217
650LFWIN-2	TH232	GAM20	4.26E-01	7.1E+01		3.1E-01	pCi/g	07-14-98	07-13-98	6.77E+02	gm	SOIL G			05-01	G9399-1-75217
650LFWIN-3	K 40	GAM20	2.99E+00	4.8E+01		9.4E-01	pCi/g	07-14-98	07-13-98	7.14E+02	gm	SOIL G			05-01	G9399-2-75220
650LFWIN-3	RA226	GAM20	4.17E-01	4.3E+01		2.2E-01	pCi/g	07-14-98	07-13-98	7.14E+02	gm	SOIL G			05-01	G9399-2-75220

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 3

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: 0835
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650LFWIN-3	TH228	GAM20	4.65E-01	3.4E+01		1.9E-01	pCi/g	07-14-98	07-13-98	7.14E+02	gm	SOIL G			05-01	G9399-2-75220
650LFWIN-4	CS137	GAM20	2.23E-01	4.6E+01		7.9E-02	pCi/g	07-14-98	07-13-98	6.32E+02	gm	SOIL G			05-01	G9399-3-75223
650LFWIN-4	K 40	GAM20	4.90E+00	3.7E+01		9.7E-01	pCi/g	07-14-98	07-13-98	6.32E+02	gm	SOIL G			05-01	G9399-3-75223
650LFWIN-4	RA226	GAM20	4.24E-01	4.4E+01		2.2E-01	pCi/g	07-14-98	07-13-98	6.32E+02	gm	SOIL G			05-01	G9399-3-75223
650LFWIN-4	TH228	GAM20	5.41E-01	3.2E+01		1.5E-01	pCi/g	07-14-98	07-13-98	6.32E+02	gm	SOIL G			05-01	G9399-3-75223
650LFWIN-4	TH232	GAM20	3.56E-01	8.2E+01		2.4E-01	pCi/g	07-14-98	07-13-98	6.32E+02	gm	SOIL G			05-01	G9399-3-75223
QA BKG EMPTY BTL U05	No Nucl Det	GAM20	0.00E+00	0.0E+00	U	0.0E+00	NA	07-14-98	07-01-95	1.00E+00	gm	QUAL			05-01	Q0539-0-00247
QA BKG EMPTY BTL U05	AM241	GAM20	0.00E+00	0.0E+00	U	2.5E+01	pCi	07-14-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00247
QA BKG EMPTY BTL U05	CO60	GAM20	0.00E+00	0.0E+00	U	7.9E+00	pCi	07-14-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00247
QA BKG EMPTY BTL U05	CS137	GAM20	0.00E+00	0.0E+00	U	8.8E+00	pCi	07-14-98	07-01-95	1.00E+00	sm	QUAL			05-01	Q0539-0-00247

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by: [Signature] Date: 8-6-98

Approved by: [Signature] Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: 0835
Program: 117

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:NAS-A0271	AM241	GAM20	1.80E+05	8.8E+00		3.2E+02	pCi	07-14-98	04-01-92	1.00E+00	sm	QUAL		111.3	05-01	Q0534-3-14856
QA SP:NAS-A0271	CO60	GAM20	3.02E+05	8.5E+00		1.3E+02	pCi	07-14-98	04-01-92	1.00E+00	sm	QUAL		101.3	05-01	Q0534-3-14856
QA SP:NAS-A0271	CS137	GAM20	2.06E+05	8.1E+00		8.1E+01	pCi	07-14-98	04-01-92	1.00E+00	sm	QUAL		101.6	05-01	Q0534-3-14856

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
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Note: % Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 5

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: 0836
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
WEST INNER PIPE 0-33'	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	07-14-98	07-13-98	1.00E+00	sm	Surfac			05-01	G9401-0-75228
QA BKG GF/A U05	No peaks	GAMPF	0.00E+00	0.0E+00		0.0E+00	NA	07-14-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00249
QA BKG GF/A U05	AM241	GAMPF	0.00E+00	0.0E+00	U	3.6E+01	pCi	07-14-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00249
QA BKG GF/A U05	CO60	GAMPF	0.00E+00	0.0E+00	U	1.2E+01	pCi	07-14-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00249
QA BKG GF/A U05	CS137	GAMPF	0.00E+00	0.0E+00	U	9.4E+00	pCi	07-14-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00249
QA SP:NAS-A1459	AM241	GAMPF	3.14E+04	8.4E+00		3.9E+01	pCi	07-14-98	08-01-93	1.00E+00	sm	QUAL		116.4	05-01	Q0590-5-14977
QA SP:NAS-A1459	CO60	GAMPF	3.40E+04	8.7E+00		2.3E+01	pCi	07-14-98	08-01-93	1.00E+00	sm	QUAL		100.7	05-01	Q0590-5-14977
QA SP:NAS-A1459	CS137	GAMPF	3.41E+04	8.0E+00		1.2E+01	pCi	07-14-98	08-01-93	1.00E+00	sm	QUAL		100.8	05-01	Q0590-5-14977

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots.
The data may not represent the sample as a whole.

Prepared by:

Date:

8-6-98

Approved by:

Date:

8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
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P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: M631
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
EBO71398	Gross Alpha	Gross A	3.43E-01	1.6E+02	U	9.2E-01	pCi/L	07-28-98	07-13-98	5.00E+02	ml	Water			14-01	G9400-0-75225
QA REA	Gross Alpha	Gross A	4.94E-02	4.9E+02	U	4.3E-01	pCi	07-27-98	07-13-98	1.00E+00	sm	QUAL			14-01	G9394-0-07598
QA SP:GROSSAB 05	Gross Alpha	Gross A	2.78E+00	1.8E+01		4.4E-01	pCi	07-27-98	01-06-98	1.00E+00	sm	QUAL		81.3	14-01	G9394-1-07599
EBO71398	Gross Beta	Gross B	4.42E-01	2.6E+02	U	1.9E+00	pCi/L	07-28-98	07-13-98	5.00E+02	ml	Water			14-01	G9400-0-75225
QA REA	Gross Beta	Gross B	8.91E-02	6.5E+02	U	9.7E-01	pCi	07-27-98	07-13-98	1.00E+00	sm	QUAL			14-01	G9394-0-07598
QA SP:GROSSAB 05	Gross Beta	Gross B	4.95E+00	1.4E+01		9.6E-01	pCi	07-27-98	01-06-98	1.00E+00	sm	QUAL		94.7	14-01	G9394-1-07599

Comment:

Data for samples received on 7/13/98. Gross alpha/beta and plutonium analyses of soil samples were performed on small aliquots. Data may not represent entire samples.

Prepared by:

Date:

8-6-98

Approved by:

Date:

8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
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P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: M632
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
EB071398	PU239	Pu	7.25E-04	1.4E+03	UX _{UX}	2.8E-02	pCi/L	07-21-98	07-13-98	1.00E+03	ml	Water	36.8		30-21	G9400-0-75227
EB071398	PU238	Pu	-2.61E-03	2.4E+02	UX _{UX}	2.6E-02	pCi/L	07-21-98	07-13-98	1.00E+03	ml	Water	36.8		30-21	G9400-0-75227
QA REA	PU239	Pu	-1.68E-03	2.2E+02	U	1.5E-02	pCi	07-21-98	07-13-98	1.00E+00	sm	QUAL	70.2		30-06	G9395-0-06316
QA REA	PU238	Pu	6.64E-04	8.1E+02	U	1.4E-02	pCi	07-21-98	07-13-98	1.00E+00	sm	QUAL	70.2		30-06	G9395-0-06316
QA SP:PU.25 01	PU239	Pu	8.85E-01	1.4E+01		1.8E-02	pCi	07-21-98	10-22-92	1.00E+00	sm	QUAL	56.0	103.4	30-07	G9395-1-06317
QA SP:PU.25 01	PU238	Pu	-1.66E-03	2.4E+02	U	1.7E-02	pCi	07-21-98	10-22-92	1.00E+00	sm	QUAL	56.0		30-07	G9395-1-06317

Comment:

Data for samples received on 7/13/98. Gross alpha/beta and plutonium analyses of soil samples were performed on small aliquots. Data may not represent entire samples.

Prepared by: [Signature]

Date: 8-6-98

Approved by: UX

Date: 8/10/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
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Note: % Error is the 2.0 Sigma Error

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Page 8

Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: M636
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
65OLFWIN-1	Gross Alpha	Gross A	2.00E+00	9.6E+01	U	3.1E+00	pCi/g	07-22-98	07-13-98	5.70E-01	gm	SOIL G			14-01	G9399-0-75213
65OLFWIN-2	Gross Alpha	Gross A	1.71E+00	1.2E+02	U	3.5E+00	pCi/g	07-22-98	07-13-98	5.10E-01	gm	SOIL G			14-01	G9399-1-75216
65OLFWIN-3	Gross Alpha	Gross A	2.33E+00	9.6E+01	U	3.6E+00	pCi/g	07-22-98	07-13-98	4.90E-01	gm	SOIL G			14-01	G9399-2-75219
65OLFWIN-4	Gross Alpha	Gross A	4.95E+00	4.6E+01		3.1E+00	pCi/g	07-22-98	07-13-98	5.70E-01	gm	SOIL G			14-01	G9399-3-75222
QA REA	Gross Alpha	Gross A	-1.01E-01	2.3E+02	U	4.5E-01	pCi	07-21-98	07-14-98	1.00E+00	sm	QUAL			14-01	G9402-0-06792
QA SP:GROSSAB 05	Gross Alpha	Gross A	3.18E+00	1.6E+01		4.6E-01	pCi	07-21-98	01-06-98	1.00E+00	sm	QUAL		92.7	14-01	G9402-1-06793
65OLFWIN-1	Gross Beta	Gross B	2.90E+00	4.3E+01		2.0E+00	pCi/g	07-22-98	07-13-98	5.70E-01	gm	SOIL G			14-01	G9399-0-75213
65OLFWIN-2	Gross Beta	Gross B	2.83E+00	4.8E+01		2.2E+00	pCi/g	07-22-98	07-13-98	5.10E-01	gm	SOIL G			14-01	G9399-1-75216
65OLFWIN-3	Gross Beta	Gross B	2.33E+00	6.1E+01		2.3E+00	pCi/g	07-22-98	07-13-98	4.90E-01	gm	SOIL G			14-01	G9399-2-75219
65OLFWIN-4	Gross Beta	Gross B	3.76E+00	3.4E+01		2.0E+00	pCi/g	07-22-98	07-13-98	5.70E-01	gm	SOIL G			14-01	G9399-3-75222

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date: 8/10/98

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: M636
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA REA	Gross Beta	Gross B	-1.63E-02	3.5E+03	U	9.7E-01	pCi	07-21-98	07-14-98	1.00E+00	sm	QUAL			14-01	G9402-0-06792
QA SP:GROSSAB 05	Gross Beta	Gross B	5.02E+00	1.4E+01		9.7E-01	pCi	07-21-98	01-06-98	1.00E+00	sm	QUAL		96.0	14-01	G9402-1-06793

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date: 8-6-98

Approved by:

Date:

8/10/98

Qualification Flags:

E = Estimated Quantity
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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: M637
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
65OLFWIN-1	PU239	Pu	1.08E-01	4.4E+01		3.8E-02	pCi/g	07-22-98	07-13-98	4.80E-01	gm	SOIL G	64.3		30-27	G9399-0-75215
65OLFWIN-1	PU238	Pu	3.04E-03	3.5E+02	U	2.6E-02	pCi/g	07-22-98	07-13-98	4.80E-01	gm	SOIL G	64.3		30-27	G9399-0-75215
65OLFWIN-2	PU239	Pu	6.47E-02	5.5E+01		3.5E-02	pCi/g	07-22-98	07-13-98	5.20E-01	gm	SOIL G	67.7		30-31	G9399-1-75218
65OLFWIN-2	PU238	Pu	-1.38E-03	3.5E+02	U	2.3E-02	pCi/g	07-22-98	07-13-98	5.20E-01	gm	SOIL G	67.7		30-31	G9399-1-75218
65OLFWIN-3	PU239	Pu	9.63E-03	1.7E+02	U	3.0E-02	pCi/g	07-22-98	07-13-98	4.70E-01	gm	SOIL G	82.8		30-32	G9399-2-75221
65OLFWIN-3	PU238	Pu	-1.21E-03	3.5E+02	U	2.1E-02	pCi/g	07-22-98	07-13-98	4.70E-01	gm	SOIL G	82.8		30-32	G9399-2-75221
65OLFWIN-4	PU239	Pu	9.62E-03	1.7E+02	U	3.0E-02	pCi/g	07-22-98	07-13-98	5.50E-01	gm	SOIL G	70.8		30-33	G9399-3-75224
65OLFWIN-4	PU238	Pu	-1.21E-03	3.5E+02	U	2.1E-02	pCi/g	07-22-98	07-13-98	5.50E-01	gm	SOIL G	70.8		30-33	G9399-3-75224
QA REA	PU239	Pu	7.07E-03	1.4E+02	U	1.6E-02	pCi	07-22-98	07-14-98	1.00E+00	sm	QUAL	72.9		30-19	G9403-0-06323
QA REA	PU238	Pu	1.29E-03	3.5E+02	U	1.1E-02	pCi	07-22-98	07-14-98	1.00E+00	sm	QUAL	72.9		30-19	G9403-0-06323

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date:

8-6-98

Approved by:

Date:

8/10/98

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Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Building 650 Leachfield Closure
J. F. Bonn, M/S NTS306

Report Date: 6-AUG-98
Sample Delivery Group: B600
Batch: M637
Program: 888

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:PU.25 01	PU239	Pu	8.04E-01	1.3E+01		1.6E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	78.1	94.0	30-20	G9403-1-06324
QA SP:PU.25 01	PU238	Pu	-6.22E-04	3.5E+02	U	1.1E-02	pCi	07-22-98	10-22-92	1.00E+00	sm	QUAL	78.1		30-20	G9403-1-06324

Comment:

Data for samples received 7/13/98. Gross alpha/beta and plutonium analyses were performed on small sample aliquots. The data may not represent the sample as a whole.

Prepared by:

Date:

8-6-98

Approved by:

Date:

8/10/98

Qualification Flags:

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H = High Recovery for Sample
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Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

PROJECT/CLIENT INFORMATION		REPORT INFORMATION			SAMPLE INFORMATION	
Project: <u>Bld. 650 Larchfield</u>	BN Org#: <u>2150</u>	Send Report to: <u>Terry Rynn</u>			Sampling Site: <u>Bld 650 Larchfield</u>	
Charge No.: <u>C4U-680DE</u>	ASL Prog.:	Phone: <u>5-7341</u>	Fax: <u>5-7761</u>	M/S: <u>NIS-306</u>	The samples submitted contain (check): () Hazardous () Radioactive (X) Unknown	
Project Manager: <u>Steve Nault / Terry Rynn</u>		Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: (X) Rush Preliminary by: <u>7/27/98 (VUC)</u>	Final by: _____		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.	
Phone: _____	Fax: _____	M/S: _____	Final report format: (X) Standard () NTS-WAC () Other: _____			

LAB USE ONLY		ANALYSES & METHOD								SAMPLE RECEIPT INFORMATION		
Rad SGD: <u>B600</u>	Non-Rad SGD: <u>V469</u>	<u>Total Vol (EPA 8260)</u> <u>Gamma Scan (L-EIO.602.92)</u> <u>Isotop. Pu (L-EIO.601.92)</u> <u>Alpha/Beta (L-EIO.601.92)</u>									Are all sample containers received intact (X) Yes () No	Comments: _____
Rad Packet: <u>G9399-Soil</u>	Non-Rad Packet: <u>W1500</u>										Do the labels agree with this form? (X) Yes () No	Comments: _____
<u>G9400-Water</u>											Was a Material Clearance Tag submitted? (X) Yes () No	Comments: _____
<u>G9401-Swipes</u>												
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: _____										

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX									COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
		DATE	TIME										
0	650LFWIN-1	7/13/98	1033	Soil	X	X	X	X					All Rad from 500 ml nalgene
1	650LFWIN-2	7/13/98	1020	Soil	X	X	X	X					MS/MSD
2	650LFWIN-3	7/13/98	1002	Soil	X	X	X	X					
3	650LFWIN-4	7/13/98	1025	Soil	X	X	X	X					
4	TR 071398	7/13/98	0922	Water	X	X	X	X					
5	ER 071398	7/13/98	1015	Water	X	X	X	X					
6	WES 1 Inner Pipe 0-33'	7/13/98		Swipes	X								Composite all swipes as one sample
7													
8													
9													

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.)
<u>[Signature]</u>	<u>7/13/98/144</u>	<u>[Signature]</u>			
			Relinquished (Courier & Tracking Info.)	DATE / TIME	Received (1st tier Subcontractor Rep)
			Relinquished (1st tier Subcontractor Rep)	DATE / TIME	Received (2nd tier Subcontractor Rep)

Interoffice Memorandum

To: S. J. Nacht

Date: October 13, 1998

From: L. W. Hatcher
Analytical Services Laboratory, 295-7109

No.: 2150-AL-99-0005

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V476**
Project No. 04001

Nevada Environmental Laboratory's results for the volatile organics analyses of twenty-two samples and one trip blank collected on July 29 and 30, 1998 are included with a copy of this memorandum to J. F. Bonn. A copy of the preliminary data was given to the client on August 18, 1998. Included is a statement of services which identifies the charge number associated with the SDG.

SPECIFIC:

Volatile Organics;

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

Several "Extracted" and "Analyzed" dates reported were incorrect in comparison to the raw data printouts. Corrections were made to the report forms and initialed.

The laboratory performed matrix spike / matrix spike duplicate (MS/MSD) analyses on sample 650LFWIN-2V11 as requested, and additionally on 650DB-NSW9. Analysis of the MSD for -NSW9 exceeded the 12 hour analysis run specified in the method by 29 minutes. The data are valid considering the sample was an MSD and resulting recoveries were comparable to the MS. Recoveries for several compounds were outside the upper control limits in both the MS and MSD, however, the relative percent differences for all compounds were acceptable.

Internal standard and surrogate recoveries were outside control limits for several samples. In all cases, reanalysis resulted in similar recoveries. Data flagged with "Js" are due to internal standard (IS) or surrogate (SURR) outliers while those flagged with "Jm" reflect unacceptable spike recovery in the associated MS or MSD. Flags due to IS and SURR outliers are given precedence over MS/MSD flags.

2150-AL-99-0005
S. J. Nacht
Page 2 of 2
October 13, 1998

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

L. W. Hatcher

LWH:pma
Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV080
J. F. Bonn, (results enc.) NTS306
ASL SDG V476, (results enc.) NTS273

LABORATORY

CASE

NARRATIVE

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

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: V476
PROJECT NUMBER: 17777

NEL ORDER ID: L9807315

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 7/31/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

Note: For target analytes Acetone, 2-Butanone, 2-Hexanone, and 4-Methyl-2-pentanone, a reporting limit of 20ug/L was reported. This concentration is below reporting limit, but above MDL. Any result reported at 20-25ug/L for these compounds, are estimates.

Some results have been flagged as follows:

- Jm - This concentration should be considered an estimate due to probable matrix effects.
Js - Estimated concentration due to probable matrix effects. Sample QC outside acceptance criteria in duplicate analyses.

Stan Van Wagenen
Laboratory Manager

08/18/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>		<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Arizona	AZ0520	AZ0518	AZ0583	Idaho	Certified	Certified	
California	1707	2002	1192	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified	Certified	Nevada	NV033	NV052	CA084
				Washington			Certified

VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: TB072998
DATE SAMPLED: 7/29/98
NEL SAMPLE ID: L9807315-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 8/5/98
ANALYZED: 8/5/98

ANALYST: Suzanne

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	20 µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Trichlorofluoromethane (Freon 11)	ND	15. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	91	86 - 115
Dibromofluoromethane	108	86 - 118
Toluene-d8	104	88 - 110

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

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOU01V10
DATE SAMPLED: 7/29/98
NEL SAMPLE ID: L9807315-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/5/98
ANALYZED: 8/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	96	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	102	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOU-INSW10
DATE SAMPLED: 7/29/98
NEL SAMPLE ID: L9807315-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/5/98
ANALYZED: 8/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	97	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOU-TSSW10
DATE SAMPLED: 7/29/98
NEL SAMPLE ID: L9807315-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	104	80 - 120
Toluene-d8	105	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOU-3V9.5
DATE SAMPLED: 7/29/98
NEL SAMPLE ID: L9807315-05

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/5/98
ANALYZED: 8/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	93	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	102	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOU-3ESW9.5
DATE SAMPLED: 7/29/98
NEL SAMPLE ID: L9807315-06

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid EXTRACTED: 8/6/98 ANALYST: Scott
DILUTION: 1 ANALYZED: 8/6/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	89	74 - 121
Dibromofluoromethane	102	80 - 120
Toluene-d8	104	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOU-3WSW9.5
DATE SAMPLED: 7/29/98
NEL SAMPLE ID: L9807315-07

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/5/98
ANALYZED: 8/5/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	91	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	102	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWOUT-2V10
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-08

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/2/98

ANALYST: Scott

ANALYZED: 8/8/98 R 9/1/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND Js	5. µg/kg			
Bromomethane	ND Js	5. µg/kg			
2-Butanone	ND Js	20 µg/kg			
Carbon disulfide	ND Js	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND Js	5. µg/kg			
Chloroethane	ND Js	5. µg/kg			
Chloroform	ND Js	5. µg/kg			
Chloromethane	ND Js	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND Js	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND Js	5. µg/kg			
cis-1,2-Dichloroethene	ND Js	5. µg/kg			
trans-1,2-Dichloroethene	ND Js	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND Js	5. µg/kg			
2-Hexanone	ND Js	20 µg/kg			
4-Methyl-2-pentanone	ND Js	20 µg/kg			
Styrene	ND Js	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND Js	5. µg/kg			
Tetrachloroethene (PCE)	ND Js	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND Js	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND Js	15. µg/kg			
Vinyl chloride	ND Js	6. µg/kg			
o-Xylene	ND Js	5. µg/kg			
m,p-Xylene	ND Js	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	68	74 - 121
Dibromofluoromethane	112	80 - 120
Toluene-d8	107	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWOUT-2ESW10
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-09

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/8/98
ANALYZED: 8/8/98 *TR 7/10/98*

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	Js 20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	Js 5. µg/kg			
Bromomethane	ND	Js 5. µg/kg			
2-Butanone	ND	Js 20 µg/kg			
Carbon disulfide	ND	Js 5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	Js 5. µg/kg			
Chloroethane	ND	Js 5. µg/kg			
Chloroform	ND	Js 5. µg/kg			
Chloromethane	ND	Js 5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	Js 5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	Js 5. µg/kg			
cis-1,2-Dichloroethene	ND	Js 5. µg/kg			
trans-1,2-Dichloroethene	ND	Js 5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	Js 5. µg/kg			
2-Hexanone	ND	Js 20 µg/kg			
4-Methyl-2-pentanone	ND	Js 20 µg/kg			
Styrene	ND	Js 5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	Js 5. µg/kg			
Tetrachloroethene (PCE)	ND	Js 5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	Js 15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	Js 15. µg/kg			
Vinyl chloride	ND	Js 6. µg/kg			
o-Xylene	ND	Js 5. µg/kg			
m,p-Xylene	ND	Js 5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	64	74 - 121
Dibromofluoromethane	112	80 - 120
Toluene-d8	109	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWOUT-2WSW10
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-10

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid EXTRACTED: 8/2/98 ANALYST: Scott
DILUTION: 1 ANALYZED: 8/3/98 *~ 1/10/98*

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	Js	20 µg/kg		
Benzene	ND		5. µg/kg		
Bromodichloromethane	ND		5. µg/kg		
Bromoform	ND	Js	5. µg/kg		
Bromomethane	ND	Js	5. µg/kg		
2-Butanone	ND	Js	20 µg/kg		
Carbon disulfide	ND	Js	5. µg/kg		
Carbon tetrachloride	ND		5. µg/kg		
Chlorobenzene	ND	Js	5. µg/kg		
Chloroethane	ND	Js	5. µg/kg		
Chloroform	ND	Js	5. µg/kg		
Chloromethane	ND	Js	5. µg/kg		
Dibromochloromethane	ND		5. µg/kg		
1,1-Dichloroethane (1,1-DCA)	ND	Js	5. µg/kg		
1,2-Dichloroethane (1,2-DCA)	ND		5. µg/kg		
1,1-Dichloroethene (1,1-DCE)	ND	Js	5. µg/kg		
cis-1,2-Dichloroethene	ND	Js	5. µg/kg		
trans-1,2-Dichloroethene	ND	Js	5. µg/kg		
1,2-Dichloropropane	ND		5. µg/kg		
cis-1,3-Dichloropropene	ND		5. µg/kg		
trans-1,3-Dichloropropene	ND		5. µg/kg		
Ethylbenzene	ND	Js	5. µg/kg		
2-Hexanone	ND	Js	20 µg/kg		
4-Methyl-2-pentanone	ND	Js	20 µg/kg		
Styrene	ND	Js	5. µg/kg		
1,1,2,2-Tetrachloroethane	ND	Js	5. µg/kg		
Tetrachloroethene (PCE)	ND	Js	5. µg/kg		
Toluene	ND		5. µg/kg		
1,1,1-Trichloroethane (1,1,1-TCA)	ND	Js	15. µg/kg		
1,1,2-Trichloroethane (1,1,2-TCA)	ND		5. µg/kg		
Trichloroethene (TCE)	ND		5. µg/kg		
Trichlorofluoromethane (Freon 11)	ND	Js	15. µg/kg		
Vinyl chloride	ND	Js	6. µg/kg		
o-Xylene	ND	Js	5. µg/kg		
m,p-Xylene	ND	Js	5. µg/kg		

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	70	74 - 121
Dibromofluoromethane	109	80 - 120
Toluene-d8	109	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650DB-NV9
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-11

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/5/98
ANALYZED: 8/5/98 *2 11/10/98*

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	Js 20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	Js 5. µg/kg			
Bromomethane	ND	Js 5. µg/kg			
2-Butanone	ND	Js 20 µg/kg			
Carbon disulfide	ND	Js 5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	Js 5. µg/kg			
Chloroethane	ND	Js 5. µg/kg			
Chloroform	ND	Js 5. µg/kg			
Chloromethane	ND	Js 5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	Js 5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	Js 5. µg/kg			
cis-1,2-Dichloroethene	ND	Js 5. µg/kg			
trans-1,2-Dichloroethene	ND	Js 5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	Js 5. µg/kg			
2-Hexanone	ND	Js 20 µg/kg			
4-Methyl-2-pentanone	ND	Js 20 µg/kg			
Styrene	ND	Js 5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	Js 5. µg/kg			
Tetrachloroethene (PCE)	ND	Js 5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	Js 15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	Js 15. µg/kg			
Vinyl chloride	ND	Js 6. µg/kg			
o-Xylene	ND	Js 5. µg/kg			
m,p-Xylene	ND	Js 5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	73	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	106	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650DB-NSW9
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-12

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/8/98
ANALYZED: 8/8/98 *TC 7/10/98*

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	Js	20 µg/kg		
Benzene	ND	Js	5. µg/kg		
Bromodichloromethane	ND		5. µg/kg		
Bromoform	ND	Js	5. µg/kg		
Bromomethane	ND	Js	5. µg/kg		
2-Butanone	ND	Js	20 µg/kg		
Carbon disulfide	ND	Js	5. µg/kg		
Carbon tetrachloride	ND		5. µg/kg		
Chlorobenzene	ND	Js	5. µg/kg		
Chloroethane	ND	Js	5. µg/kg		
Chloroform	ND	Js	5. µg/kg		
Chloromethane	ND	Js	5. µg/kg		
Dibromochloromethane	ND		5. µg/kg		
1,1-Dichloroethane (1,1-DCA)	ND	Js	5. µg/kg		
1,2-Dichloroethane (1,2-DCA)	ND		5. µg/kg		
1,1-Dichloroethene (1,1-DCE)	ND	Js	5. µg/kg		
cis-1,2-Dichloroethene	ND	Js	5. µg/kg		
trans-1,2-Dichloroethene	ND	Js	5. µg/kg		
1,2-Dichloropropane	ND		5. µg/kg		
cis-1,3-Dichloropropene	ND	Js	5. µg/kg		
trans-1,3-Dichloropropene	ND	Js	5. µg/kg		
Ethylbenzene	ND	Js	5. µg/kg		
2-Hexanone	ND	Js	20 µg/kg		
4-Methyl-2-pentanone	ND	Js	20 µg/kg		
Styrene	ND	Js	5. µg/kg		
1,1,2,2-Tetrachloroethane	ND	Js	5. µg/kg		
Tetrachloroethene (PCE)	ND	Js	5. µg/kg		
Toluene	ND	Js	5. µg/kg		
1,1,1-Trichloroethane (1,1,1-TCA)	ND	Js	15. µg/kg		
1,1,2-Trichloroethane (1,1,2-TCA)	ND		5. µg/kg		
Trichloroethene (TCE)	ND	Js	5. µg/kg		
Trichlorofluoromethane (Freon 11)	ND	Js	15. µg/kg		
Vinyl chloride	ND	Js	6. µg/kg		
o-Xylene	ND	Js	5. µg/kg		
m,p-Xylene	ND	Js	5. µg/kg		

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	75	74 - 121
Dibromofluoromethane	86	80 - 120
Toluene-d8	107	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: EB73098
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-13

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 8/5/98
ANALYZED: 8/5/98

ANALYST: Suzanne

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	20 µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Trichlorofluoromethane (Freon 11)	ND	15. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	86 - 115
Dibromofluoromethane	108	86 - 118
Toluene-d8	98	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-1V10
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-14

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	84	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LPWIN-IESW10
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-15

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND Js	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND Js	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND Js	5. µg/kg			
Chloroform	ND Js	5. µg/kg			
Chloromethane	ND Js	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND Js	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND Js	5. µg/kg			
cis-1,2-Dichloroethene	ND Js	5. µg/kg			
trans-1,2-Dichloroethene	ND Js	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND Js	15. µg/kg			
Vinyl chloride	ND Js	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	102	80 - 120
Toluene-d8	106	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-1WSW10
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-16

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromedichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-2V11
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-17

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND Js	5. µg/kg			
2-Butanone	ND Js	20 µg/kg			
Carbon disulfide	ND Js	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND Jm	5. µg/kg			
Chloroethane	ND Js	5. µg/kg			
Chloroform	ND Js	5. µg/kg			
Chloromethane	ND Js	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND Js	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND Js	5. µg/kg			
cis-1,2-Dichloroethene	ND Js	5. µg/kg			
trans-1,2-Dichloroethene	ND Js	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND Jm	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND Js	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND Jm	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND Js	15. µg/kg			
Vinyl chloride	ND Js	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	83	74 - 121
Dibromofluoromethane	101	80 - 120
Toluene-d8	105	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-2ESW11
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-18

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND Js	5. µg/kg			
2-Butanone	ND Js	20 µg/kg			
Carbon disulfide	ND Js	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND Js	5. µg/kg			
Chloroform	ND Js	5. µg/kg			
Chloromethane	ND Js	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND Js	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND Js	5. µg/kg			
cis-1,2-Dichloroethene	ND Js	5. µg/kg			
trans-1,2-Dichloroethene	ND Js	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND Js	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND Js	15. µg/kg			
Vinyl chloride	ND Js	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	79	74 - 121
Dibromofluoromethane	106	80 - 120
Toluene-d8	104	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-2WSW11
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-19

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	86	74 - 121
Dibromofluoromethane	95	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-3V11
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-20

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/6/98 *TR 9/12/98*

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND Js	5. µg/kg			
2-Butanone	ND Js	20 µg/kg			
Carbon disulfide	ND Js	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND Js	5. µg/kg			
Chloroform	ND Js	5. µg/kg			
Chloromethane	ND Js	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND Js	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND Js	5. µg/kg			
cis-1,2-Dichloroethene	ND Js	5. µg/kg			
trans-1,2-Dichloroethene	ND Js	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND Js	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND Js	15. µg/kg			
Vinyl chloride	ND Js	6. µg/kg			
m-Xylene	ND	5. µg/kg			
o,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
m-Bromofluorobenzene	78	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	105	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-3ESW11
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-21

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/6/98
ANALYZED: 8/8/98 *7/10/98*

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	41	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	79	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LPWIN-3WSW11
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-22

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid EXTRACTED: 8/6/98 ANALYST: Scott
DILUTION: 1 ANALYZED: 8/8/98 *TR 9/10/98*

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	130	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	77	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-4V10
DATE SAMPLED: 7/30/98
NEL SAMPLE ID: L9807315-23

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 1

EXTRACTED: 8/7/98
ANALYZED: 8/18/98

ANALYST: Scott

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	15. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Trichlorofluoromethane (Freon 11)	ND	15. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	87	74 - 121
Dibromofluoromethane	95	80 - 120
Toluene-d8	102	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9808051S260-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/5/98

ANALYZED: 8/5/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg	1,1-Dichloropropene	ND	5 µg/kg
Benzene	ND	5 µg/kg	cis-1,3-Dichloropropene	ND	5 µg/kg
Bromobenzene	ND	5 µg/kg	trans-1,3-Dichloropropene	ND	5 µg/kg
Bromochloromethane	ND	5 µg/kg	Ethylbenzene	ND	5 µg/kg
Bromodichloromethane	ND	5 µg/kg	Hexachlorobutadiene	ND	5 µg/kg
Bromoform	ND	5 µg/kg	2-Hexanone	ND	25 µg/kg
Bromomethane	ND	5 µg/kg	Iodomethane	ND	5 µg/kg
2-Butanone	ND	25 µg/kg	Isopropylbenzene	ND	5 µg/kg
n-Butylbenzene	ND	5 µg/kg	p-Isopropyltoluene	ND	5 µg/kg
sec-Butylbenzene	ND	5 µg/kg	Methylene chloride (Dichloromethane)	ND	5 µg/kg
tert-Butylbenzene	ND	5 µg/kg	4-Methyl-2-pentanone	ND	25 µg/kg
Carbon disulfide	ND	5 µg/kg	MTBE	ND	5 µg/kg
Carbon tetrachloride	ND	5 µg/kg	Naphthalene	ND	5 µg/kg
Chlorobenzene	ND	5 µg/kg	n-Propylbenzene	ND	5 µg/kg
Chloroethane	ND	5 µg/kg	Styrene	ND	5 µg/kg
Chloroform	ND	5 µg/kg	1,1,1,2-Tetrachloroethane	ND	5 µg/kg
Chloromethane	ND	5 µg/kg	1,1,2,2-Tetrachloroethane	ND	5 µg/kg
2-Chlorotoluene	ND	5 µg/kg	Tetrachloroethene (PCE)	ND	5 µg/kg
4-Chlorotoluene	ND	5 µg/kg	Toluene	ND	5 µg/kg
Dibromochloromethane	ND	5 µg/kg	1,2,3-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/kg	1,2,4-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromoethane (EDB)	ND	5 µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	15 µg/kg
Dibromomethane	ND	5 µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/kg	Trichloroethene (TCE)	ND	5 µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/kg	Trichlorofluoromethane (Freon 11)	ND	15 µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/kg	1,2,3-Trichloropropane	ND	5 µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5 µg/kg	1,2,4-Trimethylbenzene	ND	5 µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg	1,3,5-Trimethylbenzene	ND	5 µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg	Vinyl chloride	ND	6 µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg	o-Xylene	ND	5 µg/kg
cis-1,2-Dichloroethene	ND	5 µg/kg	m,p-Xylene	ND	5 µg/kg
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
1,3-Dichloropropane	ND	5 µg/kg			
2,2-Dichloropropane	ND	10 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	98	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	101	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9808052W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Aqueous

EXTRACTED: 8/5/98
ANALYZED: 8/5/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L	1,1-Dichloropropene	ND	5 µg/L
Benzene	ND	5 µg/L	cis-1,3-Dichloropropene	ND	5 µg/L
Bromobenzene	ND	5 µg/L	trans-1,3-Dichloropropene	ND	5 µg/L
Bromochloromethane	ND	5 µg/L	Ethylbenzene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L	Hexachlorobutadiene	ND	5 µg/L
Bromoform	ND	5 µg/L	2-Hexanone	ND	25 µg/L
Bromomethane	ND	5 µg/L	Iodomethane	ND	5 µg/L
2-Butanone	ND	25 µg/L	Isopropylbenzene	ND	5 µg/L
n-Butylbenzene	ND	5 µg/L	p-Isopropyltoluene	ND	5 µg/L
sec-Butylbenzene	ND	5 µg/L	Methylene chloride (Dichloromethane)	ND	5 µg/L
tert-Butylbenzene	ND	5 µg/L	4-Methyl-2-pentanone	ND	25 µg/L
Carbon disulfide	ND	5 µg/L	MTBE	ND	5 µg/L
Carbon tetrachloride	ND	5 µg/L	Naphthalene	ND	5 µg/L
Chlorobenzene	ND	5 µg/L	n-Propylbenzene	ND	5 µg/L
Chloroethane	ND	5 µg/L	Styrene	ND	5 µg/L
Chloroform	ND	5 µg/L	1,1,1,2-Tetrachloroethane	ND	5 µg/L
Chloromethane	ND	5 µg/L	1,1,1,2,2-Tetrachloroethane	ND	5 µg/L
2-Chlorotoluene	ND	5 µg/L	Tetrachloroethene (PCE)	ND	5 µg/L
4-Chlorotoluene	ND	5 µg/L	Toluene	ND	5 µg/L
Dibromochloromethane	ND	5 µg/L	1,2,3-Trichlorobenzene	ND	5 µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/L	1,2,4-Trichlorobenzene	ND	5 µg/L
1,2-Dibromoethane (EDB)	ND	5 µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L
Dibromomethane	ND	5 µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/L	Trichloroethene (TCE)	ND	5 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/L	Trichlorofluoromethane (Freon 11)	ND	15 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/L	1,2,3-Trichloropropane	ND	5 µg/L
Dichlorodifluoromethane (Freon 12)	ND	5 µg/L	1,2,4-Trimethylbenzene	ND	5 µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L	1,3,5-Trimethylbenzene	ND	5 µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L	Vinyl chloride	ND	5 µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L	o-Xylene	ND	5 µg/L
cis-1,2-Dichloroethene	ND	5 µg/L	m,p-Xylene	ND	5 µg/L
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
1,3-Dichloropropane	ND	5 µg/L			
2,2-Dichloropropane	ND	10 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	91	86 - 115
Dibromofluoromethane	107	86 - 118
Toluene-d8	106	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9808061S60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
EXTRACTED: 8/6/98
ANALYZED: 8/6/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg	1,1-Dichloropropene	ND	5 µg/kg
Benzene	ND	5 µg/kg	cis-1,3-Dichloropropene	ND	5 µg/kg
Bromobenzene	ND	5 µg/kg	trans-1,3-Dichloropropene	ND	5 µg/kg
Bromochloromethane	ND	5 µg/kg	Ethylbenzene	ND	5 µg/kg
Bromodichloromethane	ND	5 µg/kg	Hexachlorobutadiene	ND	5 µg/kg
Bromoform	ND	5 µg/kg	2-Hexanone	ND	25 µg/kg
Bromomethane	ND	5 µg/kg	Iodomethane	ND	5 µg/kg
2-Butanone	ND	25 µg/kg	Isopropylbenzene	ND	5 µg/kg
n-Butylbenzene	ND	5 µg/kg	p-Isopropyltoluene	ND	5 µg/kg
sec-Butylbenzene	ND	5 µg/kg	Methylene chloride (Dichloromethane)	ND	5 µg/kg
tert-Butylbenzene	ND	5 µg/kg	4-Methyl-2-pentanone	ND	25 µg/kg
Carbon disulfide	ND	5 µg/kg	MTBE	ND	5 µg/kg
Carbon tetrachloride	ND	5 µg/kg	Naphthalene	ND	5 µg/kg
Chlorobenzene	ND	5 µg/kg	n-Propylbenzene	ND	5 µg/kg
Chloroethane	ND	5 µg/kg	Styrene	ND	5 µg/kg
Chloroform	ND	5 µg/kg	1,1,1,2-Tetrachloroethane	ND	5 µg/kg
Chloromethane	ND	5 µg/kg	1,1,2,2-Tetrachloroethane	ND	5 µg/kg
2-Chlorotoluene	ND	5 µg/kg	Tetrachloroethene (PCE)	ND	5 µg/kg
4-Chlorotoluene	ND	5 µg/kg	Toluene	ND	5 µg/kg
Dibromochloromethane	ND	5 µg/kg	1,2,3-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/kg	1,2,4-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromoethane (EDB)	ND	5 µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	15 µg/kg
Dibromomethane	ND	5 µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/kg	Trichloroethene (TCE)	ND	5 µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/kg	Trichlorofluoromethane (Freon 11)	ND	15 µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/kg	1,2,3-Trichloropropane	ND	5 µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5 µg/kg	1,2,4-Trimethylbenzene	ND	5 µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg	1,3,5-Trimethylbenzene	ND	5 µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg	Vinyl chloride	ND	6 µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg	o-Xylene	ND	5 µg/kg
cis-1,2-Dichloroethene	ND	5 µg/kg	m,p-Xylene	ND	5 µg/kg
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
1,3-Dichloropropane	ND	5 µg/kg			
1,2,2-Dichloropropane	ND	10 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
1-Bromofluorobenzene	97	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	100	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V476
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 980806S260-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/6/98

ANALYZED: 8/6/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg	2,2-Dichloropropane	ND	10 µg/kg
Benzene	ND	5 µg/kg	1,1-Dichloropropene	ND	5 µg/kg
Bromobenzene	ND	5 µg/kg	cis-1,3-Dichloropropene	ND	5 µg/kg
Bromochloromethane	ND	5 µg/kg	trans-1,3-Dichloropropene	ND	5 µg/kg
Bromodichloromethane	ND	5 µg/kg	Ethylbenzene	ND	5 µg/kg
Bromoform	ND	5 µg/kg	Hexachlorobutadiene	ND	5 µg/kg
Bromomethane	ND	5 µg/kg	2-Hexanone	ND	25 µg/kg
2-Butanone	ND	25 µg/kg	Iodomethane	ND	5 µg/kg
n-Butylbenzene	ND	5 µg/kg	Isopropylbenzene	ND	5 µg/kg
sec-Butylbenzene	ND	5 µg/kg	p-Isopropyltoluene	ND	5 µg/kg
tert-Butylbenzene	ND	5 µg/kg	Methylene chloride (Dichloromethane)	ND	5 µg/kg
Carbon disulfide	ND	5 µg/kg	4-Methyl-2-pentanone	ND	25 µg/kg
Carbon tetrachloride	ND	5 µg/kg	MTBE	ND	5 µg/kg
Chlorobenzene	ND	5 µg/kg	Naphthalene	ND	5 µg/kg
Chloroethane	ND	5 µg/kg	n-Propylbenzene	ND	5 µg/kg
2-Chloroethyl vinyl ether	ND	5 µg/kg	Styrene	ND	5 µg/kg
Chloroform	ND	5 µg/kg	1,1,1,2-Tetrachloroethane	ND	5 µg/kg
Chloromethane	ND	5 µg/kg	1,1,2,2-Tetrachloroethane	ND	5 µg/kg
2-Chlorotoluene	ND	5 µg/kg	Tetrachloroethene (PCE)	ND	5 µg/kg
4-Chlorotoluene	ND	5 µg/kg	Toluene	ND	5 µg/kg
Dibromochloromethane	ND	5 µg/kg	1,2,3-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/kg	1,2,4-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromoethane (EDB)	ND	5 µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	15 µg/kg
Dibromomethane	ND	5 µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/kg	Trichloroethene (TCE)	ND	5 µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/kg	Trichlorofluoromethane (Freon 11)	ND	15 µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/kg	1,2,3-Trichloropropane	ND	5 µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5 µg/kg	1,2,4-Trimethylbenzene	ND	5 µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg	1,3,5-Trimethylbenzene	ND	5 µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg	Vinyl chloride	ND	6 µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg	o-Xylene	ND	5 µg/kg
cis-1,2-Dichloroethene	ND	5 µg/kg	m,p-Xylene	ND	5 µg/kg
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
1,3-Dichloropropane	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	98	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	102	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada CLIENT ID: Laboratory Control Spike
PROJECT ID: V476/17777 DATE SAMPLED: NA
PROJECT #: 17777 NEL SAMPLE ID: 9808051S260-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/5/98

ANALYZED: 8/5/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	112	70 - 130
Chlorobenzene	117	70 - 130
1,1-Dichloroethene (1,1-DCE)	89	70 - 130
Toluene	116	70 - 130
Trichloroethene (TCE)	118	70 - 130

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	97	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	102	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V476/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9807315-12-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/5/98

ANALYZED: 8/5/98 *PK 9/10/98*

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	134	60 - 142
Chlorobenzene	126	60 - 133
1,1-Dichloroethene (1,1-DCE)	370	59 - 172
Toluene	134	59 - 139
Trichloroethene (TCE)	134	62 - 137

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	73	74 - 121
Dibromofluoromethane	89	80 - 120
Toluene-d8	108	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V476/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9807315-12-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/8/98

ANALYZED: 8/8/98 *TR 9/10/98*

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	136	66 - 142	1.5
Chlorobenzene	126	60 - 133	0.
1,1-Dichloroethene (1,1-DCE)	396	59 - 172	6.8
Toluene	136	59 - 139	1.5
Trichloroethene (TCE)	136	62 - 137	1.5

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	72	74 - 121
Dibromofluoromethane	89	80 - 120
Toluene-d8	107	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V476/17777
PROJECT #: 17777

CLIENT ID: Laboratory Control Spike
DATE SAMPLED: NA
NEL SAMPLE ID: 9808052W60-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 8/5/98

ANALYZED: 8/5/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	105	80 - 120
Chlorobenzene	104	80 - 120
1,1-Dichloroethene (1,1-DCE)	115	80 - 120
Toluene	109	80 - 120
Trichloroethene (TCE)	112	80 - 120

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	109	86 - 115
Dibromofluoromethane	105	86 - 118
Toluene-d8	110	88 - 110

NEL LABORATORIES

CLIENT: Bechtel Nevada

CLIENT ID: Laboratory Control Spike

PROJECT ID: V476/17777

DATE SAMPLED: NA

PROJECT #: 17777

NEL SAMPLE ID: 980806S260-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/6/98

ANALYZED: 8/6/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	106	70 - 130
Chlorobenzene	110	70 - 130
1,1-Dichloroethene (1,1-DCE)	91	70 - 130
Toluene	108	70 - 130
Trichloroethene (TCE)	110	70 - 130

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	99	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	102	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V476/17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9807315-17-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/10/98

ANALYZED: 8/16/98 TR 9/10/98

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	132	60 - 142
Chlorobenzene	130	60 - 133
1,1-Dichloroethene (1,1-DCE)	258	59 - 172
Toluene	134	59 - 139
Trichloroethene (TCE)	136	62 - 137

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	84	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	104	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada

CLIENT ID: Matrix Spike Duplicate

PROJECT ID: V476/17777

DATE SAMPLED: NA

PROJECT #: 17777

NEL SAMPLE ID: L9807315-17-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/8/98

ANALYZED: 8/8/98 *TR 9/10/98*

ANALYST: Scott

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	140	66 - 142	5.9
Chlorobenzene	134	60 - 133	3.
1,1-Dichloroethene (1,1-DCE)	244	59 - 172	5.6
Toluene	140	59 - 139	4.4
Trichloroethene (TCE)	142	62 - 137	4.3

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	84	74 - 121
Dibromofluoromethane	101	80 - 120
Toluene-d8	105	81 - 117

SUPPORTING DATA

SAMPLE DELIVERY GROUP: V476CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 8/26/98DATE REVIEWED: 9/10/98REVIEWED BY: VOLATILES:MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/31/98</u>		<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0753</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>0813</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1700</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>1715</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0713</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1735</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL - SOIL</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>YES</u>
	<u>INITIAL - WATER</u>	<u>VOA2</u>	<u>7/31/98</u>		<u>YES</u>
	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0846</u>	<u>YES</u>
	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0915</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>0942</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1815</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0738</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1756</u>	<u>YES</u>
3. METHOD BLANK	<u>VBLK 980805A</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0950</u>	<u>YES</u>
	<u>VBLK 980805A - SOIL</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1024</u>	<u>YES</u>
	<u>VBLK 980805A - SOIL</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1900</u>	<u>YES</u>
	<u>VBLK 980806A - SOIL</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0821</u>	<u>YES</u>
	<u>VBLK 980806A - SOIL</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1846</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>			<u>N/A</u>
5. LAB CONTROL	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0846</u>	<u>YES</u>
	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0915</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>0942</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1815</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0738</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1756</u>	<u>YES</u>
6. TRIP BLANK	<u>TB072998</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>1211</u>	<u>YES</u>
7. SAMPLES	<u>650LFEOUT-1V10</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>2039</u>	<u>YES</u>
	<u>650LFEOUT-1NSW10</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>2126</u>	<u>YES</u>
	<u>650LFEOUT-1SSW10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1257</u>	<u>YES</u>
	<u>650LFEOUT-3V9.5</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>2256</u>	<u>YES</u>
	<u>650LFEOUT-3ESW9.5</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1335</u>	<u>YES</u>
	<u>650LFEOUT-3WSW9.5</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0025</u>	<u>YES</u>
	<u>650LFWOUT-2V10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0109</u>	<u>YES</u>
	<u>650LFWOUT-2ESW10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0152</u>	<u>YES</u>
	<u>650LFWOUT-2WSW10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0236</u>	<u>YES</u>
	<u>650DB-NV 9</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0319</u>	<u>YES</u>
	<u>650DB-NSW9</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0403</u>	<u>YES</u>
	<u>650DB-NSW9 MS</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0446</u>	<u>YES</u>

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
7. SAMPLES (cont.)	650DB-NSW9 MSD	5972-IN	8/6/98	0529	SEE COMMENT
	EB73098	VOA2	8/5/98	1247	YES
	650LFWIN-1V10	5972-IN	8/6/98	1929	YES
	650LFWIN-1ESW10	5972-IN	8/6/98	2021	YES
	650LFWIN-1WSW10	5972-IN	8/6/98	2110	YES
	650LFWIN-2V11	5972-IN	8/6/98	2157	YES
	650LFWIN-2V11 MS	5972-IN	8/7/98	0358	YES
	650LFWIN-2V11 MSD	5972-IN	8/7/98	0442	YES
	650LFWIN-2ESW11	5972-IN	8/6/98	2244	YES
	650LFWIN-2WSW11	5972-IN	8/6/98	2330	YES
	650LFWIN-3V11	5972-IN	8/7/98	0015	YES
	650LFWIN-3ESW11	5972-IN	8/7/98	0100	YES
	650LFWIN-3WSW11	5972-IN	8/7/98	0145	YES
	650LFWIN-4V10	5972-IN	8/7/98	0229	YES

8. SURROGATE RECOVERY ACCEPTABLE: YES
9. MS/MSD RECOVERY ACCEPTABLE: SEE COMMENTS
10. METHOD BLANK ACCEPTABLE: YES
11. HOLDING TIMES ACCEPTABLE: YES

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Earliest Date Sampled	<u>7/29/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>7/30/98</u>	<u>1</u>	<u>1</u>
c. Date Contract Lab Received:	<u>7/31/98</u>	<u>2</u>	<u>5</u>
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Latest Date Analyzed:	<u>8/7/98</u>	<u>9</u>	<u>14</u>
12. Correct Conc units used:	<u>YES</u>		
13. CALCULATIONS ACCEPTABLE:	<u>YES</u>		
14. ARE AREAS ACCEPTABLE:	<u>YES</u>		
15. RRT IS ACCEPTABLE:	<u>YES</u>		
16. FORMS ACCEPTABLE:	<u>YES</u>		
17. Chain-of-Custody agrees:	<u>YES</u>		

COMMENTS: Method associated quality assurance and control criteria were met. Several "Extracted" and "Analyzed" dates were incorrect in comparison to the raw data printouts. Corrections were made to the forms and initialed. The laboratory performed matrix spike / matrix spike duplicate analyses on sample 650LFWIN-2V11 as requested, and additionally on 650DB-NSW9. Analysis of the MSD for - NSW9 exceeded the 12 hour analysis run by 29 minutes. The data are considered valid. Recoveries for several compounds were outside the upper control limits in both the MS and MSD, however, the relative percent differences for all compounds were acceptable. Internal standard and surrogate recoveries were outside control limits for several samples. In all cases, reanalysis resulted in similar recoveries. Data flagged with "Js" are associated with internal standard or surrogate outliers while those flagged with "Jm" reflect unacceptable spike recovery in the associated MS or MSD. Flags due to IS and SURR outliers are given precedence over MS/MSD outliers.

ANALYTICAL SERVICES LABORATORY SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 1 of 3

PROJECT/CLIENT INFORMATION Project: Bld 650 Lehighville BN Org: 2150 Charge No.: C40-6-B006 Project Manager: Terry Bunn / Steve Wynn Phone: 5-7341 Fax: 5-7761 M/S: 1/15/98		REPORT INFORMATION Send Report to: Terry Bunn Phone: 5-7341 Fax: 5-7761 M/S: 1/15/98 Turnaround: () Standard - 30 days Non-Rad, 60 Days Rad, Other: Final by: 8/13/98 Final report format: X Standard () NTS-WAC () Other:		SAMPLE INFORMATION Sampling Site: Bld 650 Lehighville The samples submitted contain (check): () Hazardous () Radioactive (X) 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.	
---	--	---	--	--	--

SAMPLE RECEIPT INFORMATION Are all sample containers received intact () Yes () No Comments: _____ Do the labels agree with this form? () Yes () No Comments: _____ Was a Material Clearance Tag submitted? () Yes () No Comments: _____		LAB USE ONLY Rad SGD: Non-Rad SDG: V476 Rad Packet: Non-Rad Packet: W1507 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: <u>TC</u> Date: <u>7/29/98</u>	
--	--	--	--

ITEM	ID / DESCRIPTION	SAMPLING DATE	TIME	MATRIX	ANALYSES & METHOD	COMMENTS
0	88072998	7/29/98	1528	LEATH	X	Headpiece HGI
1	88072998	7/29/98	1232	Water	X	Tip Blank HGI
2	650LFE007-1V10	7/29/98	1325	Soil	X	
3	650LFE007-1V15W10	7/29/98	1330	Soil	X	
4	650LFE007-135W10	7/29/98	1335	Soil	X	
5	650LFE007-3V9.5	7/29/98	1405	Soil	X	
6	650LFE007-3E5W9.5	7/29/98	1415	Soil	X	
7	650LFE007-3W5W9.5	7/29/98	1620	Soil	X	Good
8						Good
9						Good

SERVICES REQUEST & CHAIN OF CUSTODY RECORD

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

14807315 8/13 or sooner

ANALYTICAL SERVICES LABORATORY
SERVICES REQUEST & CHAIN OF CUSTODY RECORD

PROJECT/CLIENT INFORMATION		REPORT INFORMATION		SAMPLE INFORMATION	
Project: Building 650	BN Orig#: 2150	Send Report to: Jerry Bonn	Phone: 5-73341	Sampling Site: Building 650	The samples submitted contain (check): () Hazardous () Radioactive (X) 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.
Charge No.: 40-080DE	ASL Prog.:	Phone: 5-73341	Fax:	M/S: 175306	
Project Manager: Steve Nacht / Jerry Bonn		Turnaround: () Standard - 30 days Non-rad, 60 Days Rad, Other: Rush Preliminary by: Final by:			
Phone:	Fax:	Final report format: (X) Standard () NTS-WAC () Other:			

LAB USE ONLY		ANALYSES & METHOD										SAMPLE RECEIPT INFORMATION	
Rad SGD:	Non-Rad SGD:											Are all sample containers received intact () Yes () No	
Rad Packet:	Non-Rad Packet:											Comments:	
Ant Services Representative:												Do the labels agree with this form? () Yes () No	
Will these analyses be performed under a signed SOW? () YES () NO												Comments:	
If so, do analyses entered here agree with the SOW? () YES () NO () N/A												Was a Material Clearance Tag submitted? () Yes () No	
If not, identify the variation												Comments:	
CSR initials indicating review and approval:													
Date:													

ITEM	ID / DESCRIPTION	SAMPLING		MATRIX											COMMENTS
		DATE	TIME												
0	650LFWIN-1V10	7/20/98	1415	Soil	X										MS/MSD
1	650LFWIN-1ESW10	7/30/98	1435	Soil	X										
2	650LFWIN-1NWSW10	7/30/98	1425	Soil	X										
3	650LFWIN-2V11	7/30/98	1365	Soil	X										
4	650LFWIN-2ESW11	7/30/98	1412	Soil	X										
5	650LFWIN-2NWSW11	7/30/98	1405	Soil	X										
6	650LFWIN-3V11	7/30/98	1348	Soil	X										
7	650LFWIN-3ESW11	7/30/98	1347	Soil	X										
8	650LFWIN-3NWSW11	7/30/98	1347	Soil	X										
9	650LFWIN-4V10	7/30/98	1415	Soil	X										

Transfer of samples submitted for analyses				Complete for samples shipped to an OFF-SITE Subcontract Laboratory			
Relinquished (Signature/Organization)		DATE / TIME		Relinquished (BN Representative Signature)		DATE / TIME	
Steve Nacht / Jerry Bonn		7/19/98		[Signature]		[Signature]	
Relinquished (Courier & Tracking Info)		DATE / TIME		Relinquished (Courier & Tracking Info)		DATE / TIME	
Relinquished (1st tier Subcontractor Rep)		DATE / TIME		Relinquished (1st tier Subcontractor Rep)		DATE / TIME	
Relinquished (2nd tier Subcontractor Rep)		DATE / TIME		Relinquished (2nd tier Subcontractor Rep)		DATE / TIME

Interoffice Memorandum

To: S. J. Nacht

Date: October 13, 1998

From: L. W. Hatcher
Analytical Services Laboratory, 295-7109

No.: 2150-AL-99-0005

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V476**
Project No. 04001

Nevada Environmental Laboratory's results for the volatile organics analyses of twenty-two samples and one trip blank collected on July 29 and 30, 1998 are included with a copy of this memorandum to J. F. Bonn. A copy of the preliminary data was given to the client on August 18, 1998. Included is a statement of services which identifies the charge number associated with the SDG.

SPECIFIC:

Volatile Organics;

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

Several "Extracted" and "Analyzed" dates reported were incorrect in comparison to the raw data printouts. Corrections were made to the report forms and initialed.

The laboratory performed matrix spike / matrix spike duplicate (MS/MSD) analyses on sample 650LFWIN-2V11 as requested, and additionally on 650DB-NSW9. Analysis of the MSD for -NSW9 exceeded the 12 hour analysis run specified in the method by 29 minutes. The data are valid considering the sample was an MSD and resulting recoveries were comparable to the MS. Recoveries for several compounds were outside the upper control limits in both the MS and MSD, however, the relative percent differences for all compounds were acceptable.

Internal standard and surrogate recoveries were outside control limits for several samples. In all cases, reanalysis resulted in similar recoveries. Data flagged with "Js" are due to internal standard (IS) or surrogate (SURR) outliers while those flagged with "Jm" reflect unacceptable spike recovery in the associated MS or MSD. Flags due to IS and SURR outliers are given precedence over MS/MSD flags.

2150-AL-99-0005

S. J. Nacht

Page 2 of 2

October 13, 1998

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

L. W. Hatcher

LWH:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008

EM correspondence, NLV080

J. F. Bonn, (results enc.) NTS306

ASL SDG V476, (results enc.) NTS273

**STATEMENT
OF
SERVICES**

*** Client Information Only ***

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Page 1 of 1

Billed to: BN - Environmental Management

Remediation Projects

P.O. Box 98521

M/S NTS 306

Las Vegas

NV 891938521

Sample Delivery Group: V476

Work Order Number: C4U6-B0D-E00

Service Statement Date: 17-SEP-98

Service Statement Number: 7338

Total Amount Due:

1328.25

Base Qty	Analysis Description	Base Rate	BE	DF	PF	QC	Amount
1	BPA 17777 - Nevada Environmental Laboratory	3795.00		0.35			1328.25

Note:

Rate = Base price

BE = Batch equivalent multiplier

(Sample batches of fewer than three are charged as three)

DF = Discount multiplier

PF = Priority multiplier

QC = Quality Control multiplier

Client Rep: Ted Redding

(702)295-7220

Page Total:

1328.25

LABORATORY

CASE

NARRATIVE

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

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: V476
PROJECT NUMBER: 17777

NEL ORDER ID: L9807315

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 7/31/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

Note: For target analytes Acetone, 2-Butanone, 2-Hexanone, and 4-Methyl-2-pentanone, a reporting limit of 20ug/L was reported. This concentration is below reporting limit, but above MDL. Any result reported at 20-25ug/L for these compounds, are estimates.

Some results have been flagged as follows:

Jm - This concentration should be considered an estimate due to probable matrix effects.

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

Stan Van Wagenen
Laboratory Manager

08/18/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Arizona	AZ0520	AZ0518	AZ0583
California	1707	2002	1192
US Army Corps of Engineers	Certified	Certified	Certified

	<u>Reno</u>	<u>Las Vegas</u>	<u>So. Calif</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
Washington			Certified

VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-3VESW13
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20. µg/kg			
Benzene	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,2,4-Trichlorobenzene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	103	81 - 117

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

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-3VWSW13
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20. µg/kg			
Benzene	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,2,4-Trichlorobenzene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	106	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOUT-2V10.5
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20. µg/kg			
Benzene	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,2,4-Trichlorobenzene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
m-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
1-Bromofluorobenzene	97	74 - 121
Dibromofluoromethane	97	80 - 120
Toluene-d8	104	81 - 117

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

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: TB082598
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 0.8

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

ANALYST: Suzanne

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20. µg/L			
Benzene	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	20. µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	20. µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	20. µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,2,4-Trichlorobenzene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	98	86 - 115
Dibromofluoromethane	108	86 - 118
Toluene-d8	96	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9808262W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	20 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,2,4-Trichlorobenzene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
o-Xylene	ND	5 µg/L			
m,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	99	86 - 115
Dibromofluoromethane	111	86 - 118
Toluene-d8	104	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9808261S60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Solid

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,2,4-Trichlorobenzene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	99	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	102	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada CLIENT ID: Laboratory Control Spike
PROJECT ID: V495-17777 DATE SAMPLED: NA
PROJECT #: 17777 NEL SAMPLE ID: 9808261S60-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	109	70 - 130
Chlorobenzene	108	70 - 130
1,1-Dichloroethene (1,1-DCE)	100	70 - 130
Toluene	109	70 - 130
Trichloroethene (TCE)	109	70 - 130

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	100	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	102	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V495-17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9808275-02-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	118	66 - 142
Chlorobenzene	110	60 - 133
1,1-Dichloroethene (1,1-DCE)	206	59 - 172
Toluene	114	59 - 139
Trichloroethene (TCE)	118	62 - 137

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	108	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V495-17777
PROJECT #: 17777

CLIENT ID: Matrix Spike Duplicate
DATE SAMPLED: NA
NEL SAMPLE ID: L9808275-02-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	122	66 - 142	3.3
Chlorobenzene	118	60 - 133	7.
1,1-Dichloroethene (1,1-DCE)	194	59 - 172	6.
Toluene	120	59 - 139	5.1
Trichloroethene (TCE)	122	62 - 137	3.3

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	89	74 - 121
Dibromofluoromethane	102	80 - 120
Toluene-d8	107	81 - 117

SUPPORTING DATA

SAMPLE DELIVERY GROUP: V476CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 8/26/98DATE REVIEWED: 9/10/98REVIEWED BY:

VOLATILES:

MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>7/31/98</u>		<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0753</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>0813</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1700</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>1715</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0713</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1735</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL - SOIL</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>YES</u>
	<u>INITIAL - WATER</u>	<u>VOA2</u>	<u>7/31/98</u>		<u>YES</u>
	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0846</u>	<u>YES</u>
	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0915</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>0942</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1815</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0738</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1756</u>	<u>YES</u>
3. METHOD BLANK	<u>VBLK 980805A</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0950</u>	<u>YES</u>
	<u>VBLK 980805A - SOIL</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1024</u>	<u>YES</u>
	<u>VBLK 980805A - SOIL</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1900</u>	<u>YES</u>
	<u>VBLK 980806A - SOIL</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0821</u>	<u>YES</u>
	<u>VBLK 980806A - SOIL</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1846</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>			<u>N/A</u>
5. LAB CONTROL	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0846</u>	<u>YES</u>
	<u>VSTD050 CC980804</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>0915</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>0942</u>	<u>YES</u>
	<u>VSTD050 CC980804-S</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>1815</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0738</u>	<u>YES</u>
	<u>VSTD050 CC980806-S</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1756</u>	<u>YES</u>
6. TRIP BLANK	<u>TB072998</u>	<u>VOA2</u>	<u>8/5/98</u>	<u>1211</u>	<u>YES</u>
7. SAMPLES	<u>650LFEOUT-1V10</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>2039</u>	<u>YES</u>
	<u>650LFEOUT-1NSW10</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>2126</u>	<u>YES</u>
	<u>650LFEOUT-1SSW10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1257</u>	<u>YES</u>
	<u>650LFEOUT-3V9.5</u>	<u>5972-IN</u>	<u>8/5/98</u>	<u>2256</u>	<u>YES</u>
	<u>650LFEOUT-3ESW9.5</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>1335</u>	<u>YES</u>
	<u>650LFEOUT-3WSW9.5</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0025</u>	<u>YES</u>
	<u>650LFWOUT-2V10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0109</u>	<u>YES</u>
	<u>650LFWOUT-2ESW10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0152</u>	<u>YES</u>
	<u>650LFWOUT-2WSW10</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0236</u>	<u>YES</u>
	<u>650DB-NV 9</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0319</u>	<u>YES</u>
	<u>650DB-NSW9</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0403</u>	<u>YES</u>
	<u>650DB-NSW9 MS</u>	<u>5972-IN</u>	<u>8/6/98</u>	<u>0446</u>	<u>YES</u>

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
7. SAMPLES (cont.)	650DB-NSW9 MSD	5972-IN	8/6/98	0529	SEE COMMENT
	EB73098	VOA2	8/5/98	1247	YES
	650LFWIN-1V10	5972-IN	8/6/98	1929	YES
	650LFWIN-1ESW10	5972-IN	8/6/98	2021	YES
	650LFWIN-1WSW10	5972-IN	8/6/98	2110	YES
	650LFWIN-2V11	5972-IN	8/6/98	2157	YES
	650LFWIN-2V11 MS	5972-IN	8/7/98	0358	YES
	650LFWIN-2V11 MSD	5972-IN	8/7/98	0442	YES
	650LFWIN-2ESW11	5972-IN	8/6/98	2244	YES
	650LFWIN-2WSW11	5972-IN	8/6/98	2330	YES
	650LFWIN-3V11	5972-IN	8/7/98	0015	YES
	650LFWIN-3ESW11	5972-IN	8/7/98	0100	YES
	650LFWIN-3WSW11	5972-IN	8/7/98	0145	YES
	650LFWIN-4V10	5972-IN	8/7/98	0229	YES
8. SURROGATE RECOVERY ACCEPTABLE:	YES				
9. MS/MSD RECOVERY ACCEPTABLE:	SEE COMMENTS				
10. METHOD BLANK ACCEPTABLE:	YES				
11. HOLDING TIMES ACCEPTABLE:	YES				

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Earliest Date Sampled	7/29/98	0	0
b. Date ASL Received:	7/30/98	1	1
c. Date Contract Lab Received:	7/31/98	2	5
d. Date Extracted:	N/A	N/A	N/A
e. Latest Date Analyzed:	8/7/98	9	14
12. Correct Conc units used:	YES		
13. CALCULATIONS ACCEPTABLE:	YES		
14. ARE AREAS ACCEPTABLE:	YES		
15. RRT IS ACCEPTABLE:	YES		
16. FORMS ACCEPTABLE:	YES		
17. Chain-of-Custody agrees:	YES		

COMMENTS: Method associated quality assurance and control criteria were met. Several "Extracted" and "Analyzed" dates were incorrect in comparison to the raw data printouts. Corrections were made to the forms and initialed. The laboratory performed matrix spike / matrix spike duplicate analyses on sample 650LFWIN-2V11 as requested, and additionally on 650DB-NSW9. Analysis of the MSD for - NSW9 exceeded the 12 hour analysis run by 29 minutes. The data are considered valid. Recoveries for several compounds were outside the upper control limits in both the MS and MSD, however, the relative percent differences for all compounds were acceptable. Internal standard and surrogate recoveries were outside control limits for several samples. In all cases, reanalysis resulted in similar recoveries. Data flagged with "Js" are associated with internal standard or surrogate outliers while those flagged with "Jm" reflect unacceptable spike recovery in the associated MS or MSD. Flags due to IS and SURR outliers are given precedence over MS/MSD outliers.

SERVICES REQUEST & CHAIN OF CUSTODY RECORD

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Copy 1 - To be retained by laboratory performing intermediate analysis
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ANALYTICAL SERVICES LABORATORY
SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 3 of 3

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BN-0732 (02/98)

Bechtel Nevada

Interoffice Memorandum

To: S. J. Nacht

Date: October 13, 1998

From: L. W. Hatcher
Analytical Services Laboratory, 295-7109

No.: 2150-AL-99-0006

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V495**
Project No. 04001

Nevada Environmental Laboratory's results for the volatile organics analyses of three soil samples and one trip blank collected on August 25, 1998 are included with a copy of this memorandum to J. F. Bonn. Included is a statement of services which identifies the charge number associated with the SDG. Preliminary data were faxed to the client on August 27, 1998.

SPECIFIC:

Volatile Organics:

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

The laboratory performed matrix spike / matrix spike duplicate (MS/MSD) analyses on sample 650LFWIN-3VWSW13. Recoveries for 1,1-dichloroethene (1,1-DCE) were outside the upper control limits in both the MS and MSD, however, the relative percent difference was acceptable. The sample's 1,1-DCE result was accordingly flagged with "Jm".

The bromofluorobenzene (BFB) tune associated with the soil initial calibration was not submitted with the data package. Also, the incorrect BFB tune and initial calibration data associated with the trip blank analyses were submitted. The laboratory was contacted to submit both the soil BFB tune and the appropriate water tune and calibration data. The client will be notified if the resubmitted data adversely impact the sample data.

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

L. W. Hatcher

LWH:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008

EM correspondence, NLV080

J. F. Bonn, (results enc.) NTS306

ASL SDG V495, (results enc.) NTS273

LABORATORY

CASE

NARRATIVE

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

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: V495
PROJECT NUMBER: 17777

NEL ORDER ID: L9808275

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 8/25/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

The 20ppb reporting limit for the analysis of acetone, 2-butanone, 2-hexanone & 4-methyl-2-pentanone by EPA 8260B is below our normal reporting limit but above our MDL. Any ketone values reported at 20 - 25ppb should be considered estimates.

Some results have been flagged as follows:

Jm - This concentration should be considered an estimate due to probable matrix effects.

Stan Van Wagenen
Laboratory Manager

8/27/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>		<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0583	Idaho	Certified	Certified	
California	1707	2002	2264	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified	Certified	Nevada	NV033	NV052	CA084
				Washington			Certified

VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: 650LFWIN-3VESW13
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20. µg/kg			
Benzene	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,2,4-Trichlorobenzene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	88	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	103	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: 650LFWN-3VWSW13
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20. µg/kg			
Benzene	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20. µg/kg			
Methylené chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,2,4-Trichlorobenzene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	106	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: 650LFEOUT-2V10.5
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8
EXTRACTED: 8/26/98
ANALYZED: 8/26/98
ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20. µg/kg			
Benzene	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	20. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
2-Methyl-2-pentanone	ND	20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
1,1,2,2-Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,2,4-Trichlorobenzene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
1,1,2-Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
m-Xylene	ND	5. µg/kg			
p-Xylene	ND	5. µg/kg			

ID - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
1-Bromofluorobenzene	97	74 - 121
1-Bromofluoromethane	97	80 - 120
1-Toluene-d8	104	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V495
PROJECT NUMBER: 17777

CLIENT ID: TB082598
DATE SAMPLED: 8/25/98
NEL SAMPLE ID: L9808275-04

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 0.8

EXTRACTED: 8/26/98
ANALYZED: 8/26/98

ANALYST: Suzanne

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20. µg/L			
Benzene	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	20. µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	20. µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	20. µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,2,4-Trichlorobenzene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	98	86 - 115
Dibromofluoromethane	108	86 - 118
Toluene-d8	96	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada

PROJECT NAME: V495

PROJECT NUMBER: 17777

CLIENT ID: Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 9808262W60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	20 µg/L			
Benzene	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	20 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	20 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	20 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,2,4-Trichlorobenzene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
m-Xylene	ND	5 µg/L			
n,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
1-Bromofluorobenzene	99	86 - 115
Dibromofluoromethane	111	86 - 118
Toluene-d8	104	88 - 110

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NEL LABORATORIES

CLIENT: Bechtel Nevada

PROJECT NAME: V495

PROJECT NUMBER: 17777

CLIENT ID: Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 9808261S60-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	20 µg/kg			
Benzene	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	20 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	20 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	20 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,2,4-Trichlorobenzene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	99	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	102	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada CLIENT ID: Laboratory Control Spike
PROJECT ID: V495-17777 DATE SAMPLED: NA
PROJECT #: 17777 NEL SAMPLE ID: 9808261S60-LCS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	109	70 - 130
Chlorobenzene	108	70 - 130
1,1-Dichloroethene (1,1-DCE)	100	70 - 130
Toluene	109	70 - 130
Trichloroethene (TCE)	109	70 - 130

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	100	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	102	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V495-17777
PROJECT #: 17777

CLIENT ID: Matrix Spike
DATE SAMPLED: NA
NEL SAMPLE ID: L9808275-02-MS

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
Benzene	118	66 - 142
Chlorobenzene	110	60 - 133
1,1-Dichloroethene (1,1-DCE)	206	59 - 172
Toluene	114	59 - 139
Trichloroethene (TCE)	118	62 - 137

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	85	74 - 121
Dibromofluoromethane	103	80 - 120
Toluene-d8	108	81 - 117

NEL LABORATORIES

CLIENT: Bechtel Nevada CLIENT ID: Matrix Spike Duplicate
PROJECT ID: V495-17777 DATE SAMPLED: NA
PROJECT #: 17777 NEL SAMPLE ID: L9808275-02-MSD

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid

EXTRACTED: 8/26/98

ANALYZED: 8/26/98

ANALYST: Suzanne

<u>PARAMETER</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	122	66 - 142	3.3
Chlorobenzene	118	60 - 133	7.
1,1-Dichloroethene (1,1-DCE)	194	59 - 172	6.
Toluene	120	59 - 139	5.1
Trichloroethene (TCE)	122	62 - 137	3.3

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	89	74 - 121
Dibromofluoromethane	102	80 - 120
Toluene-d8	107	81 - 117

SUPPORTING DATA

SAMPLE DELIVERY GROUP: V495CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 9/10/98DATE REVIEWED: 9/18/98REVIEWED BY:

VOLATILES:

MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>See Comment</u>
	<u>BFB</u>	<u>VOA2</u>			<u>See Comment</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>0710</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/26/98</u>	<u>0711</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL - SOIL</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>YES</u>
	<u>INITIAL - WATER</u>	<u>VOA2</u>			<u>See Comment</u>
	<u>VSTD050 CC980826-S</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>0743</u>	<u>YES</u>
	<u>VSTD050 CC980825</u>	<u>VOA2</u>	<u>8/26/98</u>	<u>0816</u>	<u>YES</u>
3. METHOD BLANK	<u>VLBK 980826A - S</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>0824</u>	<u>YES</u>
	<u>VLBK 980826A</u>	<u>VOA2</u>	<u>8/26/98</u>	<u>0851</u>	<u>YES</u>
	<u>VLBK 980826B</u>	<u>VOA2</u>	<u>8/26/98</u>	<u>1058</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>			<u>N/A</u>
5. LAB CONTROL	<u>VSTD050 CC980826-S</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>0743</u>	<u>YES</u>
	<u>VSTD050 CC980825</u>	<u>VOA2</u>	<u>8/26/98</u>	<u>0816</u>	<u>YES</u>
6. TRIP BLANK	<u>TB082598</u>	<u>VOA2</u>	<u>8/26/98</u>	<u>1208</u>	<u>YES</u>
7. SAMPLES	<u>650LFWIN-3VESW13</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>1057</u>	<u>YES</u>
	<u>650LFWIN-3VWSW13 RE</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>1636</u>	<u>YES</u>
	<u>650LFWIN-3VWSW13 MS</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>1401</u>	<u>YES</u>
	<u>650LFWIN-3VWSW13MSD</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>1723</u>	<u>YES</u>
	<u>650LFEOUT-2V10.5</u>	<u>5972-IN</u>	<u>8/26/98</u>	<u>1229</u>	<u>YES</u>
8. SURROGATE RECOVERY ACCEPTABLE:	<u>YES</u>				
9. MS/MSD RECOVERY ACCEPTABLE:	<u>SEE COMMENTS</u>				
10. METHOD BLANK ACCEPTABLE:	<u>YES</u>				
11. HOLDING TIMES ACCEPTABLE:	<u>YES</u>				
		<u># DAYS</u>	<u>ACCEPTABLE</u>		
a. Earliest Date Sampled	<u>8/25/98</u>	<u>0</u>	<u>0</u>		
b. Date ASL Received:	<u>N/A</u>	<u>N/A</u>	<u>1</u>		
c. Date Contract Lab Received:	<u>8/25/98</u>	<u>0</u>	<u>5</u>		
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>		
e. Latest Date Analyzed:	<u>8/26/98</u>	<u>1</u>	<u>14</u>		
12. Correct Conc units used:	<u>YES</u>				
13. CALCULATIONS ACCEPTABLE:	<u>YES</u>				
14. ARE AREAS ACCEPTABLE:	<u>YES</u>				
15. RRT IS ACCEPTABLE:	<u>YES</u>				
16. FORMS ACCEPTABLE:	<u>YES</u>				
17. Chain-of-Custody agrees:	<u>YES</u>				

COMMENTS: Method associated quality assurance and control criteria were met. The laboratory performed matrix spike / matrix spike duplicate analyses on sample 650LFWIN-3VWSW13. Recoveries

for 1,1-dichloroethene were outside the upper control limits in both the MS and MSD, however, the relative percent differences for all compounds were acceptable. The sample's 1,1-DCE result was accordingly flagged with "Jm". The bromofluorobenze (BFB) tune associated with the soil initial calibration was not submitted with the data package. Also, the incorrect BFB tune and initial calibration data associated with the trip blank analyses were submitted. The laboratory was contacted to submit both the soil BFB tune and the appropriate water calibration data. The client will be notified if the resubmitted data impact the sample data.

BN-0732 (02/98)

Interoffice Memorandum

To: S. J. Nacht

Date: October 13, 1998

From: L. W. Hatcher
Analytical Services Laboratory, 295-7109

No.: 2150-AL-99-0007

Subject: **DATA REPORT FOR SAMPLE DELIVERY GROUP (SDG) V496**
Project No. 04001

Nevada Environmental Laboratory's (NEL) results for the volatile organics analyses of two soil samples and one trip blank collected on August 26, 1998 are included with a copy of this memorandum to J. F. Bonn. Included is a statement of services which identifies the charge number associated with the SDG. Preliminary data were faxed to the client on August 31, 1998.

SPECIFIC:

Volatile Organics:

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

The laboratory performed matrix spike / matrix spike duplicate (MS/MSD) analyses on sample 650LFEOUT-2ESW10.5. The recovery of 1,1-dichloroethene in the MSD was outside the upper control limit, however, the relative percent difference was acceptable. The sample's 1,1-DCE result was accordingly flagged with "Jm".

The bromofluorobenze (BFB) tune associated with the soil initial calibration was not submitted with the data package. The laboratory was contacted to submit the soil BFB tune data. The client will be notified if the resubmitted data impact the sample data.

NEL flagged those compounds reported below their usual reporting limit with "Je". These lower limits had been agreed to with the laboratory prior to initiation of work and had been reported without flags to this point. The laboratory had been contacted after receipt of the preliminary data and requested to submit the final report without the flags, however, this was not done. Contact your Client Service Representative (CSR) if the unflagged reporting limit is necessary and the laboratory will again be requested to submit corrected report forms.

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

L. W. Hatcher

LWH:pma

Subject Code: ENV3

2150-AL-99-0007

S. J. Nacht

Page 2 of 2

October 13, 1998

cc: Correspondence Control. NLV008

EM correspondence, NLV080

J. F. Bonn, (results enc.) NTS306

ASL SDG V496, (results enc.) NTS273

LABORATORY

CASE

NARRATIVE

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

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: V496
PROJECT NUMBER: 17777

NEL ORDER ID: L9808303

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 8/26/98.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

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

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

Some results have been flagged as follows:

- Je - This concentration is below reporting limit, but above method detection limit. It should be considered an approximate value.
Jm - This concentration should be considered an estimate due to probable matrix effects.

Stan Van Wagenen
Laboratory Manager

08/31/98
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>		<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0583	Idaho	Certified	Certified	
California	1707	2002	2264	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified	Certified	Nevada	NV033	NV052	CA084
				Washington			Certified

VOLATILE
ORGANICS
DATA

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V496
PROJECT NUMBER: 17777

CLIENT ID: TB082698
DATE SAMPLED: 8/26/98
NEL SAMPLE ID: L9808303-03

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous
DILUTION: 0.8

EXTRACTED: 8/27/98
ANALYZED: 8/27/98

ANALYST: Suzanne

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	Je 20. µg/L			
Benzene	ND	5. µg/L			
Bromodichloromethane	ND	5. µg/L			
Bromoform	ND	5. µg/L			
Bromomethane	ND	5. µg/L			
2-Butanone	ND	Je 20. µg/L			
Carbon disulfide	ND	5. µg/L			
Carbon tetrachloride	ND	5. µg/L			
Chlorobenzene	ND	5. µg/L			
Chloroethane	ND	5. µg/L			
Chloroform	ND	5. µg/L			
Chloromethane	ND	5. µg/L			
Dibromochloromethane	ND	5. µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L			
cis-1,2-Dichloroethene	ND	5. µg/L			
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
cis-1,3-Dichloropropene	ND	5. µg/L			
trans-1,3-Dichloropropene	ND	5. µg/L			
Ethylbenzene	ND	5. µg/L			
2-Hexanone	ND	Je 20. µg/L			
Methylene chloride (Dichloromethane)	ND	5. µg/L			
4-Methyl-2-pentanone	ND	Je 20. µg/L			
Styrene	ND	5. µg/L			
1,1,2,2-Tetrachloroethane	ND	5. µg/L			
Tetrachloroethene (PCE)	ND	5. µg/L			
Toluene	ND	5. µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L			
Trichloroethene (TCE)	ND	5. µg/L			
Vinyl chloride	ND	5. µg/L			
o-Xylene	ND	5. µg/L			
m,p-Xylene	ND	5. µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	101	86 - 115
Dibromofluoromethane	104	86 - 118
Toluene-d8	106	88 - 110

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

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V496
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEOUT-2ESW10.5
DATE SAMPLED: 8/26/98
NEL SAMPLE ID: L9808303-01

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 8/27/98
ANALYZED: 8/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	Je 20. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	Je 20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	Jm 5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	Je 20. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	Je 20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	10. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	80	74 - 121
Dibromofluoromethane	99	80 - 120
Toluene-d8	102	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V496
PROJECT NUMBER: 17777

CLIENT ID: 650 LFEOUT-2WSW10.5
DATE SAMPLED: 8/26/98
NEL SAMPLE ID: L9808303-02

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Solid
DILUTION: 0.8

EXTRACTED: 8/27/98
ANALYZED: 8/27/98

ANALYST: Suzanne

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	Je 20. µg/kg			
Benzene	ND	5. µg/kg			
Bromodichloromethane	ND	5. µg/kg			
Bromoform	ND	5. µg/kg			
Bromomethane	ND	5. µg/kg			
2-Butanone	ND	Je 20. µg/kg			
Carbon disulfide	ND	5. µg/kg			
Carbon tetrachloride	ND	5. µg/kg			
Chlorobenzene	ND	5. µg/kg			
Chloroethane	ND	5. µg/kg			
Chloroform	ND	5. µg/kg			
Chloromethane	ND	5. µg/kg			
Dibromochloromethane	ND	5. µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg			
cis-1,2-Dichloroethene	ND	5. µg/kg			
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
cis-1,3-Dichloropropene	ND	5. µg/kg			
trans-1,3-Dichloropropene	ND	5. µg/kg			
Ethylbenzene	ND	5. µg/kg			
2-Hexanone	ND	Je 20. µg/kg			
Methylene chloride (Dichloromethane)	ND	5. µg/kg			
4-Methyl-2-pentanone	ND	Je 20. µg/kg			
Styrene	ND	5. µg/kg			
1,1,2,2-Tetrachloroethane	ND	5. µg/kg			
Tetrachloroethene (PCE)	ND	5. µg/kg			
Toluene	ND	5. µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	10. µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg			
Trichloroethene (TCE)	ND	5. µg/kg			
Vinyl chloride	ND	6. µg/kg			
o-Xylene	ND	5. µg/kg			
m,p-Xylene	ND	5. µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	79	74 - 121
Dibromofluoromethane	100	80 - 120
Toluene-d8	104	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT NAME: V496
PROJECT NUMBER: 17777

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 9808271S60A-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996
MATRIX: Solid

EXTRACTED: 8/27/98
ANALYZED: 8/27/98

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg			
Benzene	ND	5 µg/kg			
Bromodichloromethane	ND	5 µg/kg			
Bromoform	ND	5 µg/kg			
Bromomethane	ND	5 µg/kg			
2-Butanone	ND	25 µg/kg			
Carbon disulfide	ND	5 µg/kg			
Carbon tetrachloride	ND	5 µg/kg			
Chlorobenzene	ND	5 µg/kg			
Chloroethane	ND	5 µg/kg			
Chloroform	ND	5 µg/kg			
Chloromethane	ND	5 µg/kg			
Dibromochloromethane	ND	5 µg/kg			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg			
cis-1,2-Dichloroethene	ND	5 µg/kg			
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
cis-1,3-Dichloropropene	ND	5 µg/kg			
trans-1,3-Dichloropropene	ND	5 µg/kg			
Ethylbenzene	ND	5 µg/kg			
2-Hexanone	ND	25 µg/kg			
Methylene chloride (Dichloromethane)	ND	5 µg/kg			
4-Methyl-2-pentanone	ND	25 µg/kg			
Styrene	ND	5 µg/kg			
1,1,2,2-Tetrachloroethane	ND	5 µg/kg			
Tetrachloroethene (PCE)	ND	5 µg/kg			
Toluene	ND	5 µg/kg			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	10 µg/kg			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg			
Trichloroethene (TCE)	ND	5 µg/kg			
Vinyl chloride	ND	6 µg/kg			
o-Xylene	ND	5 µg/kg			
m,p-Xylene	ND	5 µg/kg			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	103	74 - 121
Dibromofluoromethane	98	80 - 120
Toluene-d8	106	81 - 117

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NEL LABORATORIES

CLIENT: Bechtel Nevada

CLIENT ID: Method Blank

PROJECT NAME: V496

DATE SAMPLED: NA

PROJECT NUMBER: 17777

NEL SAMPLE ID: 9808272W60A-BLK

TEST: Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996

MATRIX: Aqueous

EXTRACTED: 8/27/98

ANALYZED: 8/27/98

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L			
Benzene	ND	5 µg/L			
Bromodichloromethane	ND	5 µg/L			
Bromoform	ND	5 µg/L			
Bromomethane	ND	5 µg/L			
2-Butanone	ND	25 µg/L			
Carbon disulfide	ND	5 µg/L			
Carbon tetrachloride	ND	5 µg/L			
Chlorobenzene	ND	5 µg/L			
Chloroethane	ND	5 µg/L			
Chloroform	ND	5 µg/L			
Chloromethane	ND	5 µg/L			
Dibromochloromethane	ND	5 µg/L			
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L			
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L			
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L			
cis-1,2-Dichloroethene	ND	5 µg/L			
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
cis-1,3-Dichloropropene	ND	5 µg/L			
trans-1,3-Dichloropropene	ND	5 µg/L			
Ethylbenzene	ND	5 µg/L			
2-Hexanone	ND	25 µg/L			
Methylene chloride (Dichloromethane)	ND	5 µg/L			
4-Methyl-2-pentanone	ND	25 µg/L			
Styrene	ND	5 µg/L			
1,1,2,2-Tetrachloroethane	ND	5 µg/L			
Tetrachloroethene (PCE)	ND	5 µg/L			
Toluene	ND	5 µg/L			
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L			
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L			
Trichloroethene (TCE)	ND	5 µg/L			
Vinyl chloride	ND	5 µg/L			
m-Xylene	ND	5 µg/L			
n,p-Xylene	ND	5 µg/L			

ND - Not Detected

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
m-Bromofluorobenzene	93	86 - 115
Dibromofluoromethane	101	86 - 118
Toluene-d8	102	88 - 110

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SUPPORTING DATA

SAMPLE DELIVERY GROUP: V496CLIENT: RP - JERRY BONNLABORATORY: NELFINAL REPORT RECEIVED: 9/10/98DATE REVIEWED: 9/20/98REVIEWED BY:

VOLATILES:

MATRIX: SOILARE VOA DATA ACCEPTABLE: YES

	<u>SAMPLE ID</u>	<u>INSTRUMENT ID</u>	<u>DATE</u>	<u>TIME</u>	<u>ACCEPTABLE?</u>
1. TUNE	<u>BFB</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>See Comment</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/25/98</u>	<u>0737</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>0723</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1112</u>	<u>YES</u>
	<u>BFB</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1456</u>	<u>YES</u>
	<u>BFB</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>1525</u>	<u>YES</u>
2. CALIBRATION	<u>INITIAL - SOIL</u>	<u>5972-IN</u>	<u>7/30/98</u>		<u>YES</u>
	<u>INITIAL - WATER</u>	<u>VOA2</u>	<u>8/25/98</u>		<u>YES</u>
	<u>VSTD050 CC980827-S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>0749</u>	<u>YES</u>
	<u>VSTD050 CC980827-S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>0816</u>	<u>YES</u>
	<u>VSTD050 CC980827</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1137</u>	<u>YES</u>
	<u>VSTD050 CC980827</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1518</u>	<u>YES</u>
	<u>VSTD050 CC980827-S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>1641</u>	<u>YES</u>
3. METHOD BLANK	<u>VLBK 980827A - S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>0841</u>	<u>YES</u>
	<u>VLBK 980827A</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1214</u>	<u>YES</u>
	<u>VLBK 980827B</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1558</u>	<u>YES</u>
	<u>VLBK 980827B - S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>1734</u>	<u>YES</u>
4. EXT. BLANK	<u>N/A</u>	<u>N/A</u>			<u>N/A</u>
5. LAB CONTROL	<u>VSTD050 CC980827-S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>0749</u>	<u>YES</u>
	<u>VSTD050 CC980827-S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>0816</u>	<u>YES</u>
	<u>VSTD050 CC980827</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1137</u>	<u>YES</u>
	<u>VSTD050 CC980827</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1518</u>	<u>YES</u>
	<u>VSTD050 CC980827-S</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>1641</u>	<u>YES</u>
6. TRIP BLANK	<u>TB082698</u>	<u>VOA2</u>	<u>8/27/98</u>	<u>1948</u>	<u>YES</u>
7. SAMPLES	<u>650LFEOUT-2ESW10.5</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>2029</u>	<u>YES</u>
	<u>650LFEOUT-2ESW10.5 MS</u>	<u>5972-IN</u>	<u>8/28/98</u>	<u>0015</u>	<u>YES</u>
	<u>650LFEOUT-2ESW10.5 MSD</u>	<u>5972-IN</u>	<u>8/28/98</u>	<u>0100</u>	<u>YES</u>
	<u>650LFEOUT-2WSW10.5</u>	<u>5972-IN</u>	<u>8/27/98</u>	<u>2115</u>	<u>YES</u>

8. SURROGATE RECOVERY ACCEPTABLE: YES9. MS/MSD RECOVERY ACCEPTABLE: SEE COMMENTS10. METHOD BLANK ACCEPTABLE: YES11. HOLDING TIMES ACCEPTABLE: YES

		<u># DAYS</u>	<u>ACCEPTABLE</u>
a. Earliest Date Sampled	<u>8/26/98</u>	<u>0</u>	<u>0</u>
b. Date ASL Received:	<u>N/A</u>	<u>N/A</u>	<u>1</u>
c. Date Contract Lab Received:	<u>8/27/98</u>	<u>1</u>	<u>5</u>
d. Date Extracted:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
e. Latest Date Analyzed:	<u>8/28/98</u>	<u>2</u>	<u>14</u>

12. Correct Conc units used: YES13. CALCULATIONS ACCEPTABLE: YES

14. ARE AREAS ACCEPTABLE:	<u>YES</u>
15. RRT IS ACCEPTABLE:	<u>YES</u>
16. FORMS ACCEPTABLE:	<u>YES</u>
17. Chain-of-Custody agrees:	<u>YES</u>

COMMENTS: Method associated quality assurance and control criteria were met. The laboratory performed matrix spike / matrix spike duplicate analyses on sample 650LFEOU-2ESW10.5. The recovery of 1,1-dichloroethene in the MSD was outside the upper control limit, however, the relative percent difference was acceptable. The sample's 1,1-DCE result was accordingly flagged with "Jm". The bromofluorobenze (BFB) tune associated with the soil initial calibration was not submitted with the data package. The laboratory was contacted to submit the soil BFB tune data. The client will be notified if the resubmitted data impact the sample data. NEL flagged those compounds reported below their usual reporting limit with "Je". These lower limits had been agreed to with the laboratory prior to initiation of work and had been reported without flags to this point. The laboratory had been contacted and requested to submit the final report without the flags, however, this was not done. Contact ASL if the unflagged reporting limit is required and the laboratory will again be requested to submit un-"Je"-flagged data.

BN-0732 (02/98)

Bechtel Nevada

Interoffice Memorandum

JUL 9 1 5 PM '98

To: S. J. Nacht

Date: July 08, 1998

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

No.: 2150-AL-98-0300

**Subject: DATA REPORT FOR SAMPLE DELIVERY
GROUPS (SDGs) B494, B510, and B553
Project No. 04001**

Analytical Services Laboratory's results have been reported to J. F. Bonn for the 20 minute gamma spectroscopy analysis of composited swipe samples collected on June 18 (B494), June 23 (B510), and July 2 (B553), 1998. The swipes were associated with the Building 650 Leachfield Closure project. Also included were the statements of services associated with these SDGs.

SPECIFIC:

Gamma Spectroscopy:

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

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

T. P. Van Sittert

TPV:pma

Subject Code: ENV3

cc: Correspondence Control, NLV008
EM correspondence, NLV022
J. F. Bonn, (results enc.) NTS306
ASL SDG B494, (results enc.) NTS273
ASL SDG B510, (results enc.) NTS273
ASL SDG B553, (results enc.) NTS273

SDG B494

RADIOANALYTICAL

RESULTS

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Bldg 650 Leachfield Closure
J. F. Bonn
M/S NTS306

Report Date: 24-JUN-98
Sample Delivery Group: B494
Batch: 0824
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650PIPE	No peaks	GAMPF	0.00E+00	0.0E+00		0.0E+00	NA	06-18-98	06-18-98	1.00E+00	sm	Surfac			05-01	G9223-0-75108
QA BKG GF/A U05	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	06-18-98	10-01-97	1.00E+00	SM CG TR	QUAL			05-01	Q0605-0-00220
QA BKG GF/A U05	AM241	GAMPF	0.00E+00	0.0E+00	U	3.0E+01	pCi	06-18-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00220
QA BKG GF/A U05	CO60	GAMPF	0.00E+00	0.0E+00	U	1.4E+01	pCi	06-18-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00220
QA BKG GF/A U05	CS137	GAMPF	0.00E+00	0.0E+00	U	9.4E+00	pCi	06-18-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00220
QA SP:NAS-A1459	AM241	GAMPF	3.07E+04	8.4E+00		3.4E+01	pCi	06-18-98	08-01-93	1.00E+00	sm	QUAL		113.7	05-01	Q0590-5-14663
QA SP:NAS-A1459	CO60	GAMPF	3.48E+04	8.7E+00		3.2E+01	pCi	06-18-98	08-01-93	1.00E+00	sm	QUAL		103.1	05-01	Q0590-5-14663
QA SP:NAS-A1459	CS137	GAMPF	3.43E+04	8.0E+00		1.2E+01	pCi	06-18-98	08-01-93	1.00E+00	sm	QUAL		101.4	05-01	Q0590-5-14663

Comment:

Data generated from a 20 minute gamma spectroscopy analysis
of one composited sample consisting of five swipes.
Preliminary data were provided the client on 6/18/98.

Prepared by: Date: 6-24-98

Approved by: Date: 6/25/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

SDG B510

RADIOANALYTICAL

RESULTS

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: Remediation Projects
Bldg 650 Leachfield Closure
J. F. Bonn
M/S NTS306

Report Date: 24-JUN-98
Sample Delivery Group: B510
Batch: 0825
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
650NEXCPIPE	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	06-23-98	06-23-98	1.00E+00	sm	Surfac			05-01	G9242-0-75109
QA BKG GF/A U05	No peaks	GAMPF	0.00E+00	0.0E+00		0.0E+00	NA	06-23-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00225
QA BKG GF/A U05	AM241	GAMPF	0.00E+00	0.0E+00	U	3.3E+01	pCi	06-23-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00225
QA BKG GF/A U05	CO60	GAMPF	0.00E+00	0.0E+00	U	1.2E+01	pCi	06-23-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00225
QA BKG GF/A U05	CS137	GAMPF	0.00E+00	0.0E+00	U	1.0E+01	pCi	06-23-98	10-01-97	1.00E+00	sm	QUAL			05-01	Q0605-0-00225
QA SP:NAS-A1459	AM241	GAMPF	3.07E+04	8.4E+00		3.8E+01	pCi	06-23-98	08-01-93	1.00E+00	sm	QUAL		113.9	05-01	Q0590-5-14724
QA SP:NAS-A1459	CO60	GAMPF	3.48E+04	8.7E+00		2.7E+01	pCi	06-23-98	08-01-93	1.00E+00	sm	QUAL		103.2	05-01	Q0590-5-14724
QA SP:NAS-A1459	CS137	GAMPF	3.43E+04	8.0E+00		1.3E+01	pCi	06-23-98	08-01-93	1.00E+00	sm	QUAL		101.4	05-01	Q0590-5-14724

Comment:

Data generated from a 20 minute gamma spectroscopy analysis of one composite swipe sample submitted on 6/23/98. Preliminary data were provided to the client on 6/23/98.

Prepared by:

Date: 6-24-98

Approved by:

Date: 6/25/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

SDG B553

RADIOANALYTICAL

RESULTS

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

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Reported to: 650 Leachfield Closure Project
Remediation Projects
J. F. Bonn, M/S NTS306

Report Date: 8-JUL-98
Sample Delivery Group: B553
Batch: 0710
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Analysis	Result	Error %	Qual Flag	MDA	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Type Matrix	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
EAST INNER PIPE	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	07-02-98	07-02-98	1.00E+00	sm	Surfac			06-01	G9317-1-75174
WEST OUTER PIPE 0-16	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	07-02-98	07-02-98	1.00E+00	sm	Surfac			06-01	G9317-0-75173
QA BKG GF/A U06	No Nucl Det	GAMPF	0.00E+00	0.0E+00	U	0.0E+00	NA	07-02-98	10-01-97	1.00E+00	SM bc 72 sm	Qualit			06-01	Q0606-0-00237
QA BKG GF/A U06	AM241	GAMPF	0.00E+00	0.0E+00	U	3.4E+01	pCi	07-02-98	10-01-97	1.00E+00	sm	Qualit			06-01	Q0606-0-00237
QA BKG GF/A U06	CO60	GAMPF	0.00E+00	0.0E+00	U	9.6E+00	pCi	07-02-98	10-01-97	1.00E+00	sm	Qualit			06-01	Q0606-0-00237
QA BKG GF/A U06	CS137	GAMPF	0.00E+00	0.0E+00	U	9.1E+00	pCi	07-02-98	10-01-97	1.00E+00	sm	Qualit			06-01	Q0606-0-00237
QA SP:NAS-A2207	AM241	GAMPF	6.15E+04	7.8E+00		3.6E+01	pCi	07-02-98	09-01-94	1.00E+00	sm	Qualit		102.1	06-01	Q0590-0-14808
QA SP:NAS-A2207	CO60	GAMPF	6.97E+04	7.9E+00		2.0E+01	pCi	07-02-98	09-01-94	1.00E+00	sm	Qualit		93.5	06-01	Q0590-0-14808
QA SP:NAS-A2207	CS137	GAMPF	5.52E+04	7.7E+00		1.2E+01	pCi	07-02-98	09-01-94	1.00E+00	sm	Qualit		100.2	06-01	Q0590-0-14808

Comment:

Data generated from analyses of composited samples submitted
to the laboratory on July 2, 1998.

Prepared by:

Date: 7-8-98

Approved by:

Date: 7/8/98

Qualification Flags:

E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
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Q = Bad Instrument Quality Control, Result is OK
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U = Result is less than Minimum Detectable Activity

Note: % Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

APPENDIX D

PHOTOGRAPHS OF CLOSURE ACTIVITIES

APPENDIX D - PLATE 2

APPENDIX D - PLATE 3

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