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REPORTS

DATE:

April 2004

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Memorandum

TO: Wayne Price, OCD

FROM: Rick Shean, Environmental Scientist, Ground Water Quality Bureau

DATE: April 28,2004

SUBJECT: DOE submission of Application / Corrective Action Plan for Gasbuggy Site

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Here is the report that DOE has submitted with the VRP application for the Gasbuggy site. I will be reviewing for the VRP, but it is not necessary for you to review on our account, unless you would like me to have them address something in their work plan (Appendix A) that they have not included. They plan to cleanup to a level of 100 mg/kg for diesel in the drilling mud.

Please call me if you have any questions or need additional information.

Thanks,

Rick 476 - 3658

Nevada
Environmental
Restoration
Project

DOE/NV--908

National Nuclear Security Administration

Surface Corrective Action Investigation Report with Surface Corrective Action Plan for the Gasbuggy Site, New Mexico

Controlled Copy No.: UNCONTROLLED
Revision No.: 0

April 2004

Approved for public release; further dissemination unlimited.

Environmental Restoration
Division

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office

DOE/NV--908

SURFACE CORRECTIVE ACTION INVESTIGATION REPORT WITH SURFACE CORRECTIVE ACTION PLAN FOR THE GASBUGGY SITE, NEW MEXICO

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
Las Vegas, Nevada

Controlled Copy No.: ___
Revision No.: 0

April 2004

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List of Acronyms and Abbreviations

AEC	U.S. Atomic Energy Commission
AOC	Area of Concern
bgs	Below Ground Surface
BLM	U.S. Bureau of Land Management
CAP	Corrective Action Plan
CLP	Contract Laboratory Program
cm/s	Centimeters per second
CNF	Carson National Forest
COPC	Contaminants of potential concern
CP	Control Point
CQCSR	Chemical Quality Control Summary Report
CRZ	Contamination Reduction Zone
CY	Cubic yards
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DQI	Data Quality Indicator
DQO	Data Quality Objective
DRO	Diesel-range organics
E&P	Exploration/production
EC	Environmental Compliance
EPA	U.S. Environmental Protection Agency
EZ	Exclusion Zone
ft	Feet/foot
ft/yr	Feet per year
GPS	Global Positioning System
GRO	Gasoline-range organics
H&S	Health and Safety

List of Acronyms and Abbreviations (Continued)

HP	Helicopter Pad
HWB	Hazardous Waste Bureau
Hwy	Highway
ICP	Inductively coupled plasma
IDW	Investigation-derived waste
in.	Inches
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicate
MDL	Minimum detectable level
mg/kg	Milligrams per kilogram
MS	Matrix spike
MSD	Matrix spike duplicate
NCR	Nonconformance
NEPA	*National Environmental Policy Act*
NIST	National Institute for Standards and Technology
NMED HWB	New Mexico Environment Department of Hazardous Waste Bureau
NNSA/NSO	U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office
OCD	New Mexico Oil Conservation Division
PAL	Preliminary Action Level
PB	Preparation blanks
pCi/g	Picocuries per gram
PID	Photoionization detector
PPE	Personal protective equipment
ppm	Parts per million
PRG	Preliminary remediation goal
QA	Quality assurance
QAPP	Quality Assurance Project Plan

List of Acronyms and Abbreviations *(Continued)*

QC	Quality control
RCRA	*Resource Conservation and Recovery Act*
RPD	Relative percent difference
RTP	Recording Trailer Park
SDG	Sample delivery group
SGZ	Surface ground zero
SSHASP	Site-specific health and safety plan
SSO	Site Safety Officer
SVOC	Semivolatile organic compound
SWPPP	Storm Water Pollution and Prevention Plan
SZ	Support Zone
TCLP	Toxicity characteristic leaching procedure
TMB	1,2,4-trimethylbenzene
TPH	Total petroleum hydrocarbons
TSDF	Treatment, storage, disposal, facility
USFS	U.S. Forest Service
VOC	Volatile organic compound
VRP	Voluntary Remediation Program
WM	Waste Management
µg/kg	Micrograms per kilogram
%R	Percent recovery

Executive Summary

This report presents a summary of the surface investigation activities conducted at the Gasbuggy Site by the U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office (NNSA/NSO). The Gasbuggy Site is located approximately 55 air miles east of Farmington, New Mexico, in Rio Arriba County within the Carson National Forest. Project Gasbuggy was the first of three joint government-industry experiments conducted under the Plowshare Program to test the effectiveness of nuclear explosives to fracture low-permeability natural gas reservoirs to stimulate production. Gasbuggy consisted of one 29-kiloton nuclear device (DOE/NV, 2000) emplaced in a boring at a depth of 4,240 feet (ft) below ground surface (bgs) in the Pictured Cliffs sandstone formation and detonated on December 10, 1967 (AEC, 1971).

The Gasbuggy Site surface investigation focused on five operational areas where the DOE conducted drilling and other surface support activities for the Gasbuggy Project. For the purposes of this document, the Gasbuggy Site surface is defined as the surface soils and shallow subsurface soils that may have been impacted as a result of surface activities conducted during the Gasbuggy Project or surface and shallow subsurface soil that may have been impacted as a result of a release from the deep subsurface. This definition intentionally excludes contamination in the deep subsurface resulting from the Project Gasbuggy nuclear detonation.

The purpose of this Corrective Action Investigation Report is to present and interpret the data collected during the corrective action investigation. The Gasbuggy Site surface includes the surface and shallow subsurface soils and shallow groundwater to a depth of approximately 55 ft bgs. Based on the results of the surface investigation, a corrective action of clean closure is recommended to remove contamination at the site. The NNSA/NSO intends to remove the contaminated soil allowing closure of the site under the New Mexico Voluntary Remediation Program. Justification for clean closure is provided through a review of current surface and shallow subsurface conditions, including the presence, concentration, and extent of contamination. Closure activities will be conducted in accordance with the Corrective Action Plan (CAP) included as Appendix A of this report.

A corrective action investigation was performed from August to September 2000, and July through October 2002. Soil sample analytical results were analyzed for total *Resource Conservation and Recovery Act* metals, volatile organic compounds, semivolatile organic compounds, total petroleum

hydrocarbons (TPH) diesel-range organics (DRO) and gasoline-range organics (GRO). Soil sample analytical results for arsenic, 1,2,4-trimethylbenzene, TPH-DRO, and TPH-GRO indicated these compounds were present above screening levels in one or more samples.

Arsenic results were determined to be representative of background concentrations found throughout the Gasbuggy Site; therefore, they pose no increased risk to human health or the environment.

A preliminary risk assessment determined that the levels of 1,2,4-trimethylbenzene at the Gasbuggy Site are below concentrations determined to be hazardous to human health according to the most recent risk assessment guidance.

Concentrations of TPH were found to exceed the clean up level of 100 parts per million.

It is the intention of NNSA/NSO to clean close the site surface under the New Mexico Voluntary Remediation Program. Closure will be accomplished by removing all soil that exceeds the associated cleanup levels. Contaminated soils will be transported off site to an approved landfill. Confirmation samples will be collected to document removal of contaminated material.

1.0 Introduction

This report presents a summary of the surface investigation activities conducted at the Gasbuggy Site by the U.S. Department of Energy (DOE), National Nuclear Security Administration Nevada Site Office (NNSA/NSO). For the purposes of this document, the Gasbuggy Site surface is defined as the surface soils and shallow subsurface soils that may have been impacted as a result of surface activities conducted during the Gasbuggy Project or surface and shallow subsurface soil that may have been impacted as a result of a release from the deep subsurface. This definition intentionally excludes contamination in the deep subsurface resulting from the Project Gasbuggy nuclear detonation.

Based on the results of the surface investigation, a corrective action of clean closure is recommended to remove contamination at the site. The NNSA/NSO intends to remove the contaminated soil allowing closure of the site under the New Mexico Voluntary Remediation Program. Closure activities will be conducted in accordance with the Corrective Action Plan (CAP) included as Appendix A of this report.

Project Gasbuggy was the first of three joint government-industry experiments conducted under the Plowshare Program to test the effectiveness of nuclear explosives to fracture low-permeability natural gas reservoirs to stimulate production. Gasbuggy consisted of one 29-kiloton nuclear device (DOE/NV, 2000) emplaced in a boring at a depth of 4,240 feet (ft) below ground surface (bgs) in the Pictured Cliffs sandstone formation and detonated on December 10, 1967 (AEC, 1971). The Gasbuggy Site is located approximately 55 air miles east of Farmington, New Mexico, in Rio Arriba County within the Carson National Forest (CNF) (Figure 1-1). Six major natural gas production tests were conducted after reentry drilling was completed in January 1968. Long-term production testing was completed in November 1973 and pressure monitoring activities were completed in late 1976 (DOE/NV, 1978).

Characterization of the surface and shallow subsurface of the Gasbuggy Site was conducted according to the *Site Characterization Work Plan for Gasbuggy, New Mexico,* Revision 1 (Work Plan) (DOE/NV, 2002). The Work Plan was reviewed and commented on by the New Mexico Environment Department, Hazardous Waste Bureau.

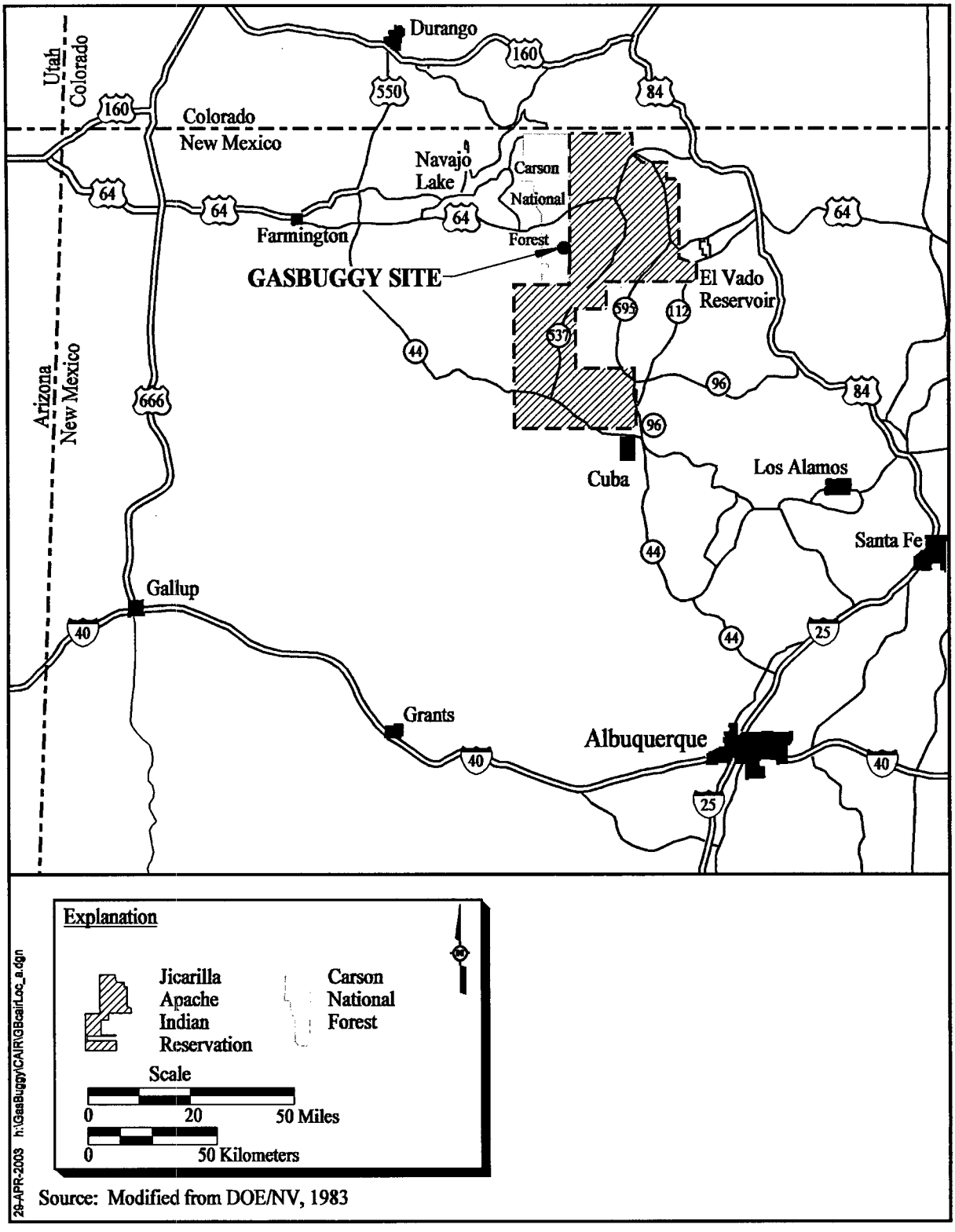


Figure 1-1
Gasbuggy Site Location Map

Characterization activities took place from July to October, 2002. A preliminary field investigation took place during the summer of 2000. A detailed account of the preliminary field investigation, including data, is provided in Appendix C of the Work Plan (DOE/NV, 2002).

Site characterization work was conducted in the following operational areas of the Gasbuggy Site (Figure 1-2):

- Surface Ground Zero (SGZ) Area
- Well GB-D Area
- Recording Trailer Park (RTP)
- Control Point (CP)
- Helicopter Pad (HP)

Additional descriptions of these operational areas and the potential environmental impacts are provided in the Work Plan (DOE/NV, 2002).

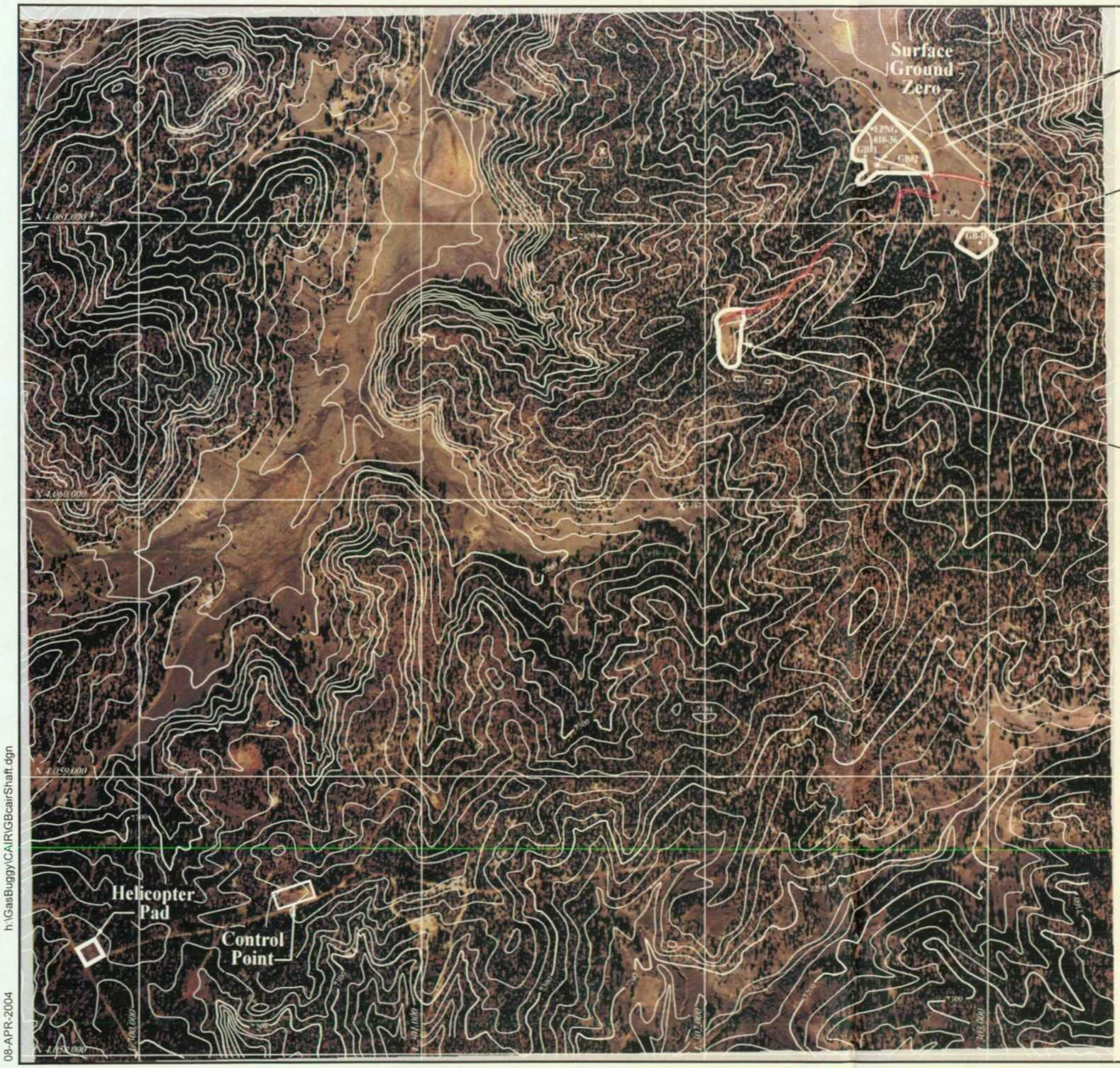
1.1 Purpose

The purpose of this report is to provide information and data to support the recommendation that the Gasbuggy Site surface be clean closed and provide details on how the closure will be achieved. The information and data included in the main body of this report will document that the following data quality objective statements were met during the Gasbuggy Site surface corrective action investigation.

- Collect data of sufficient quality and quantity to determine the nature and extent of contaminants of potential concern (COPCs) at the surface/shallow subsurface.
- Collect data of sufficient quality and quantity to support a risk-based decision on the need to perform corrective actions for the surface/shallow subsurface, if COPCs exceed the preliminary action levels (PALs).
- Collect data of sufficient quantity and quality to support a corrective action alternative analysis for the surface/shallow subsurface, if the risk-based decision indicates a corrective action is required.

1.2 Scope

The scope of this report is the corrective action investigation, closure recommendation, and corrective action plan for the Gasbuggy Site surface. As stated in the introduction, the Gasbuggy Site surface is



Cattle Tanks (Runoff Catchment Basins)

Well GB-D Area

Recording Trailer Park

Explanation

- Well Location and Label
- Major Contours at 100-ft Intervals
- Road
- Project Gasbuggy Operational Area

Note

Aerial Photograph is for Information Only and Not Coincident to Site

Scale

0 1,000 2,000 Feet

0 500 1,000 Meters

Source: USGS, 1995; EG&G/EM, 1994

Figure 1-2
Gasbuggy Site and Surrounding Area

08-APR-2004 h:\GasBuggy\CAIR\GBcairShaft.dgn

defined as the surface soils and shallow subsurface soils that may have been impacted as a result of activities conducted during the Gasbuggy Project. Investigation of deep subsurface contamination resulting from the detonation of the nuclear device and/or drilling practices does not fall within this scope. Although hydrostatic testing and groundwater sampling was performed during field work conducted in the summer of 2002 at the deep groundwater monitoring well located on site (i.e., Well EPNG 10-36), this work does not fall under the scope of this document and will not be discussed in further detail.

1.3 Summary of Investigation

The surface field investigation consisted of four major tasks: (1) geophysical investigation; (2) septic tank investigation and/or closure; (3) surface/shallow subsurface soil investigation; and (4) shallow groundwater investigation.

The **geophysical investigation** was conducted in the summer of 2000 and the results were presented in the Work Plan. Results from the geophysical investigation were used to aid in identifying areas of suspect soil contamination, identifying potential locations of septic tanks, and identifying other underground features.

The plan for the **septic tank investigation** was to locate the septic tanks, ascertain their structure/condition, sample contents as appropriate, and close the tanks, as necessary. Geophysical data and historical documentation were used to identify potential locations of three septic tanks. One of three septic tanks was located and confirmed as closed (i.e., filled with native soil). Samples were collected of soil inside the tank, soil on the outside of the tank, and the soil below the leach line associated with the tank. The other two septic tanks mentioned in the historical literature were not located.

The **surface/shallow subsurface soil investigation** consisted of trenching with a backhoe to observe shallow subsurface conditions and collecting soil cores by the direct-push or rotosonic drilling methods. Observations were recorded on soil types and potential contamination during both trenching and drilling. The majority of soil samples were collected by the direct push-method. Sampling locations were selected based on the results of the geophysical investigation, historical

documentation, and/or field observations. Soil samples were also collected at undisturbed areas to establish background conditions for metals.

The **shallow groundwater investigation** consisted of drilling boreholes to determine depth to shallow groundwater. As described in the Work Plan, shallow groundwater was not to be considered a potential migration pathway if the depth to the shallow groundwater table was greater than 10 ft below soil contamination. Potential soil contamination was identified during the investigation at the SGZ area and the Well GB-D Area. The deepest contamination identified during the investigation was approximately 16 ft bgs. Six (6) borings were drilled to depths between approximately 50 and 75 ft bgs. No shallow groundwater table was identified at the SGZ area. A shallow groundwater table was identified at the Well GB-D area of the Gasbuggy Site at a depth of greater than 40 ft below the contaminated mud layer. Therefore, no shallow groundwater samples were collected and shallow groundwater will not be considered a migration pathway and/or route of exposure for contaminants in the shallow subsurface.

The actions taken to complete the field investigation are presented in Table 1-1 along with the dates of each activity.

Table 1-1
Summary of Site Characterization

Activity	Dates of Activity[a]
Preliminary Field Investigation	August - September, 2000
Summer 2002 Field Work	
Mobilization and Site Set Up	July 8 - 11, 2002
Septic Tank Investigation	July 11 - 16, 2002
Surface/Shallow Subsurface Soil Investigation	July 11 - August 28, 2002
Shallow Groundwater Investigation	August 28 - September 9, 2002
Site Survey	September 9 - 16, 2002
Waste Disposal and Demobilization	September 16 - October 15, 2002
Site Restoration (i.e., reseeding)	October 7 - 10, 2002

[a]Due to NNSA/NSO funding constraints, no work occurred on the Gasbuggy Site during fiscal year 2001.

1.4 Report Content

The content of this report is as follows:

- Section 1.0 provides information on the investigation background, purpose, scope of work, and the report contents.
- Section 2.0 provides a general summary of field methods.
- Section 3.0 provides a summary of the soil investigation.
- Section 4.0 provides a summary of the background soil investigation.
- Section 5.0 provides a summary of the soil investigation at the SGZ Area.
- Section 6.0 provides a summary of the soil investigation at the Well GB-D Area.
- Section 7.0 provides a summary of the soil investigation at the RTP.
- Section 8.0 provides a summary of the soil investigation at the CP.
- Section 9.0 provides a summary of the shallow groundwater investigation.
- Section 10.0 provides a summary of the geotechnical sample results.
- Section 11.0 provides a summary of the survey, demobilization, and waste disposal activities.
- Section 12.0 provides conclusions.
- Section 13.0 provides recommendations.
- Section 14.0 provides a list of references.

Appendix A - Gasbuggy Site Surface Proposed Corrective Action Plan

Appendix B - Gasbuggy Site Surface Soil Boring Location Survey Data

Appendix C - Gasbuggy Site Surface Investigation Chemical Quality Control Summary Report

Appendix D - Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico

Appendix E - Analytical Results for Samples Collected During the Surface Investigation at the Gasbuggy Site, New Mexico.

To make this report a concise summary, the complete field documentation (e.g., Field Activity Daily Logs, Sample Collection Logs, Analysis Request/Chain of Custody Forms, Visual Classification of Soils Forms) and laboratory data are not contained in this report. These documents are retained in project files as both hard copy and electronic media, where appropriate.

2.0 Summary of Field Methods

This section provides general information on the field methods used during the septic tank investigation, surface and shallow subsurface soil investigation, and shallow groundwater investigation conducted at the Gasbuggy Site.

2.1 Excavation

Excavation was used at the Gasbuggy Site mainly as a method to observe the shallow subsurface soil and to locate site features not definitively located by geophysical surveys. Excavation was used in this manner to search for the septic tanks and for the drilling mud landfills (e.g., mud disposal trenches). Observations on the physical features of the soil were described and logged for each excavation. When drilling mud or other potentially contaminated material was encountered, the excavation was halted. Based on observation and screening with a photoionization detector, no potentially contaminated material was removed from any excavation. All excavations were backfilled and leveled at the end of each day.

Each excavation was assigned an excavation number for tracking purposes. The locations of each excavation were recorded using global positioning system (GPS) technology.

2.2 Sample Collection Methods

The majority of soil samples were collected by one of two drilling methods (i.e., direct-push or sonic drilling) described below. One soil sample was collected directly from an open excavation. All soil samples were collected in accordance with the New Mexico Quality Assurance Project Plan (QAPP) (see Appendix A of the Work Plan [DOE/NV, 2002]).

2.2.1 Direct-Push Method

The direct-push method of soil sample collection involves the use of a truck-mounted, direct-push drill rig. The direct-push method works by mechanically pushing and/or hammering a core barrel sampler into the soil to the desired depth. Soil core was collected continuously from surface to total depth in clean, clear, lexan sleeves located within the core sampler. The core sampler used was 4 ft in length and had an inside diameter of 1.75 inches (in.). Upon removal of the sampler from the boring,

the lexan sleeve was extracted. The soil core was transferred from the driller to the sample collection team, where it was opened. Where appropriate (i.e., not all cores were sampled), sample aliquots for volatile organic compound (VOC) analysis and total petroleum hydrocarbons (TPH) gasoline-range organics (GRO) were collected immediately upon opening. If soil samples were to be collected for TPH field screening from a specified core, these samples were also collected at this time.

The contents of all sampling sleeves were inspected, and the physical features of the soil or drilling materials were described and logged. Upon completion of the visual observations of the soils, the contents of the sleeves were homogenized over the selected interval. The homogenized soils/drilling materials were then placed in sample containers and labeled. Excess soil was placed in a 20-cubic yard (CY) roll-off container.

In all, 147 soil borings were completed, 6 for background sample collection and 141 for site characterization. Samples were not collected from all boreholes. The location of each borehole was recorded using GPS technology.

2.2.2 *Sample Collection by Rotosonic Drilling*

The final 13 borings were completed by the rotosonic drilling method. The rotosonic drilling method works by advancing a 4-in. diameter, 10-ft long core barrel into the soil using mechanical pressure, vibration, and rotation. Soil core was collected continuously from surface to total depth at each sample location. Approximately 5 ft of soil core was collected in this manner at any one time. Upon removal of the core barrel from the boring, a 5-in. diameter polyurethane bag was placed over the end of the core barrel and the soil core was extruded into the bag. The soil core was transferred from the driller to the sample collection team for sample collection in the same manner as described for direct push. Excess soil was placed in a 20-cubic yard roll-off container.

2.3 *Soil Field Screening*

All soil cores and soil sample material was visually inspected and logged. During the soil investigation, a number of samples were field screened for diesel contamination using a portable gas chromatography instrument. The purpose of this screening was to determine if the extent of potential diesel contamination in and around the mud pits had been established.

2.4 Sample Numbering

The boring identification number and depth interval from which each sample was collected is reflected in the sample numbering system (Table 2-1). Note that samples from the Preliminary Site Investigation conducted in 2000 will, in some cases, be reported in this document (all sample results from the Preliminary Site Investigation were originally reported in Appendix C of the Work Plan).

2.5 Rotosonic Drilling Use in the Shallow Groundwater Investigation

Rotosonic drilling technology was used to explore the subsurface in selected locations for shallow groundwater zones. During this process, continuous core was collected, described, and logged. Three samples were collected for geotechnical analysis. No samples were collected for chemical analysis during this portion of the investigation.

Table 2-1
Boring, Excavation, and Sample Identification Nomenclature

Description	Example of Identification Number	Description
Excavation	GBE001	GB = Gasbuggy E = Excavation 001 = Sequential excavation number
Excavation Soil Samples	GBE0210203	GBE021 = Excavation identification number 0203 = depth bgs in ft at which the sample was collected
Soil Boring	GBS030 or GBP001	GB = Gasbuggy S = Soil boring P = Soil boring conducted during the preliminary investigation in 2000 030 = Sequential boring number, borings "001" - "029" were completed in 2000; soil borings completed in 2000 begin with "030"
Soil Boring Sample	GBS0300405	GBS030 = Soil boring identification number 0405 = depth bgs in ft at which the sample was collected
Background Soil Boring and Sample	GBB04	GB = Gasbuggy B = Background boring 04 = Sequential background boring number, samples "01" to "03" were collected in 2000, samples "04" to "09" were collected in 2002
Sample Duplicate	GB033	All quality assurance/quality control (QA/QC) samples including soil and water matrices are represented by a five-digit alphanumeric code. GB = Gasbuggy "033" - Three-digit sequential number for QA/QC samples, samples collected in 2002 begin with "033"; samples "001" to "032" were collected in 2000
Source Blank		
Equipment Rinsate Blank		
Field Blank		

3.0 Summary of Soil Investigation

3.1 Scope and Objectives of the Soil Investigation

The objectives of the soil investigation were to determine the nature and extent of potential contamination at the site. The scope of the soil investigation included the surface and shallow-subsurface soils at the SGZ area, Well GB-D area, RTP, and CP. There was no soil investigation at the HP.

The results of the geophysical surveys conducted in 2000, along with historical photographs, site diagrams, and current site conditions were used to determine sampling locations.

3.2 Summary of Chemical Data Collection and Quality Control for the Soil Investigation

This section presents an overall description of the data collection with regard to completion of DQOs for the Gasbuggy Site surface investigation. Positive detects greater than the PAL are discussed in regard to the corresponding operational area in Section 5.0 through Section 8.0. A Chemical Quality Control Summary Report (CQCSR) is provided in Appendix C. Analytical results are provided in Appendix E.

3.2.1 Project Data Quality Objectives

All project data quality objectives (DQOs) listed in Section 1.1 were met for COPCs in accordance with the Work Plan (DOE/NV, 2002).

In order to determine if there is a potential for adverse impacts to possible receptors, contaminants detected in soil samples were compared to appropriate screening levels. In accordance with the Work Plan, PALs for chemical COPCs are based on the preliminary remediation goals (PRGs) for industrial exposures provided in the U.S. Environmental Protection Agency (EPA) *Region IX Risk-Based Concentration Table* (EPA, 1999a). These PRGs are developed based on protection of human health assuming different exposure scenarios. Industrial PRGs assume exposures through incidental soil ingestion as well as inhalation of airborne dust. These PRGs reflect cancer risks of 1×10^{-6} (i.e., one

in one million) or noncancer hazard quotients of 0.1. These values were used for screening purposes to flag chemical COPCs potentially requiring further evaluation by a risk assessment.

The PAL for TPH was negotiated by representatives of NNSA/NSO and NMED Voluntary Remediation Program (VRP) with additional input from the New Mexico Department of Energy, Minerals, and Natural Resources Oil Conservation Division (OCD). Negotiations included consideration of a 2,200 mg/kg TPH cleanup level as provided in the August 30, 2002, draft of *New Mexico Environment Department Hazardous Waste Bureau TPH Cleanup Guidelines* (Wycoff, 2003) and discussed by NNSA/NSO, NMED HWB, and NMED VRP during a January 30, 2003, meeting in Sante Fe, New Mexico (Wycoff, 2003). Based on the Gasbuggy Site's history of association with gas exploration and production, the OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, as referenced in NMED, 2000b, was also considered. This guidance provides for three levels of TPH regulation based on a total ranking score as defined by three specific ranking criteria. The ranking criteria include depth to groundwater, wellhead protection area (i.e., distance from a water source or private domestic water source), and distance to surface water body. Based on these ranking criteria, the Gasbuggy Site falls into the strictest regulatory level of 100 parts per million (ppm).

Based on the NNSA/NSO goal of ultimately closing the Gasbuggy Site surface with no future monitoring requirements, NNSA/NSO has agreed to apply the most stringent TPH cleanup level considered (i.e., the OCD guidance). Therefore, the PAL of 100 ppm will be used. Because the OCD guidance does not allow for additional consideration by risk assessment, the PAL becomes the cleanup level.

The following PALs were used for the purpose of determining if additional consideration needed to be given to the COPCs identified in soil samples:

- Chemical COPCs - Industrial risk-based PRGs provided in EPA Region IX Risk-Based Concentration Table (EPA, 1999a)
- TPH-DRO - 100 mg/kg (NMED, 2000b)
- TPH-GRO - 100 mg/kg (NMED, 2000b)

3.2.2 Chemical Data Quality Evaluation

The CQCSR in Appendix C contains an evaluation of the data quality indicators including precision, accuracy, representativeness, completeness, and comparability, which were used to demonstrate that DQOs have been met.

3.2.3 Selected Analytical Methods and Contaminants of Potential Concern

Contaminants of potential concern for the Gasbuggy Site surface investigation are listed in Section 3.2.1 of the Work Plan (DOE/NV, 2002). The list was determined based on an evaluation of site-specific historical documentation regarding the drilling fluids, drilling methods, site operations, previous sampling events performed at the Gasbuggy Site, process knowledge from similar sites (e.g., the Rio Blanco Site, Colorado), and State of New Mexico guidance on selection of contaminants of concern. The COPCs and their corresponding method of analyses for the soil investigation are:

- TPH-DRO and TPH-GRO - EPA Method 8015B (EPA, 1996)
- VOC - EPA Method 8260B (EPA, 1996)
- Semivolatile organic compounds (SVOC) - EPA Method 8270C (EPA, 1996)
- Total RCRA metals - EPA Methods 6010B/7470A (EPA, 1996)

Soil samples were collected and analyzed for tritium during the preliminary field investigation. Results were used to perform a dose/risk assessment for potential tritium exposure at the Gasbuggy Site (see Appendix D of the Work Plan [DOE/NV, 2002]). Based on this assessment, the Gasbuggy Site does not pose a potential risk to human health based on exposure to tritium in soil, and further sampling for tritium was not necessary. However, as a best management practice, additional samples were collected for tritium analyses at areas not previously sampled and to support waste disposal requirements. Samples were analyzed for tritium by a laboratory-specific method. Tritium was not detected at concentrations exceeding the minimum detectable limit (MDL) in any samples collected in 2002. The Work Plan details the tritium analysis results for soil samples collected in 2000.

To support waste disposal profiles some samples were analyzed for VOCs, SVOCs, and/or metals using the toxicity characteristic leaching procedure (TCLP), EPA Method 1311 (EPA, 1996).

A master sample log is provided in Appendix D. This log contains sampling information such as sample identification number and analyses performed for each sample. The analyses were conducted by Paragon Analytics Inc.

3.3 Summary of Soil Sampling Plan and Boring Location Selection

Details on the sampling plan can be found in Section 4.2.3 of the Work Plan (DOE/NV, 2002). Tables 4-3 through 4-6 of the Work Plan provide a summary of the planned investigation method for each area of concern (AOC) identified through historical documentation and the results of the preliminary field investigation. Specific boring locations were selected for each AOC based on a combination of geophysical survey results, historical documentation, and field conditions. Locations for step-out borings were selected based on field conditions.

In cases where a random borehole location is specified (e.g., mud pit investigation) in the Work Plan, the following method was used to generate the boring locations. Coordinates for the limits of the mud pit or feature were estimated based on geophysical survey results and historical documentation. Then, the appropriate number of sample locations were randomly generated within the estimated coordinates. If no evidence of a mud pit or subsurface feature was identified in the field at a specified sample location, a new sample location was selected based on field conditions.

Sample depths were selected based on field observations and previous sample results. In cases where randomly selected depths were specified in the Work Plan (e.g., background locations) random number tables were used to generate the depth of sample collection.

Table 3-1 provides a summary of soil samples collected at the Gasbuggy Site. For a complete list of all samples collected during the Gasbuggy Site Surface Investigation, see Table D.1-1 in Appendix D.

Table 3-1
Summary of Soil Sample Collection

Operational Area	Number of Samples Collected in 2000[a]	Number of Samples Collected in 2002[a]
Surface Ground Zero	73	182
Well GB-D	0	31
Recording Trailer Park	0	9
Control Point	0	6
Total	**73**	**228**

[a]Includes field duplicate samples

4.0 Background Soil Investigation

This section provides details on the collection and analysis of samples to determine the background concentrations of metals in soils at the Gasbuggy Site.

4.1 Sample Collection

During the Preliminary Field Investigation conducted in the summer of 2000, five soil samples were collected from background locations and analyzed for RCRA metals (i.e., arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Based on the results of these five samples, it was determined that a minimum of five additional samples were needed to ensure the average arsenic concentration fell within the tolerable error of +/- 20 percent with 90 percent confidence (see Section 4.2.1 of the Work Plan).

The selected locations for the collection of the background samples were in the vicinity of Well GB-D and SGZ areas, where metals contamination in the mud pits was suspected. All sample locations were outside of previously disturbed areas. The depth interval for sample collection at each of the selected locations was determined by using random number tables to generate an interval starting point between 4 and 12 ft bgs. All background sample locations are provided in Figure 4-1.

4.2 Summary of Analytical Results

Table E.1-1 in Appendix E provides the analytical results for the metals analysis of the 10 background samples. Because arsenic was found to exceed PALs in both site characterization samples and background samples, further analysis of the distribution of arsenic concentrations was conducted. This information is presented in context with the chemical analytical results for the SGZ area (see Section 5.3.1). Concentrations of other metals in site characterization samples did not exceed PALs.

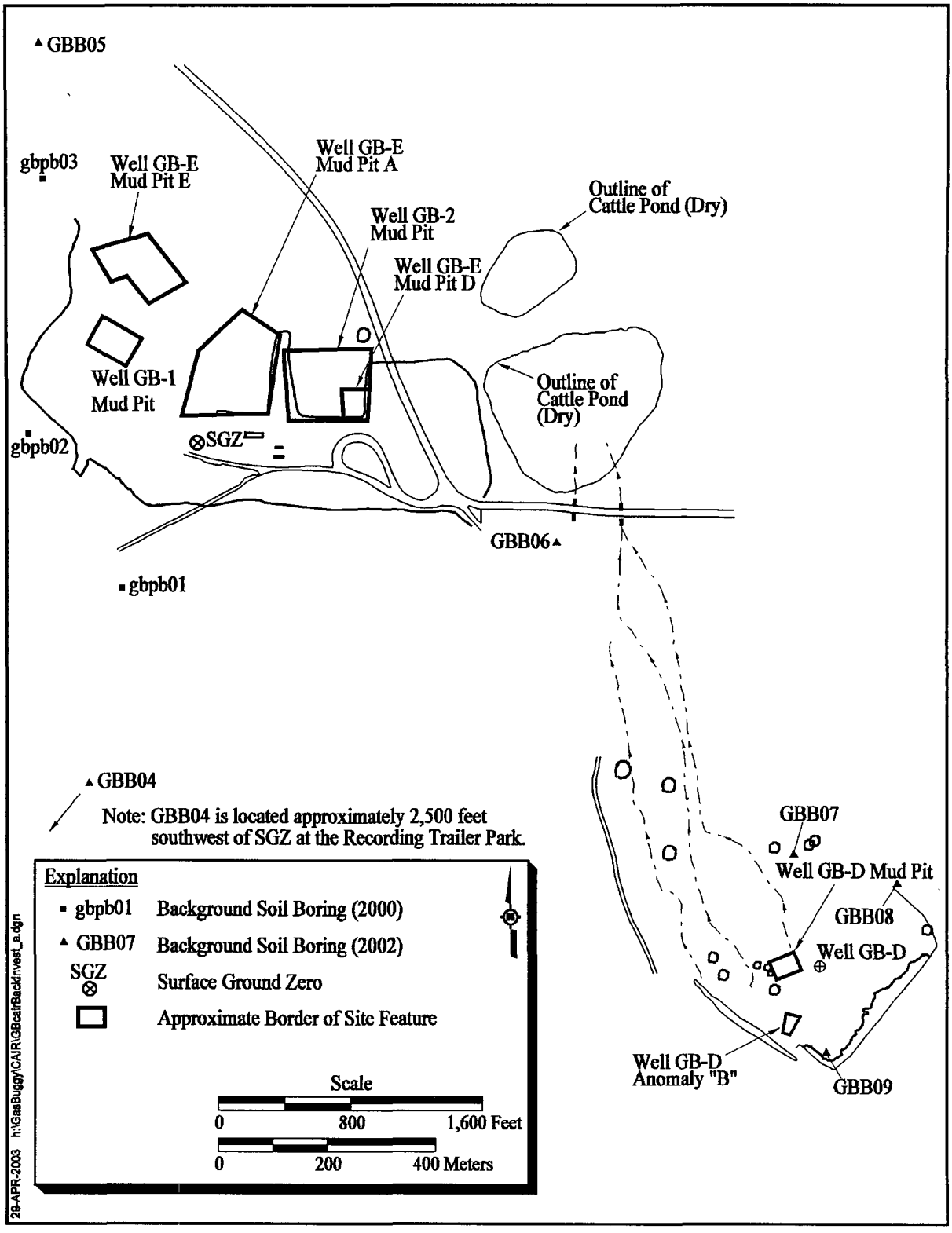


Figure 4-1
Locations of Background Investigation Boreholes

5.0 Surface Ground Zero Area Soil Investigation

This section provides details on the investigation activities that were conducted at the SGZ area and the data collected as a result of those activities. Work at the SGZ area included the investigation of two suspect septic systems, four drilling pads, several drilling mud pits, several drilling mud disposal trenches (mud landfills), and miscellaneous other AOCs.

5.1 Septic Tank Investigation at the SGZ Area

The objectives of the septic tank investigation were to locate, observe, sample, and close, as applicable, any identified septic tanks. Historical documents suggested two septic tanks were installed at the SGZ area. The documentation was unclear as to whether the tanks had been closed in place (i.e., filled with inert material) or removed. Exploratory excavation guided by historical documentation (e.g., drawings and photographs) and geophysical data was the primary method of investigation. As stated in the Work Plan, if excavation failed to locate a septic tank, it would be assumed the tank was either (1) not constructed, (2) closed in place in accordance with New Mexico regulations (NMAC, 1997), or (3) was removed, and the investigation would be discontinued.

Using historical drawings (see Figures 2-3 and 2-8 in the Work Plan), photographs (see Figure 2-4 in the Work Plan), and plots of the geophysical data (see Figures C.6-1 and C.6-2 in the Work Plan), the anticipated locations of the two septic tanks in the SGZ area were marked for excavation. Septic Tank A was anticipated to be located in the southwestern corner of the site near the historical location of the latrine trailer. Septic Tank B was anticipated to be located just off the northeast corner of one of the concrete pads remaining on site. A metal detector was used to identify additional possible targets in the vicinity of these locations.

Multiple excavations were conducted in an attempt to locate each of the two suspected septic tanks. Although several hose bib attachments and risers were identified, no evidence of either septic tank was found. The locations of the excavations were recorded using a GPS. Figure 5-1 shows the locations of excavations conducted as part of the septic system investigation. Excavations were approximately 3 to 4 ft deep. Based on the lack of physical evidence at the site, it is assumed that Septic Tank A was removed during the initial site restoration in 1978 and Septic Tank B was either

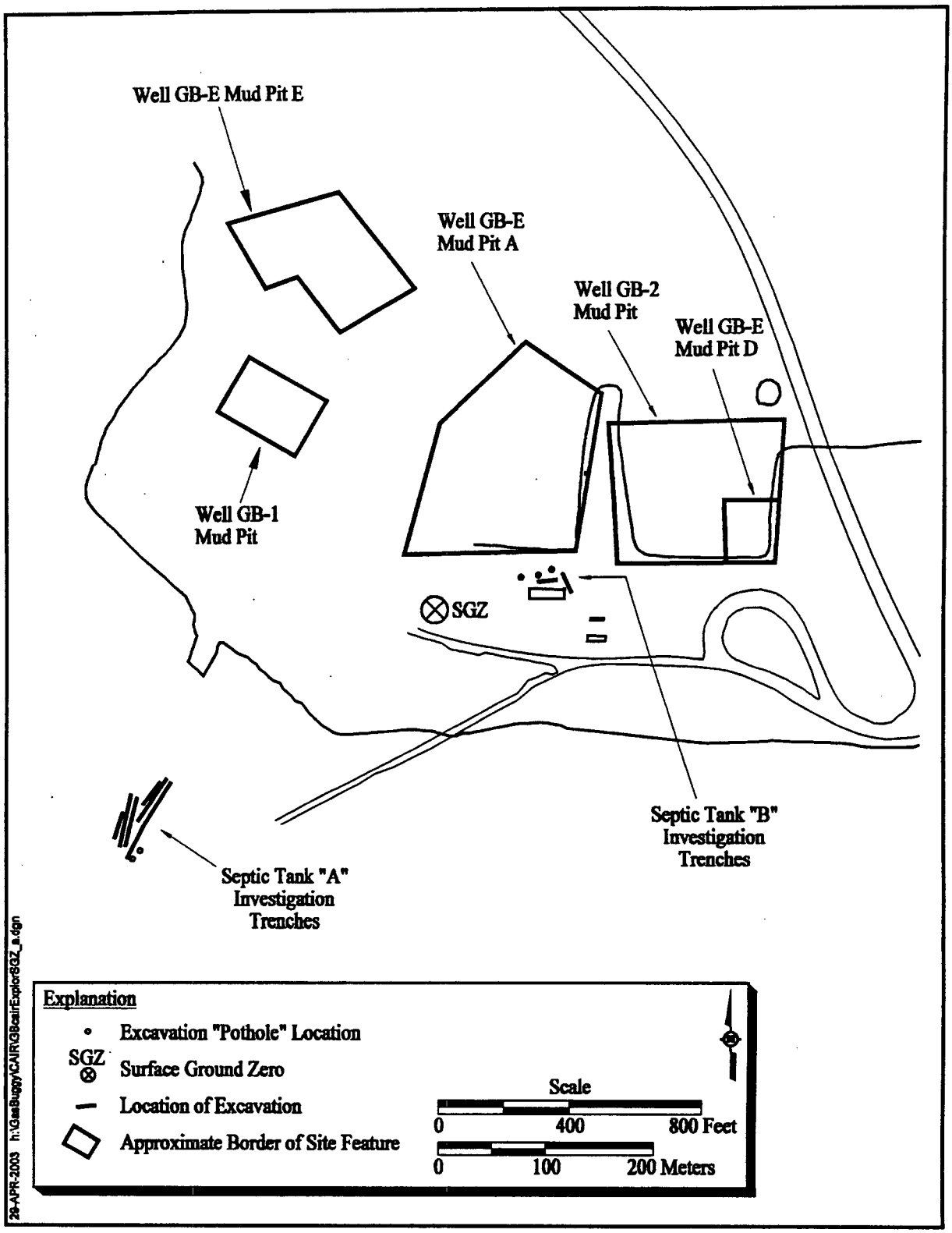


Figure 5-1
Exploratory Excavations for Septic Tanks at the SGZ Area

never constructed or was also removed during the 1978 site restoration. No further investigation of the septic systems at SGZ is proposed.

5.2 Boring/Excavation Locations for Soil Investigation at the SGZ Area

This section provides information on the locations of soil borings and/or excavations completed at SGZ in support of the soil investigation and that are not associated with the septic system investigations. Borings and/or excavations were completed in each of the AOCs at the SGZ area in accordance with the Work Plan. Figure 5-2 provides the location of each of the soil borings used for the investigation of the mud pits in the SGZ area. Figure 5-3 provides the location of each of the soil borings and excavations used for the investigation of the mud trenches, drill pads, and other miscellaneous features of the SGZ area. A combined version of Figure 5-2 and Figure 5-3 is provided in Plate 1. The coordinates of the borings are provided in Appendix B.

5.3 Summary of Analytical Results for the SGZ Area

A total of 182 soil samples were collected at the SGZ area. This section contains a summary of the analytical results for chemical COPCs, TPH, and tritium analysis.

5.3.1 Chemical Analysis

Positive detects for chemical COPCs are presented in Table E.1-2 of Appendix E. Table E.1-2 contains results of samples collected during the Preliminary Field Investigation conducted in the summer of 2000 as well as results of samples collected during the 2002 field activities.

In order to determine if there is a potential for adverse impacts to possible receptors, contaminants detected in soil samples were compared to the PAL or "screening value." Arsenic and 1,2,4-trimethylbenzene were present in some soil samples in excess of their PRGs (Table E.1-2).

Arsenic

Arsenic exceeded the Region IX PRG of 2.7 mg/kg in approximately 50 percent of the site characterization soil samples. An analysis of the arsenic data was performed to determine if the arsenic detected in site characterization samples is representative of normal site conditions or could be related to past DOE-sponsored drilling activities at the Gasbuggy Site (Adams, 2003). Analysis of

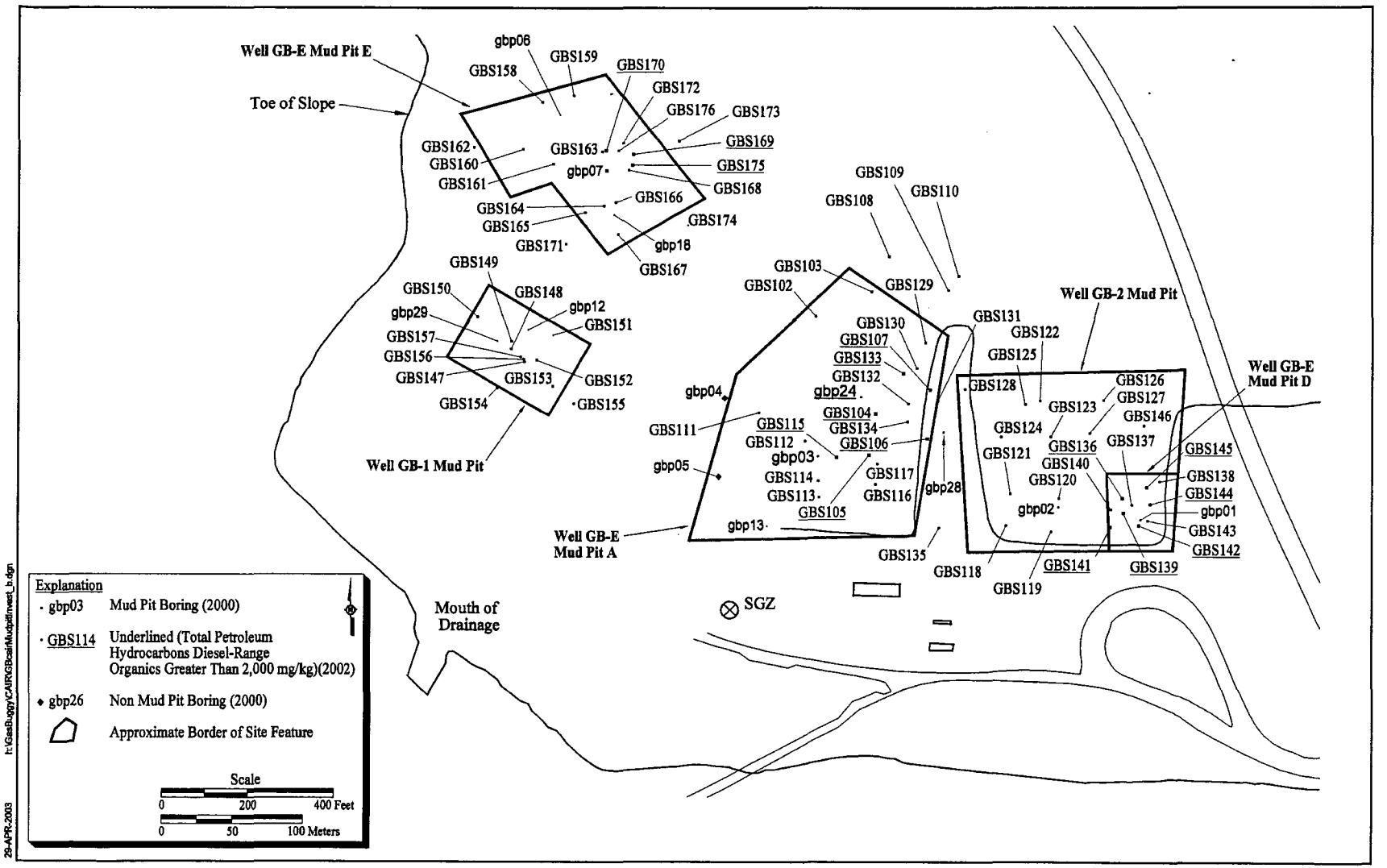


Figure 5-2
Boreholes Used for the Mud Pit Investigation at the SGZ

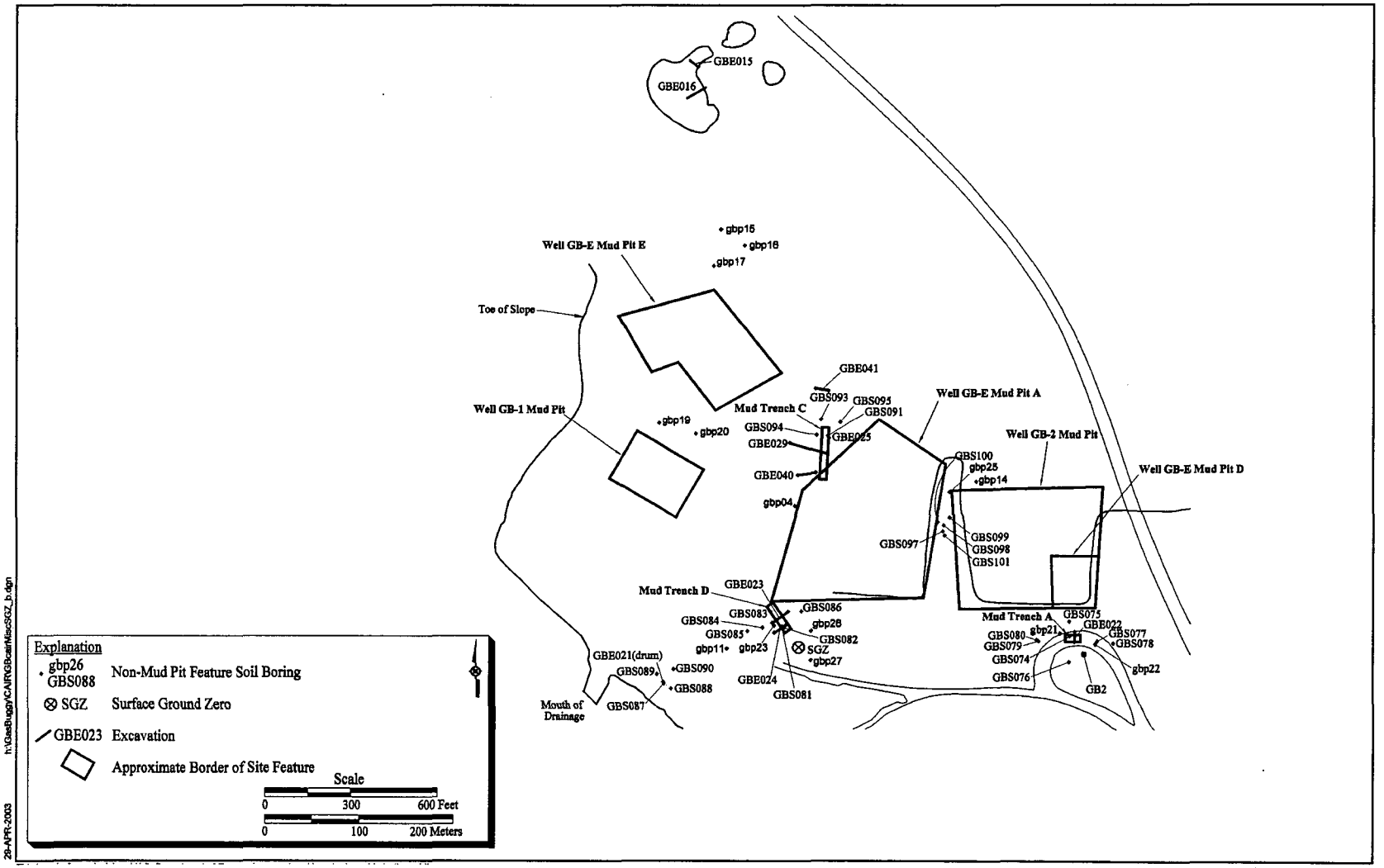


Figure 5-3
Excavations and Boreholes Used for the Investigation of the Miscellaneous Features at the SGZ

the arsenic concentration data was performed on each of three sets of soil samples; background soil samples, soil samples with diesel concentrations >100 mg/kg, and soil samples with diesel concentrations <100 mg/kg. Analysis of this data addressed the following:

- Were a sufficient number of samples collected to provide usable data?
- Does the arsenic concentration differ significantly in the three data sets?
- Is there a high correlation between the arsenic and diesel concentrations?

Based on the analysis performed:

- A sufficient number of samples were collected for each data set to ensure a 90 percent confidence level in the mean with a relative error in the mean of less than 0.2.

- There is no significant difference in the arsenic concentrations detected in soil samples collected from ten Gasbuggy Site background locations, 35 Gasbuggy Site soil samples with diesel concentrations exceeding 100 mg/kg, and 133 soil samples with diesel concentrations less than 100 mg/kg.

- There is no significant correlation between the arsenic concentration and the diesel concentrations in the soil samples with diesel concentrations exceeding 100 mg/kg.

The lack of correlation between the arsenic and diesel concentrations in the soil samples and the equality in the arsenic concentrations in the three sets of soil samples supports the hypothesis that the arsenic concentration in all three data sets is due to the natural variation in arsenic concentrations in soil and not due to past DOE activities at the Gasbuggy Site. Additionally, the New Mexico Environment Department has set an industrial/occupational soil screening level of 17 mg/kg for arsenic (NMED, 2000a). The highest concentration of arsenic identified in site characterization samples (7.2 mg/kg and 8.58 mg/kg in a laboratory duplicate) is less than half of this threshold (Table E.1-2).

Based on the data and analysis as presented, arsenic was not considered a contaminant of concern.

1,2,4-Trimethylbenzene

The PAL for 1,2,4-trimethylbenzene (TMB) is 5,700 micrograms per kilogram (µg/kg). As indicated in Table E.1-2, nine soil samples were equal to or exceeded the PRG for TMB. These nine samples represent seven discrete locations (two soil samples were reanalyzed for TMB, and the reanalysis also was above the PRG). These seven locations represent less than 5 percent of the locations where

samples were collected and analyzed for TMB. Samples in which the PAL for TMB was exceeded are listed in Table 5-1. These samples were all collected at the SGZ area within known or suspected mud pits (Figure 5-4). 1,2,4-Trimethylbenzene occurs naturally in coal tar and petroleum crude oil. It is generally recovered during the refining process and added directly to gasoline (EPA, 1994). Thus, the TMB present at the site may be related to the gasoline identified in the soil and/or the natural petroleum produced during the flaring operation (DOE/NV, 2002). Figure 5-4 presents boring locations where TMB "hits" exceeded the PAL.

The concentrations of TMB detected are considered to be related to DOE activities at the site, and found at sufficient concentrations to warrant further evaluation. A risk assessment was prepared (Shaw, 2003) that evaluated the exposure of possible receptors to these contaminants. The receptor scenarios evaluated in the risk assessment were a rancher and recreation scenario as well as a Native American scenario (using a modified recreation scenario). Each of these receptors could be exposed to contaminants through incidental soil ingestion or inhalation of fugitive dusts. The use of groundwater as a drinking water source or exposure to contaminants in surface water bodies was not considered to be an exposure pathway.

Two categories of human health risks were considered in the risk assessment: risk of cancer and noncarcinogenic toxicity. Cancer risks are usually presented as a probability of developing cancer (e.g., 1×10^{-6} or one-in-a-million) (EPA, 1989). Current toxicity information for 1,2,4-trimethylbenzene is available for noncarcinogenic toxicity, but not for cancer risk (EPA, 1999b and 2003). Noncarcinogenic toxicity is usually evaluated in terms of a Hazard Quotient (i.e., the ratio of the exposure dose to an acceptable dose, referred to as the reference dose). A Hazard Quotient greater than one indicates a potential for noncarcinogenic health effects (EPA, 1989).

Based upon the possible receptors evaluated and the potential exposure pathways considered, the exposure dose for TMB is considerably less than the reference dose, and the Hazard Quotient is less than one. Thus, TMB present in the soil at the site is not likely to pose a potential for adverse impacts to potential receptors at the site.

Table 5-1
Soil Sample Results for COCs Detected Above Screening Level
(Page 1 of 2)

Sample Number	Sample Location	Parameter		
		Diesel-Range Organics (mg/kg)	Gasoline-Range Organics (mg/kg)	1,2,4-Trimethylbenzene (µg/kg)
Screening Value or PAL		100 (NMED, 2000b)	100 (NMED, 2000b)	5,700 (EPA, 1999a)
GBS1070608	Well GB-E Mud Pit A	26,000	NA	NA
GBS1410810	Well GB-E Mud Pit D	26,000	320	NA
GBS1701315	Well GB-E Mud Pit E	24,000 2,100	440 280	NA
GBS1330507[a]	Well GB-E Mud Pit A	22,000 1,900	380	24,000
GBS1050507	Well GB-E Mud Pit A	13,000	2,000	NA
GBR1751214	Well GB-E Mud Pit E	12,000	420	NA
GBS1040507	Well GB-E Mud Pit A	9,600	1,200	NA
GBS1691416 GB102 (Duplicate) GBR1691416	Well GB-E Mud Pit E	7,900 4,700 3,400	170 NA 170	NA
GBS1440709	Well GB-E Mud Pit D	7,600	NA	NA
GBS1420810	Well GB-E Mud Pit D	6,600	560	NA
GBS1060608 GB068 (Duplicate)	Well GB-E Mud Pit A	3,700 3,600	NA 1,600	NA
GBS1420507	Well GB-E Mud Pit D	3,700	130	NA
GBS1390709	Well GB-E Mud Pit D	3,000	690	NA
GBS1360911	Well GB-E Mud Pit D	2,800	730	9,300
GBPS240506 GBPS240506RR1	Well GB-E Mud Pit A	2,600 NA	NA NA	NA 5,700
GBS1360709	Well GB-E Mud Pit D	2,300	NA	NA
GBPS010609	Well GB-E Mud Pit D	2,100	NA	NA
GBS1150507 GBS1150507RR2	Well GB-E Mud Pit A	2,100 NA	NA NA	9,000 6,400
GBS1450709	Well GB-E Mud Pit D	2,000	NA	NA
GBS1370709 GB082 (Duplicate)	Well GB-E Mud Pit D	1,600 1,800	130	NA
GBR1761113	Well GB-E Mud Pit E	1,500	250	NA
GBS1340507	Well GB-E Mud Pit A	1,300	NA	NA
GBS1400709	Well GB-E Mud Pit D	1,200	NA	NA
GBS1701012	Well GB-E Mud Pit E	1,200	NA	NA
GBS1430911	Well GB-E Mud Pit D	1,100	NA	NA
GBR1681113	Well GB-E Mud Pit E	1,100	NA	NA
GBS1450911	Well GB-E Mud Pit D	960	NA	NA

Table 5-1
Soil Sample Results for COCs Detected Above Screening Level
(Page 2 of 2)

Sample Number	Sample Location	Parameter		
		Diesel-Range Organics (mg/kg)	Gasoline-Range Organics (mg/kg)	1,2,4-Trimethylbenzene (µg/kg)
Screening Value or PAL		100 (NMED, 2000b)	100 (NMED, 2000b)	5,700 (EPA, 1999a)
GBS1430709	Well GB-E Mud Pit D	940	NA	NA
GBS1170507	Well GB-E Mud Pit A	880	170	NA
GBS1681214	Well GB-E Mud Pit E	770	NA	NA
GBS1761012	Well GB-E Mud Pit E	740	170	NA
GBPS030406	Well GB-E Mud Pit A	720	NA	NA
GBS1400911	Well GB-E Mud Pit D	720	NA	NA
GBS1691719	Well GB-E Mud Pit E	660	NA	NA
GBS1290608	Well GB-E Mud Pit A	600	NA	NA
GBS1440911	Well GB-E Mud Pit D	540	NA	NA
GBS1410608	Well GB-E Mud Pit D	500	NA	NA
GBS1701012	Well GB-E Mud Pit E	490	NA	NA
GBS1370911	Well GB-E Mud Pit D	490	NA	NA
GBS1300507	Well GB-E Mud Pit A	460	510	NA
GBS1751012	Well GB-E Mud Pit E	440	NA	NA
GBPS280608	Well GB-E Mud Pit A	360	3,300	NA
GBPS020610	Well GB-2 Mud Pit	300	NA	NA
GBS0980608 GB063RR2 (Duplicate)	Well GB-E Mud Pit A	300 NA	NA NA	NA 15,000
GBS1120406	Well GB-E Mud Pit A	280	NA	NA
GBPS010911	Well GB-E Mud Pit D	270	NA	NA
GBPS250507 GBPS250507RR1	Well GB-E Mud Pit A	250 NA	340 NA	40,000 65,000
GBS1030406	Well GB-E Mud Pit A	180	NA	NA
GBS1000507	Well GB-E Mud Pit A	160	NA	NA
GBS1280709	Well GB-E Mud Pit A	160	NA	NA
GBS1140204	Well GB-E Mud Pit A	110	NA	NA
GBS1650911	Well GB-E Mud Pit E	110	NA	NA
GBS1310608	Well GB-E Mud Pit A	NA	NA	12,000

[a]This sample was analyzed twice for diesel.

mg/kg = Milligrams per kilogram
µg/kg - Micrograms per kilogram
NA = Not applicable (the concentration of this contaminant did not exceed the screening level)

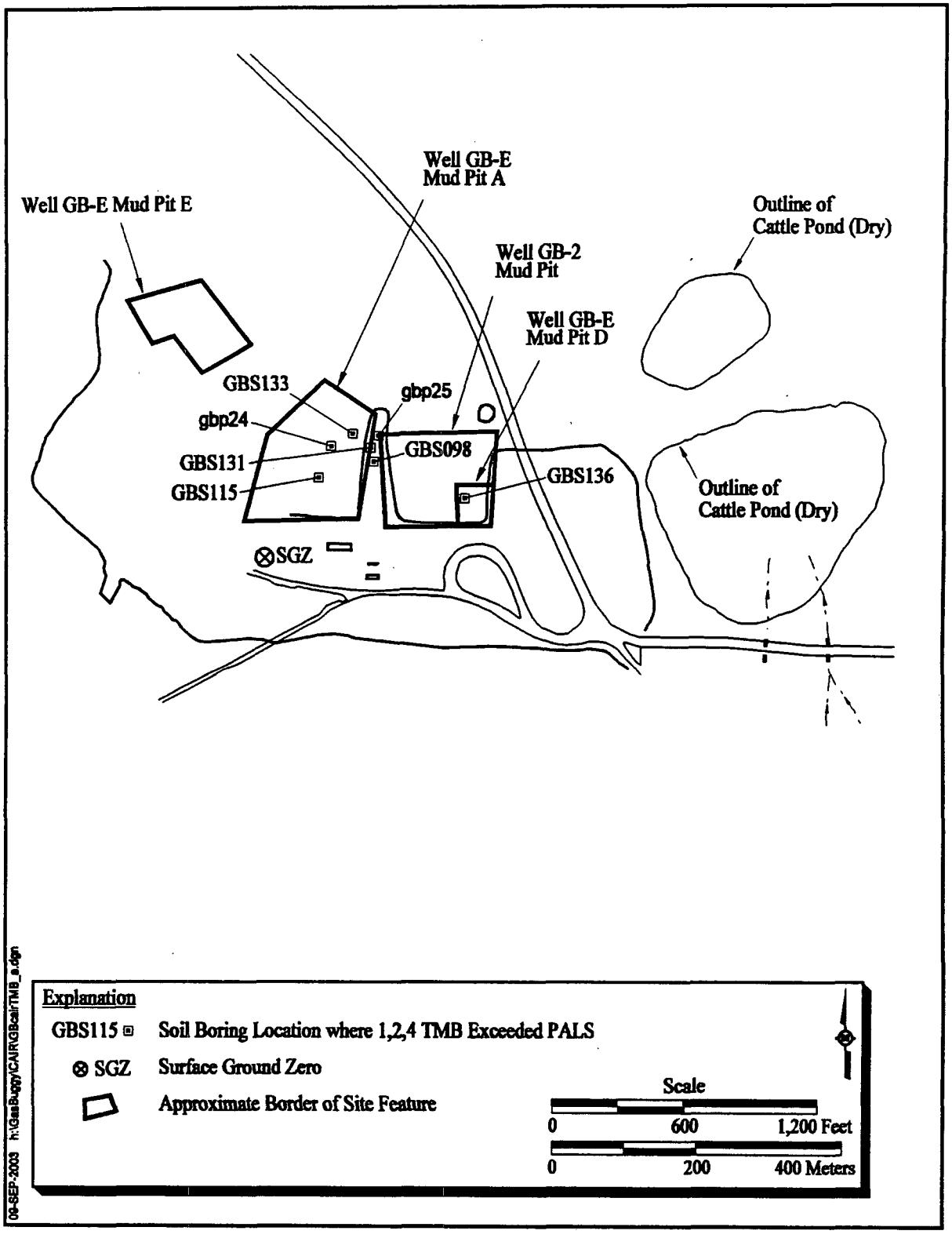


Figure 5-4
Boreholes with TMB Hits Above the PAL at the SGZ Area

Although the TMB is not considered to pose a threat to human health or the environment, as a best management practice given that NNSA/NSO will be performing corrective action activities at the site, soil containing TMB above PALs will be removed and transported off site for disposal.

5.3.2 TPH Analysis

All sample results for TPH-DRO and TPH-GRO are presented in Table E.1-3 of Appendix E. The data is presented in this fashion (i.e., non-detects and detects) so that the concentration of the vertical profile of these constituents can be viewed on an individual borehole basis. Table E.1-3 contains results of samples collected during the Preliminary Field Investigation (summer 2000) as well as results of samples collected during the 2002 field activities.

The PAL for TPH is 100 mg/kg (see Section 3.2.1). The samples collected at the SGZ area in which TPH values exceeded 100 mg/kg are listed in Table 5-1. Table 5-1 includes all diesel and gasoline "hits" with values equal to or greater than 100 mg/kg. All of these "hits" were within the anticipated locations or in close proximity to the mud pits at the SGZ area. Figure 5-5 presents boring locations where TPH "hits" exceeded the PAL.

A corrective action consisting of the removal of soil contaminated with TPH above 100 mg/kg will be instituted as detailed in Appendix A.

5.3.3 Tritium Analysis

As discussed in the Work Plan, additional analysis of soil samples for tritium was determined not to be necessary based on the results obtained during the Preliminary Field Investigation (see Appendix D of the Work Plan). However, as a best management practice, tritium was analyzed in seven soil samples collected in 2002 (six samples collected at the CP and one sample collected at the SGZ area). Tritium was analyzed in the CP samples because no samples from the CP were collected in 2000 and the samples were to characterize features that may have been associated with an on-site laboratory. The single sample at the SGZ area that was analyzed for tritium was associated with buried debris discovered during the investigation. No samples had previously been collected in this area.

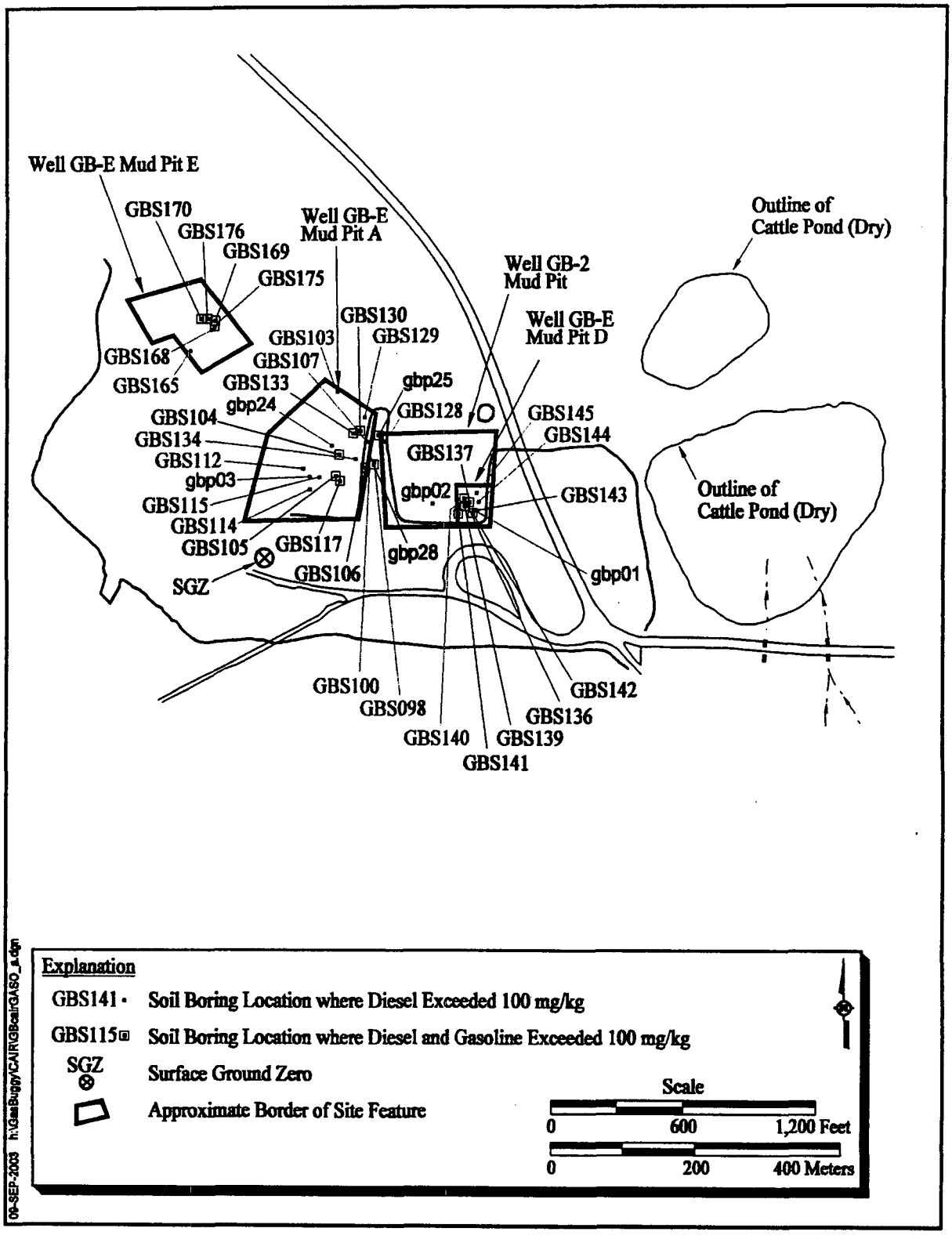


Figure 5-5
Soil Boring Locations with Diesel and/or Gasoline Hits Above the Screening Level at the SGZ Area

Tritium was not detected at concentrations exceeding the MDL in any samples collected at SGZ in 2002. The highest MDL for tritium analysis on samples collected in 2002 was 0.051 picocuries per gram (pCi/g). The highest detected tritium concentration in the 2000 samples was 7.32 pCi/g. This level of contamination was found not to present a risk to human health (see Appendix D of the Work Plan).

5.4 Waste Characterization Samples

A total of 29 waste characterization samples were collected at SGZ for the purpose of characterizing investigation-derived waste (IDW). No hazardous waste constituents were identified above regulatory levels. See Table E.1-4 in Appendix E.

5.5 Summary of Soil Investigation Results for the SGZ Area

Table 5-2 provides a summary of the investigation strategy and results for each of the identified AOCs in the SGZ area. If no additional work was proposed in the Work Plan (beyond what was already documented in the Work Plan) for a specific feature, that feature is not listed in Table 5-2.

Table 5-2
Investigation Summary for Surface Ground Zero Area Known and Suspect AOCs
(Page 1 of 2)

Unique Identifier	Approx. Size (feet)	Summary of Investigation	Summary of Investigation Findings[a]
Well EPNG 10-36 Sump	50 X 25	Three (3) boreholes were drilled in the expected location of this feature. Drilling mud was not identified at the Well EPNG 10-36 Sump.	No PALs exceeded.
Well GB-1 Mud Pit	100 X 50	Based on available historical documentation and the results of the geophysical investigation, these three mud pits cannot be distinguished from each other. Therefore, for the purposes of investigation, these three mud pits were treated as one unit. Twelve (12) boreholes were drilled in the expected location of this feature. Drilling mud was identified in 4 boreholes.	No PALs exceeded.
Well GB-E Mud Pit B	NA		
Well GB-E Mud Pit C	NA		
Well GB-2 Mud Pit	150 X 125	Thirteen (13) boreholes were drilled in the expected location of this feature. Drilling mud was identified in 2 boreholes.	One (1) soil sample exceeded the PAL for TPH.
Well GB-E Mud Pit A	150 X 175	Twenty-six (26) boreholes were drilled in the expected location of this feature. Drilling mud was identified in 14 boreholes.	Twenty (20) soil samples exceeded the PAL for TPH, and seven (7) soil samples exceeded the PAL for TMB.
Well GB-E Mud Pit D	75 X 50	Well GB-E Mud Pit D is located entirely within the lateral bounds of the Well GB-2 Mud Pit, but consists of a distinct mud layer. Eleven (11) boreholes were drilled in the expected location of this feature. Drilling mud was identified in 9 boreholes.	Seventeen (17) soil samples exceeded the PAL for TPH and one (1) soil sample exceeded the PAL for TMB.
Well GB-E Mud Pit E	100 X 75	Sixteen (16) boreholes were drilled in the expected location of this feature. Drilling mud was identified in 6 boreholes.	Ten (10) soil samples exceeded the PAL for TPH.

Table 5-2
Investigation Summary for Surface Ground Zero Area Known and Suspect AOCs
(Page 2 of 2)

Unique Identifier	Approx. Size (feet)	Summary of Investigation	Summary of Investigation Findings[a]
Landfill A (mud trench)	20 X 10	Each of these landfills (or mud trenches) was identified by excavation. Sampling of the mud in the trench was conducted by direct push.	No PALs exceeded.
Landfill C (mud trench)	50 X 10		
Landfill D (mud trench)	30 X 10		
Septic Tank A	NA	Seven trenches and two potholes were excavated in the expected location of the septic tank.	Septic Tank A was not identified during the investigation. It is assumed the tank was removed during the 1978 site restoration effort.
Septic Tank B		Two trenches and three potholes were excavated in the expected location of the septic tank.	Septic Tank B was not identified during the investigation. It is assumed the tank was removed during the 1978 site restoration or was never constructed.
Soil Pile	75 X 50	Two trenches were excavated through the soil pile. No biasing factors (e.g., odors, stained soil) were identified during the excavation; therefore, no samples were collected.	The soil pile consists of top soil and sagebrush.
Gas-Flaring System	Unknown	Seven (7) boreholes were drilled in the flare stack area. Drilling mud was identified in the berm on which the Gas-Flaring System was located.	Two (2) soil samples exceeded the PAL for TMB. These samples were also counted as part of the GB-E Mud Pit A investigation.

[a]Information in this column does not include whether arsenic was detected above the PAL because it was determined that levels of arsenic detected in association with the features at the Well GB-D were not different than normal background concentrations.

NA = Not applicable

6.0 Well GB-D Area Soil Investigation

This section provides details on the investigation activities conducted at the Well GB-D area and the data collected as a result of those activities. Work at the Well GB-D area included the investigation of the Well GB-D drill pad, a mud pit, and one geophysical anomaly.

6.1 Boring Locations at Well GB-D

Borings were completed in each of the AOCs at the Well GB-D area in accordance with the Work Plan. Figure 6-1 provides the location of each of the soil borings in the Well GB-D area. The coordinates of the borings are provided in Appendix B.

6.2 Summary of Analytical Results for the Well GB-D Area

A total of 36 soil samples were collected at the Well GB-D area. This section contains a summary of the analytical results for chemical COPCs and TPH analysis.

6.2.1 Chemical Analysis

Positive detects for chemical COPCs are presented in Table E.1-2 of Appendix E. Arsenic was the only COPC detected at the Well GB-D area that exceeded screening levels. Arsenic identified in the site characterization samples above the Region IX PRGs (EPA, 1999a) is believed to be representative of background conditions at the site and will not be further addressed (Section 5.3.1).

6.2.2 TPH Analysis

Positive detects for TPH are presented in Table E.1-3. Diesel was detected above the PAL at six boring locations at the Well GB-D area. Table 6-1 includes all diesel "hits" with values equal to or greater than 100 mg/kg. Figure 6-2 presents boring locations where diesel "hits" exceeded the PAL.

6.3 Summary of Soil Investigation Results for the Well GB-D Area

Table 6-2 provides a summary of the investigation strategy and results for each of the identified AOCs in the Well GB-D area.

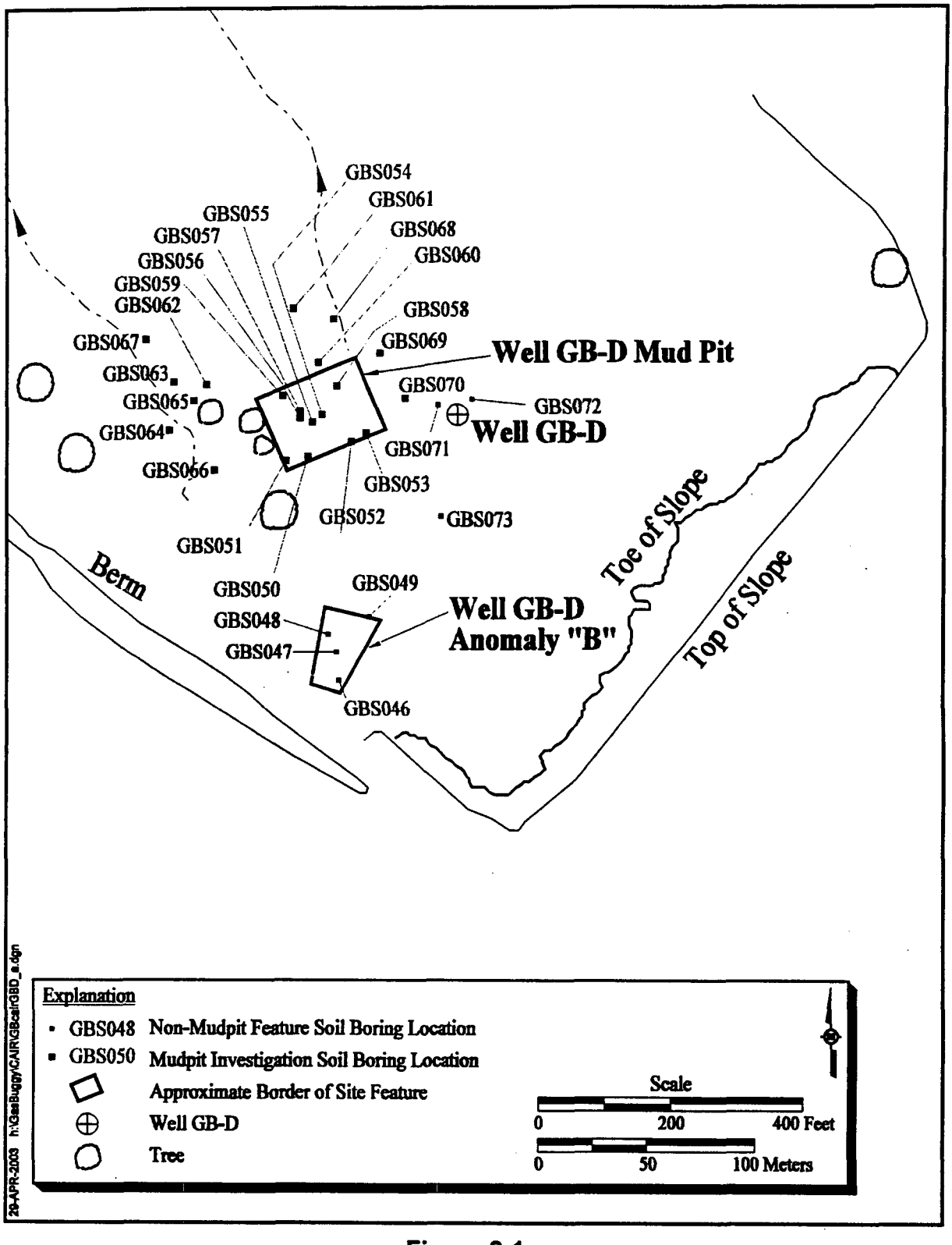


Figure 6-1
Boring Locations at the Gasbuggy Well GB-D Area

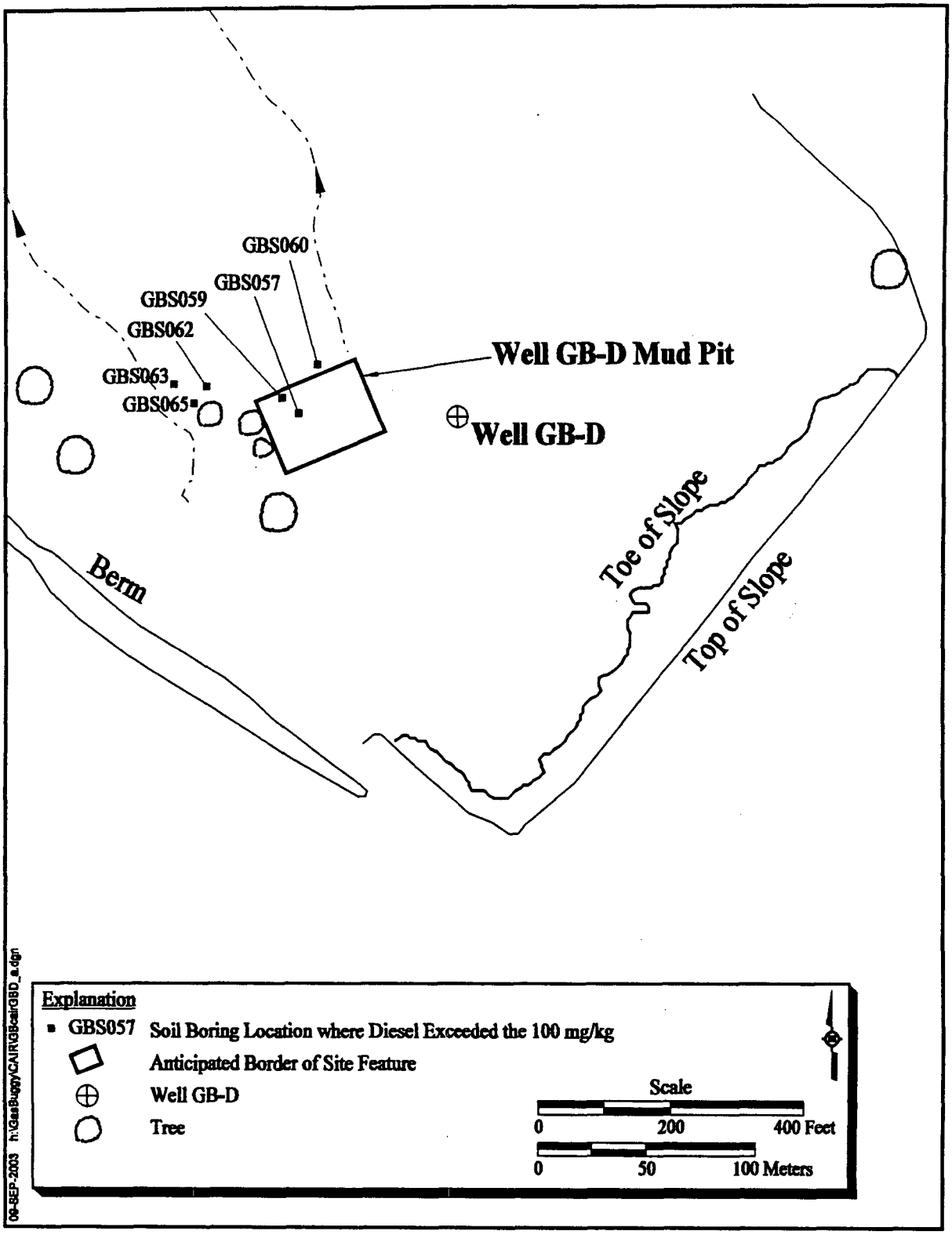


Figure 6-2
Soil Boring Locations with Diesel Hits Above the Screening Level at the Gasbuggy Well GB-D Area

Table 6-1
Soil Sample Results for COCs Detected Above the Screening Level

Sample Number	Sample Location	Diesel-Range Organics
GBS0600507	Well GB-D Mud Pit	1,300
GBS0620507	Well GB-D Mud Pit	400
GSB0590507	Well GB-D Mud Pit	180
GSB0650507	Well GB-D Mud Pit	180
GSB0570507	Well GB-D Mud Pit	140
GSB0630507	Well GB-D Mud Pit	120

Table 6-2
Investigation Summary for Well GB-D Area Known and Suspect AOCs

Unique Identifier	Approx. Size (ft)	Summary of Investigation	Summary of Investigation Findings[a]
Well GB-D Mud Pit	80 X 40	Twenty-one (21) boreholes were drilled in the expected location of this feature.	Six (6) soil samples exceeded the PAL for TPH.
Well GB-D Anomaly B[b]	100 X 75[b]	Four (4) boreholes were drilled in the location of this anomaly. No biasing factors were identified (e.g., discolored soil); therefore, samples were collected at randomly selected depths.	No PALs exceeded.
Well GB-D Drill Pad	50 X 50	Three boreholes were drilled in a triangular pattern surrounding the Well GB-D location. No biasing factors were identified (e.g., discolored soil); therefore, samples were collected at randomly selected depths.	No PALs exceeded.

[a]Information in this column does not include whether arsenic was detected above the PAL because it was determined that levels of arsenic detected in association with the features at the Well GB-D were not different than normal background concentrations.
[b]Anomalies identified by geophysical surveys are listed by the unique identifiers assigned to them in the report on the results of the geophysical survey (SAIC, 2000). Not all anomalies identified by geophysics required further investigation (see Work Plan).

7.0 Recording Trailer Park Soil Investigation

This section provides details on the investigation activities conducted at the RTP and the data collected as a result of those activities. Work at the RTP included the investigation of one geophysical anomaly and one soil pile.

7.1 Boring and Excavation Locations at the RTP

Borings and excavations were completed at the RTP in accordance with the Work Plan. Figure 7-1 provides the location of each of the soil borings and excavations at the RTP. The coordinates of the borings are provided in Appendix B.

7.2 Summary of Analytical Results for the RTP

A total of nine soil samples were collected at the RTP. This section contains a summary of the analytical results for chemical COPCs and TPH analysis.

7.2.1 Chemical Analysis

No COPCs exceeded screening levels at the RTP.

7.2.2 TPH Analysis

Positive detects for TPH are presented in Table E.1-3. Although diesel was detected in the RTP, the concentrations did not exceed the PAL.

7.3 Summary of the Surface Soil Investigation Results for RTP

Table 7-1 provides a summary of the investigation strategy and results for each of the identified AOCs at the RTP. Based on observations in the drilling cores extracted from the geophysical anomaly, it appears the anomaly represents a small construction debris pit.

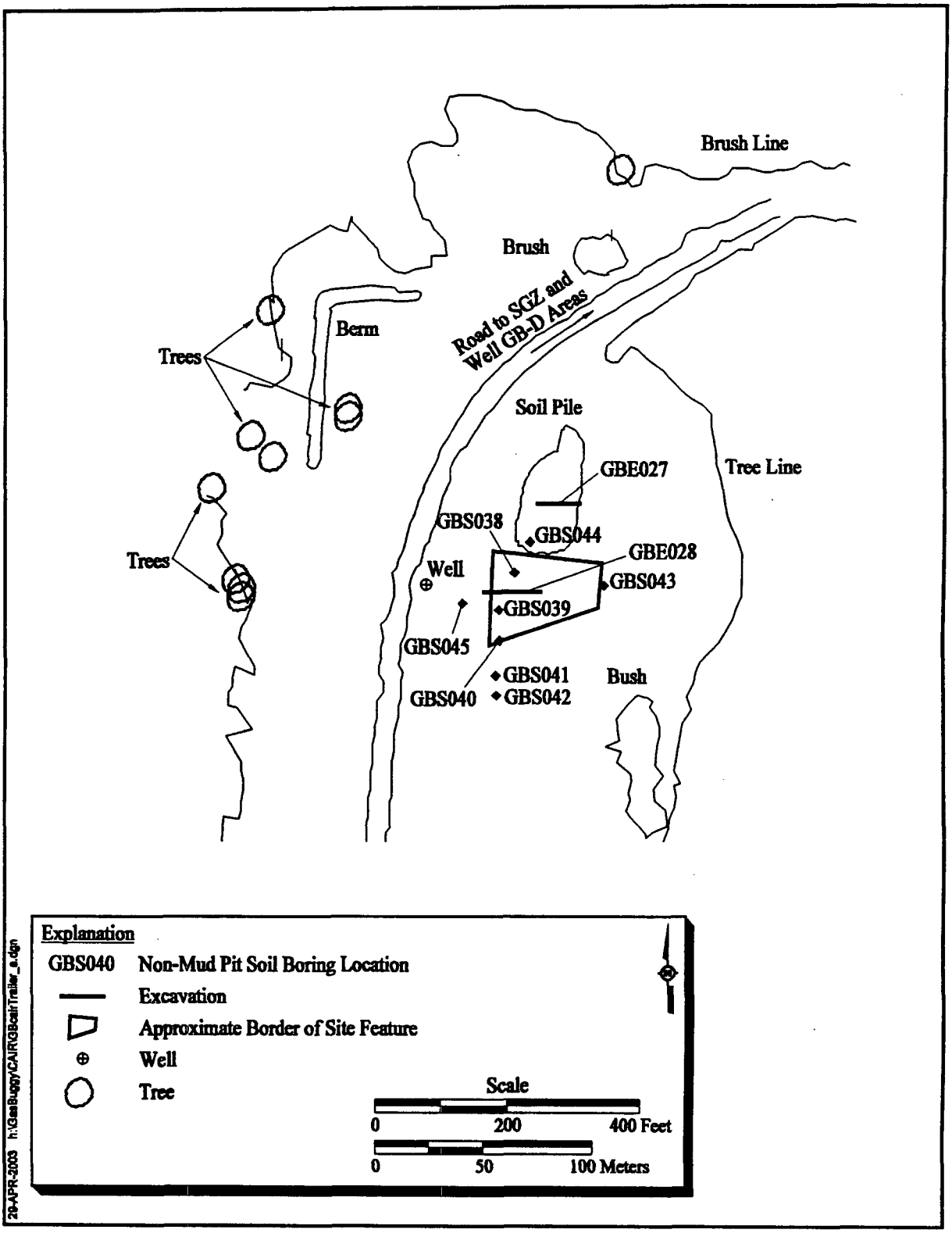


Figure 7-1
Boring and Excavation Locations at the Gasbuggy Recording Trailer Park

Table 7-1
Investigation Summary for the Recording Trailer Park Known and Suspect AOCs

Unique Identifier	Approx. Size (ft)	Summary of Investigation	Summary of Investigation Findings
RTP Anomaly G[a]	50 X 30	Eight (8) boreholes were drilled in the location of this anomaly.	No PALs exceeded. Based on visual observation of the soil core, the anomaly appears to represent a small construction debris pit.
RTP Soil Pile	50 X 20	One trench was excavated through the soil pile. No biasing factors (e.g., odor, stained soil) were identified during the excavation; therefore, no samples were collected.	The soil pile consists of native soil.

[a]Anomalies identified by geophysical surveys are listed by the unique identifiers assigned to them in the report on the results of the geophysical survey (SAIC, 2000). Not all anomalies identified by geophysics required further investigation (see Work Plan).

8.0 Control Point Soil Investigation

This section provides details on the investigation activities conducted at the Gasbuggy CP and the data collected as a result of those activities. Work at the CP included investigation of one septic system and one geophysical anomaly.

8.1 Objectives and Scope of Septic Tank Investigation

The objectives of the septic tank investigation were to locate, observe, sample, and close, as applicable, any identified septic tanks. Historical documents suggested one septic system was located at the CP. The documentation was unclear as to whether the tank had been closed (i.e., filled with inert material). The primary method of investigation was an exploratory excavation guided by historical documentation (e.g., drawings and photographs) and geophysical data.

8.2 Septic Tank Investigation at the CP

Using historical drawings (see Figure 2-13 in the Work Plan), photographs (see Figure 2-12 in the Work Plan), and plots of the geophysical data (see Figures C.3-4 and C.3-5 in the Work Plan), the anticipated location of the septic tank at the CP was marked for excavation. The septic tank was anticipated to be located on the northern edge of the site near the historical location of the latrine trailer.

A steel tank approximately 48 in. in diameter was located within 6 in. of the ground surface (Figure 8-1). There was no lid in place and the tank had been filled with native soil. Based on the depth at which the Geoprobe® met refusal, the bottom of the tank was determined to be approximately 4 ft bgs. The leachline indicated in historical drawings (Figure 2-13 in the Work Plan) was located just to the west of the septic tank approximately 18 in. bgs (Figure 8-2). Soil samples were collected from inside the tank, on both the east and west sides of the tank (uphill and downhill), and from beneath the leachline. The coordinates of the tank and sample points were collected using a global positioning system (Figure 8-3).

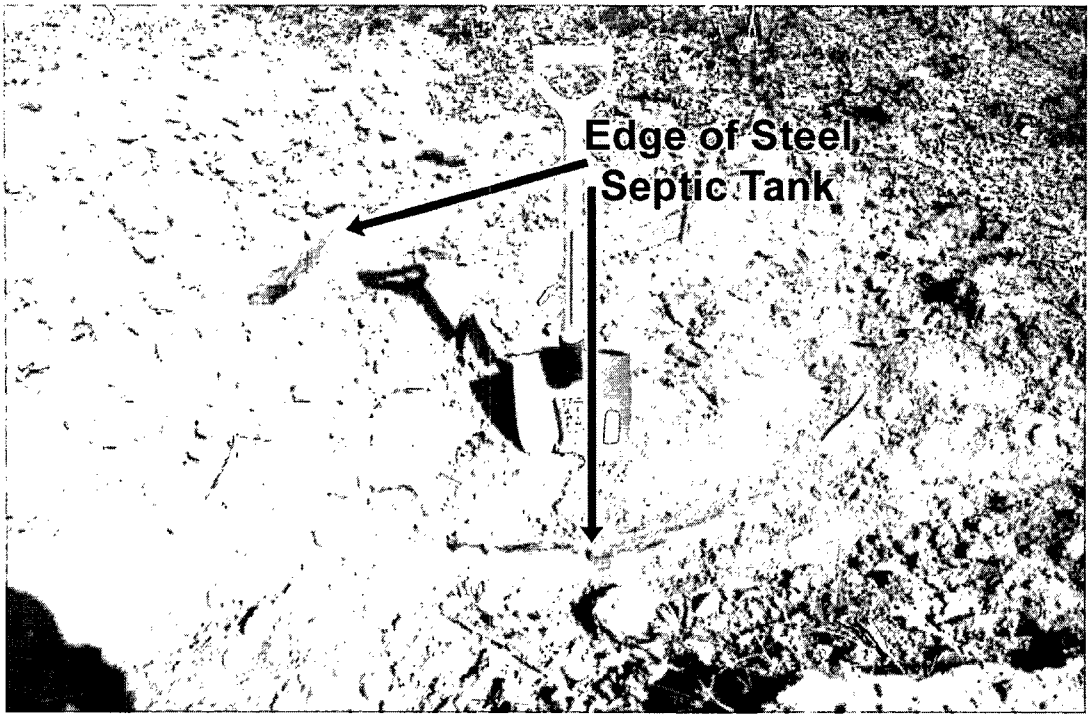


Figure 8-1
Photograph of the Control Point Septic Tank

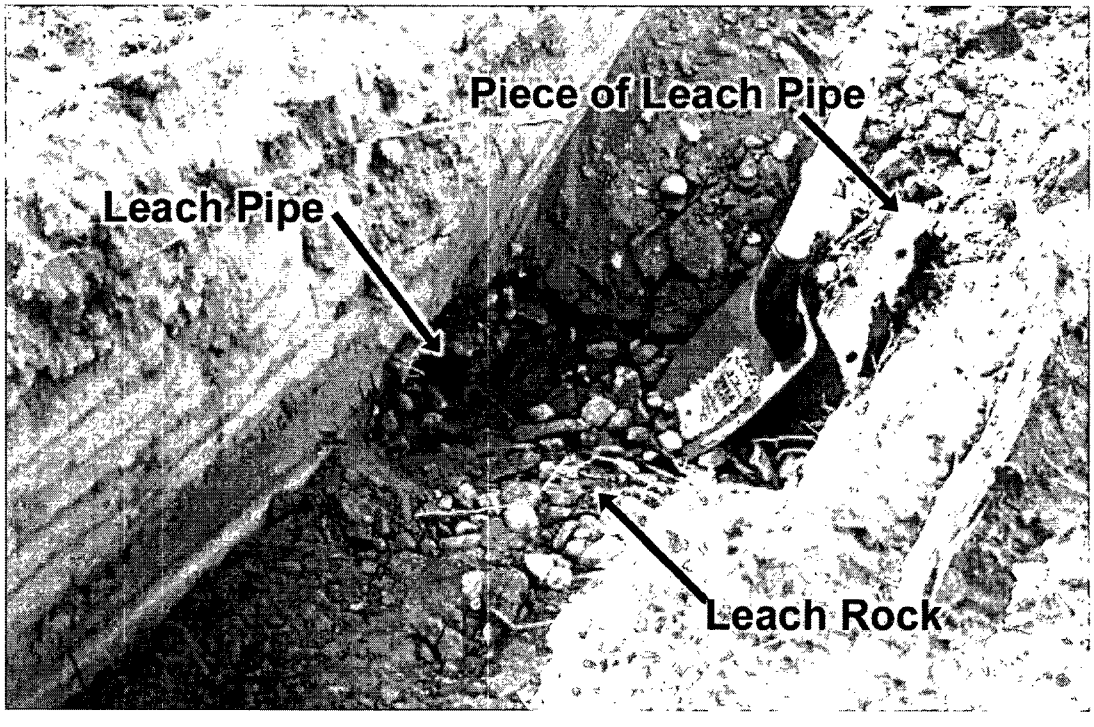


Figure 8-2
Photograph of the Control Point Septic Leach Line

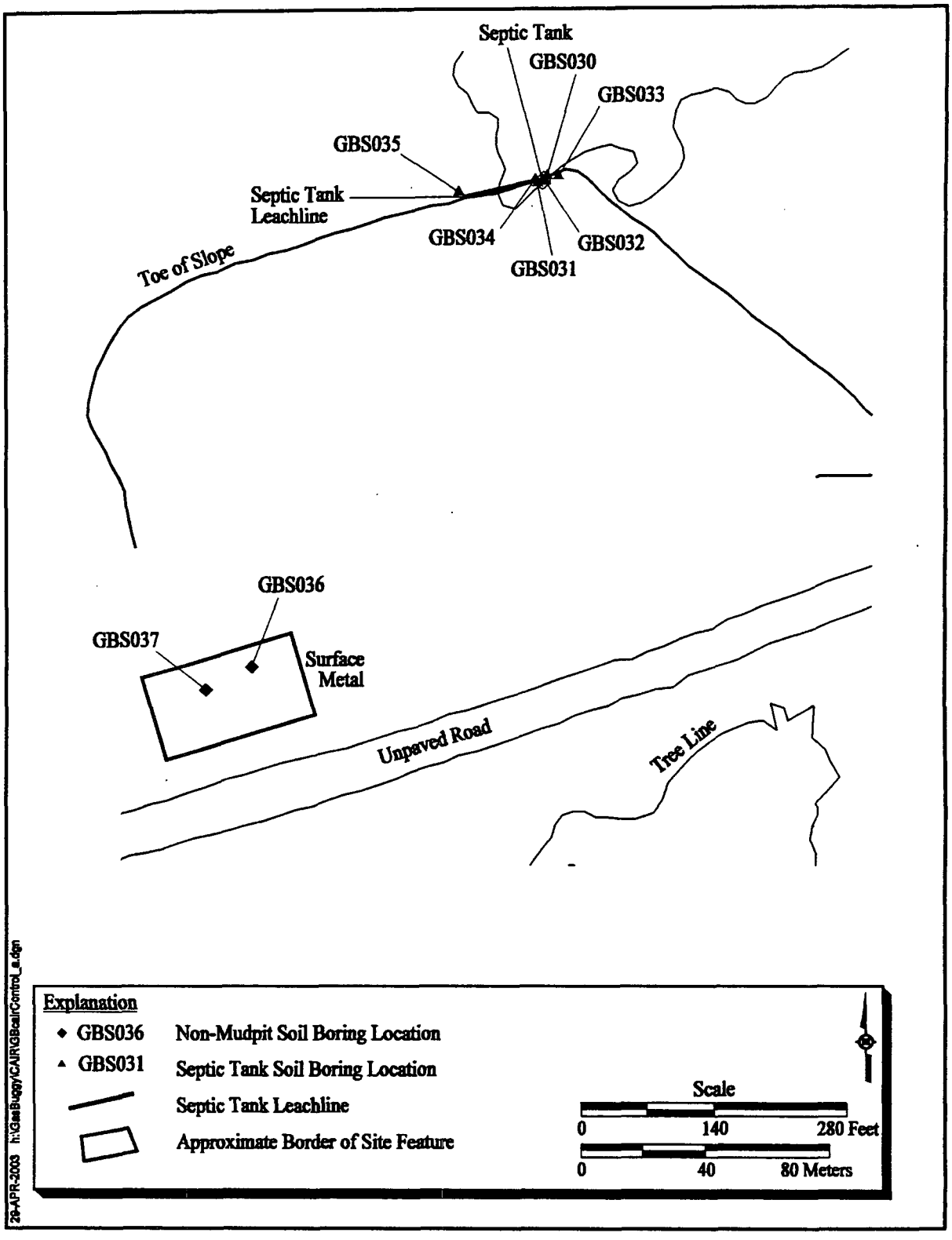


Figure 8-3
Boring and Excavation Locations at the Gasbuggy Control Point

8.3 Boring Locations at the CP

In accordance with the Work Plan, the only feature investigated at the Control Point (other than the septic system) was Anomaly E (Figure 8-3). Anomaly E was identified by geophysics during the Preliminary Field Investigation in the summer of 2000. It was unknown what Anomaly E represented; however, since it was in the vicinity of the former location of an on-site laboratory, it was determined that it should be further investigated. Two borings were completed within the area identified as Anomaly E (Figure 8-3). During the investigation, no biasing factors such as odor or soil staining were observed; therefore, soil samples were collected at the preselected intervals generated by random number tables. The coordinates of the borings are provided in Appendix B.

8.4 Summary of Analytical Results for the CP

A total of six soil samples were collected at the CP. This section contains a summary of the analytical results for chemical COPCs, TPH, and tritium analysis.

8.4.1 Chemical Analysis

No chemical COPCs exceeded PALs at the CP.

8.4.2 TPH Analysis

Total petroleum hydrocarbons were not detected at the CP.

8.5 Tritium Analysis

Six samples collected at the CP were analyzed for tritium. Tritium was analyzed in the CP samples because no samples from the CP were collected in 2000 and the samples were to characterize features that may have been associated with an on-site laboratory. Tritium was not detected at concentrations exceeding the MDL in any samples collected at the CP. The highest MDL for tritium analysis on samples collected in 2002 was 0.051 pCi/g. The highest detected tritium concentration in the 2000 samples was 7.32 pCi/g. This level of contamination was found not to present a risk to human health (see Appendix D of the Work Plan).

8.6 Summary of the Surface Soil Investigation Results for the CP

Table 8-1 provides a summary of the investigation strategy and results for each of the identified AOCs at the CP. Based on soil sample results, there is no contamination above PALs associated with the septic system tank or leachline. Sometime in the past (likely during deactivation of the CP), the tank was filled with an inert material and, thus, has been closed in accordance with New Mexico regulations (NMAC, 1997).

Table 8-1
Investigation Summary for the Control Point Known and Suspect AOCs

Unique Identifier	Approx. Size (ft)	Summary of Actual Investigation	Summary of Investigation Findings
CP Anomaly C[a] (septic tank)	NA	The septic tank and leachline were located by exploratory excavation. Six boreholes were drilled to collect soil samples. Samples were collected from the soil within the septic tank from the soil at the base of the septic tank on the uphill and downhill sides, and from beneath the leach line.	The septic tank had been backfilled with native soil and is closed in accordance with New Mexico regulations (NMAC, 1997). No PALs were exceeded in the samples collected in association with the CP septic system.
CP Anomaly E[a]	20 X 5	Two boreholes were drilled in this anomaly. No biasing factors were identified (e.g., discolored soil); therefore, samples were collected at randomly generated depths.	No PALs exceeded.

[a]Anomalies identified by geophysical surveys are listed by the unique identifiers assigned to them in the report on the results of the geophysical survey (SAIC, 2000). Not all anomalies identified by geophysics required further investigation (see Work Plan).

9.0 Summary of the Shallow Groundwater Investigation

9.1 Summary of the Shallow Groundwater Investigation

This section provides details on the shallow groundwater investigation at the Gasbuggy Site. The shallow groundwater investigation was limited to the SGZ area and the Well GB-D area based on observations of potential contamination identified during the soil investigation.

9.2 Boring Locations

The methodology of the shallow groundwater investigation was described in the Work Plan (see Section 4.3 of the Work Plan), as follows. Soil borings were to be extended a minimum of 10 ft below the deepest observed contamination. If groundwater (saturated conditions) was encountered within 10 ft of contamination, the groundwater source area would be sampled and the background conditions for shallow groundwater would be established. Contamination in the SGZ area was generally found between 5 and 16 ft bgs. Contamination in the Well GB-D area was generally found between 5 and 7 ft bgs. Saturated conditions were not encountered within 10 ft of contamination in either operational area. However, as a best management practice and to provide additional information for a potential risk assessment, a rotosonic drill rig was brought on site to drill exploratory boreholes in an attempt to determine the depth to the first saturated zone.

Six boreholes were drilled at locations on the fringes of the disturbed areas. Three borings (i.e., GBW177, GBW181, and GBW182) were installed in the vicinity of the SGZ mud pits, and three borings (i.e., GBW178 through GBW180) were installed in the vicinity of the Well GB-D Mud Pit. Figure 9-1 shows the location of these boreholes.

9.3 Borehole Observations

Soil borings were installed using rotosonic drilling technology. All borings were installed using 6-in. inside diameter core barrels, with core intervals ranging from 2 to 5 ft in length. During drilling operations, a native dark-brown, moderately-plastic, dense-clay layer was identified in all of the boreholes at depths ranging from 17 to 50 ft bgs. Samples of this layer were collected from borings GBW178, GBW181, and GBW182 and sent off site for geotechnical analysis at Daniel B. Stephens

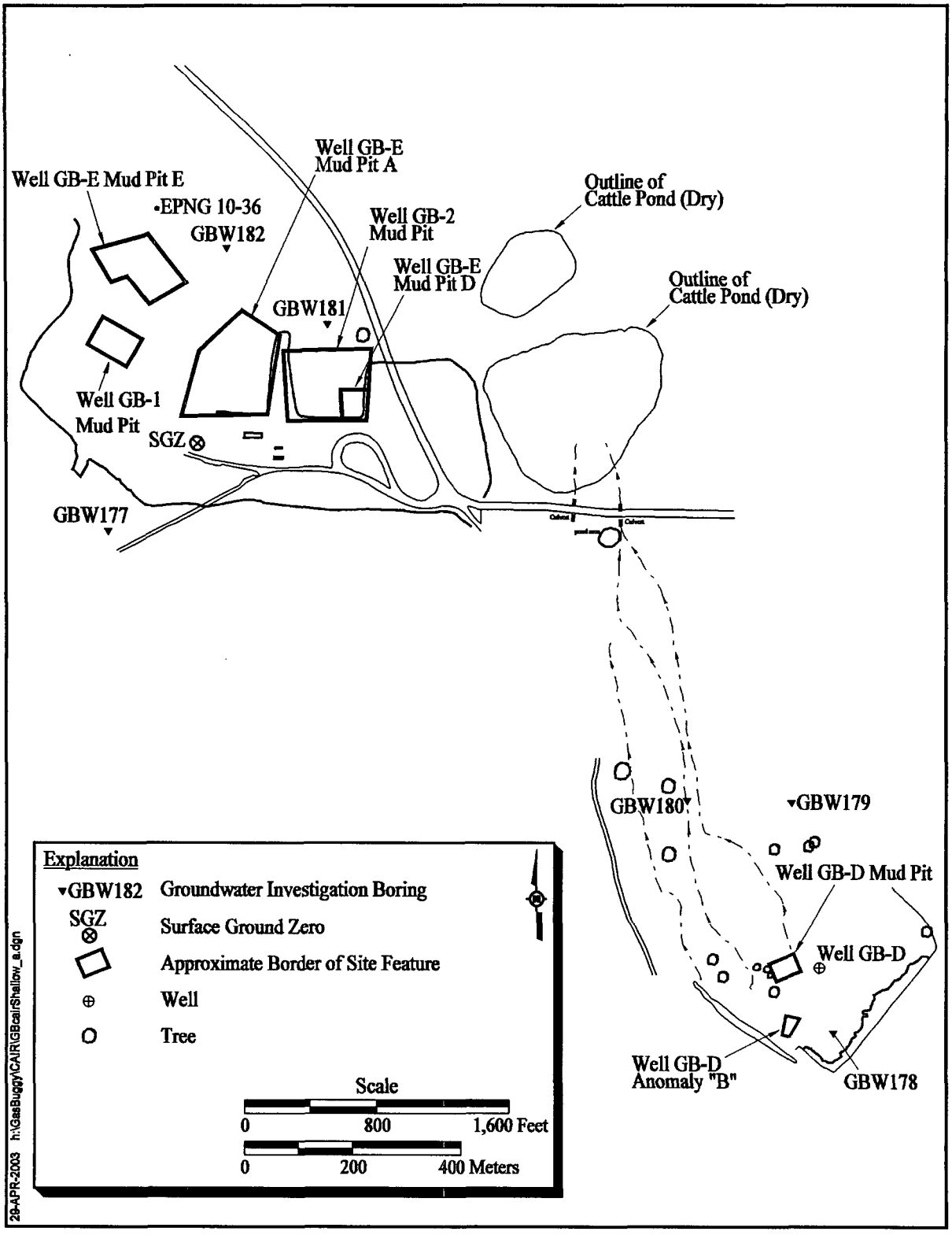


Figure 9-1
Shallow Groundwater Investigation Boring Locations

& Associates, Inc. Laboratory in Albuquerque, New Mexico. Geotechnical results, which include permeability, sieve analysis, and Atterberg limits, are provided in Section 10.0. A summary of borehole observations is provided in Table 9-1. Groundwater was encountered in borings GBW178 through GBW180 (in the general vicinity of the Well GB-D area) at depths ranging from 51.9 to approximately 57.5 ft bgs. Since groundwater was detected at a depth greater than 40 ft below the bottom of the drilling mud layer, which was generally found at 6 to 8 ft bgs, groundwater samples were not collected. Complete boring logs are retained in project files.

Table 9-1
Observations in the Shallow Groundwater Investigation Borings

Boring Identifier	General Location	Total Depth (ft bgs)	Observations
GBW177	SGZ	74	Groundwater not encountered
GBW178	Well GB-D Mud Pit	75	Static Water Level 57.5 ft bgs
GBW179	Well GB-D Mud Pit	58	Static Water Level 51.9 ft bgs
GBW180	Well GB-D Mud Pit	58	Static Water Level 56.8 ft bgs
GBW181	SGZ	56	Groundwater not encountered
GBW182	SGZ	45	Groundwater not encountered

Results of hydraulic conductivity tests, conducted on the three samples from the clay layer, ranged from 3.8×10^{-9} to 7.4×10^{-8} centimeters/second. Based on the observed shallow subsurface conditions and the results of the geotechnical sample analysis, it is highly unlikely that contamination from the mud pits at the Gasbuggy Site is impacting shallow groundwater. Therefore, groundwater is not considered an exposure pathway for contamination originating from the Gasbuggy Site surface.

10.0 Geotechnical Sample Results

This section provides information on the collection of geotechnical samples and a discussion of the results of the laboratory analysis of these samples. Geotechnical samples were collected only from the SGZ area and Well GB-D area. The purpose of collecting geotechnical samples was to provide data in the event a closure in place was selected as a corrective action. Although NNSA/NSO is recommending a clean closure of the site surface (i.e., removal of COCs), the goetechnical data is provided for completeness.

10.1 Geotechnical Sample Locations

Geotechnical samples were collected from within the contaminated zone of the GB-E Mud Pit D at depths of 6 to 8 ft, and 9 to 11 ft bgs. These samples are assumed to be representative of the drilling mud in all the mud pits at the site. Geotechnical samples collected from the drilling mud layer were tested for initial moisture content, particle size, and Atterberg limits. Three additional geotechnical samples were collected from a clay layer identified during the groundwater investigation. Section 9.0 provides additional description of this clay layer. These samples were analyzed for hydraulic conductivity, particle size, and Atterberg limits.

The purpose of collecting geotechnical samples from the mud layer was to provide soil strength and stability data in the event it was decided to build an engineered cap over the mud pits.

The purpose of collecting geotechnical samples from the clay layer was to demonstrate that the clay aquitard would prevent possible downward migration of contaminants from the mud pits to the saturated zone. See Figure 10-1 for the sample locations. See Table 10-1 for the depth and description of sample locations.

10.2 Geotechnical Sample Results

Table 10-2 provides the results of soil property tests conducted on the geotechnical samples.

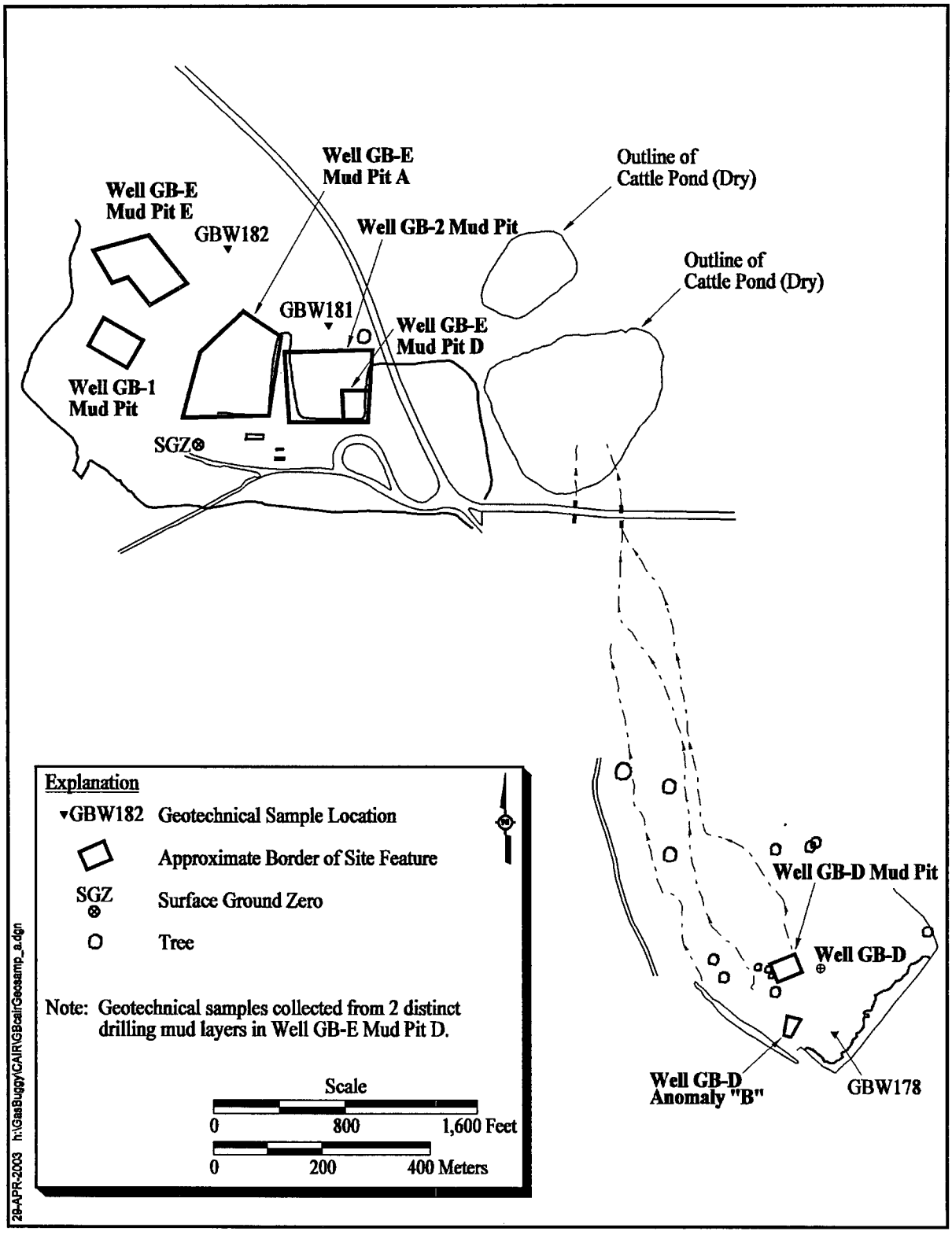


Figure 10-1
Geotechnical Sample Locations

Table 10-1
Geotechnical Sample Locations

Sample Identifier	Location	Description of Strata
GB-E Mud Pit D (6-8)	Well GB-E Mud Pit D	Drilling mud
GB-E Mud Pit D (9-11)	Well GB-E Mud Pit D	Drilling mud
GBW1782930	Near the Well GB-D Mud Pit	Dark-brown, moderately-plastic, dense, sandy clay
GBW1813637	Near the Well GB-E Mud Pit A	Dark-brown, moderately-plastic, dense, sandy clay
GBW1821920	Near the Well GB-E Mud Pit E	Dark-brown, moderately-plastic, dense, sandy clay

Table 10-2
Soil Properties

Sample Identifier	Depth (ft bgs)	Moisture Content (%cm^3/cm^3)	Saturated Hydraulic Conductivity (cm/s)	Particle Size (ASTM Classification)	Liquid Limit	Plastic Limit	Plasticity Limit
ASTM Test Standard	**NA**	**ASTM D2216-98**	**ASTM 5084**	**ASTM D422-63 (1998)**	**Atterberg limits ASTM D4318-00**		
Well GB-E Mud Pit D	6-8	29.1	NA	Sandy Lean Clay	25.6	18.4	7.2
Well GB-E Mud Pit D	9-11	35.6	NA	Clayey Sand	28.1	18.8	9.3
GBW178	29-30	NA	1.1E-8	Sandy Lean Clay	38.0	19.9	18.1
GBW181	36-37	NA	7.4E-8	Sandy Silt	35.4	24.6	10.9
GBW182	19-20	NA	3.8E-9	Lean Clay with Sand	37.8	20.7	17.1

bgs - Below ground surface
cm^3 - Centimeters cubed
cm/s - Centimeters per second
NA - Not applicable

10.2.1 Drilling Mud Samples

The natural moisture content was calculated volumetrically to be 29.1 and 35.6 percent, respectively. Atterberg limit tests and particle-size analyses indicate that the GB-E Mud Pit D drilling mud in the uppermost layer (6 to 8 ft bgs) is a fine-grained, sandy, lean clay; whereas, the lower drilling mud layer (9 to 11 ft bgs) is a fine-grained, clayey sand. The clay fraction of the samples is a low to medium plastic clay with liquid limits ranging from 25.6 to 28.1 percent and plasticity indices of less than 10 percent.

10.2.2 Clay Aquitard

Geotechnical testing was performed on samples collected from a clay layer identified beneath the mud pits during the shallow groundwater investigation. This clay aquitard was observed in all shallow groundwater investigation borings (GBW177 through GBW182) at thicknesses ranging from 3 ft to over 14 ft. This layer was also encountered during soil sample collection throughout SGZ and Well GB-D areas during the shallow subsurface soil investigation. The samples were collected from boreholes GBW178, GBW181, and GBW182, and analyzed for saturated hydraulic conductivity, particle-size analysis, and Atterberg limits. The results of the testing is summarized in Table 10-2. Hydraulic conductivity tests indicated extremely low *in situ* permeabilities ranging from 3.8×10^{-9} to 7.4×10^{-8} centimeters/second (cm/s), or 0.004 to 0.077 feet per year (ft/yr).

For reference, New Mexico regulations for landfills used to contain special wastes including petroleum-contaminated soil, require a combination liner of which the lower component shall consist of a minimum 24-in. thick layer of compacted soil having a saturated hydraulic conductivity of no more than 1×10^{-7} cm/s throughout its thickness (NMAC, 1995).

Atterberg limit tests and particle-size analyses indicate that the soil that made up the samples collected from boreholes GBW178, GBW181, and GBW182 is classified as fine-grained, sandy, lean clay; sandy silt; and lean clay with sand, respectively. The clay fraction of the samples from boreholes GBW178 and GBW182 is a low to medium plastic clay with liquid limits ranging from 37.8 to 38.0 percent, and plasticity indices of approximately 20 percent; whereas, the sample from borehole GBW181 is a slightly plastic clay with a liquid limit of 35.4 percent, and a plasticity index of 10.9 percent.

11.0 Summary of the Survey, Waste Disposal, Site Restoration, and Demobilization Activities

This section details activities that occurred after sample collection was complete, including survey, waste disposal, demobilization, and site restoration.

11.1 Gasbuggy Site Survey

A total land survey was completed for each of the Gasbuggy Site operational areas by Daggett Enterprises, Inc., of Farmington, New Mexico, from September 9 to September 16, 2002. Drawings for each site are retained in project files as both hard copy and electronic media. Coordinates were obtained for all sample points and boreholes and are provided in Appendix B.

11.2 Waste Disposal

Generated waste included sanitary waste, hydrocarbon waste, and decontamination rinsate. Analytical data for the IDW associated with the site characterization project was reviewed to determine the regulatory status of the IDW.

Results of TCLP analysis are presented in Table E.1-4 of Appendix E. Analytical data indicates that there were no hazardous waste constituents detected above regulatory levels in the soil. Therefore, all IDW was characterized as nonregulated. However, IDW was shipped to RCRA-regulated facilities as a best management practice. On October 7, 2002, ten 55-gallon drums of nonregulated decontamination rinsate was shipped to Spring Grove Resource Recovery in Cincinnati, Ohio. On October 15, 2002, one 20-cubic yard, roll-off container of nonregulated soil, personal protective equipment (e.g., gloves, Tyvek®), and other debris was shipped to the Clean Harbors Grassy Mountain RCRA-permitted landfill in Clive, Utah.

11.3 Site Restoration

During site investigation activities, the surface soil and ground cover vegetation was disturbed at several areas of the site. These areas were reworked with a tractor-mounted tilling disc to break up the compacted soil, and then seeded with a mixture recommended by the U.S. Forest Service. Site restoration activities were conducted from October 7 to October 9, 2002.

11.4 Demobilization

All equipment used during the surface and shallow subsurface investigation of the Gasbuggy Site was removed from the site by October 15, 2002.

12.0 Conclusions

This section provides a summary of the conclusions made on the environmental conditions of the Gasbuggy Site surface based on observations made during the field investigation, analytical data results for soil samples, and evaluation of the analytical data. Recommendations on additional actions at the Gasbuggy Site surface are based on the following findings of the corrective action investigation.

12.1 Surface Ground Zero

- The two suspected septic tanks at the SGZ area were not located despite multiple excavations. Based on the lack of physical evidence, it is assumed that Septic Tank A was removed during the site restoration in 1978 and that Septic Tank B was either never constructed or was also removed during the 1978 site restoration.

- The only COPCs that exceed PALs at the SGZ area are arsenic, 1,2,4-trimethylbenzene, and TPH.

- Concentrations of arsenic in site characterization samples exceeded the PAL. However, based on statistical analysis of the data, there is no significant difference in the arsenic concentrations detected in soil samples collected from ten Gasbuggy Site background locations, 35 Gasbuggy Site soil samples with diesel concentrations exceeding 100 mg/kg, and 133 soil samples with diesel concentrations less than 100 mg/kg. There is also no significant correlation between the arsenic concentration and the diesel concentrations in the soil samples with diesel concentrations exceeding 100 mg/kg. Therefore, arsenic was not considered a contaminant of concern.

- Concentrations of 1,2,4-trimethylbenzene in site characterization samples exceeded the PAL. Based upon the possible receptors evaluated and the potential exposure pathways considered, the exposure dose for TMB is considerably less than the reference dose, and the Hazard Quotient is less than one. Thus, TMB present in the soil at the site is not likely to adversely impact potential receptors at the site.

- Concentrations of TPH in site characterization samples exceeded the PAL. All TPH "hits" above the PAL of 100 mg/kg (NMED, 2000b) were within the anticipated locations or in close proximity to the mud pits.

12.2 Well GB-D Area

- Diesel and arsenic were identified above PALs in site characterization samples collected at the Well GB-D area. All diesel "hits" above the PAL of 100 mg/kg were within the anticipated locations or in close proximity to the mud pits.

12.3 Recording Trailer Park

- No COPCs were identified above PALs in site characterization samples collected at the RTP.

12.4 Control Point

- A steel septic tank and clay leach line were identified at the CP. No COPCs were identified above PALs in soil samples collected inside the tank, outside the tank, and beneath the leach line. The tank appears to have been closed in accordance with New Mexico regulations.

- No COPCs were identified above PALs in site characterization samples collected at the CP.

12.5 Shallow Groundwater Investigation

- Three boreholes were completed at depths of 74, 56, and 45 ft bgs in the SGZ area. Static groundwater was not identified in any of these boreholes. The deepest contamination identified in the SGZ area was at approximately 16 ft bgs. There is no static groundwater within 30 ft vertically of contamination in the SGZ area. Groundwater is not considered an exposure pathway at the SGZ area.

- Three boreholes were completed at depths of 75, 58, and 58 ft bgs in the Well GB-D area. Static groundwater was identified at approximately 58, 52, and 57 ft bgs, respectively, in these boreholes. No COPCs other than arsenic were identified above PALs at the Well GB-D area. The concentrations of arsenic identified in the soil have been determined to be representative of site background conditions. Groundwater is not considered an exposure pathway at the Well GB-D area.

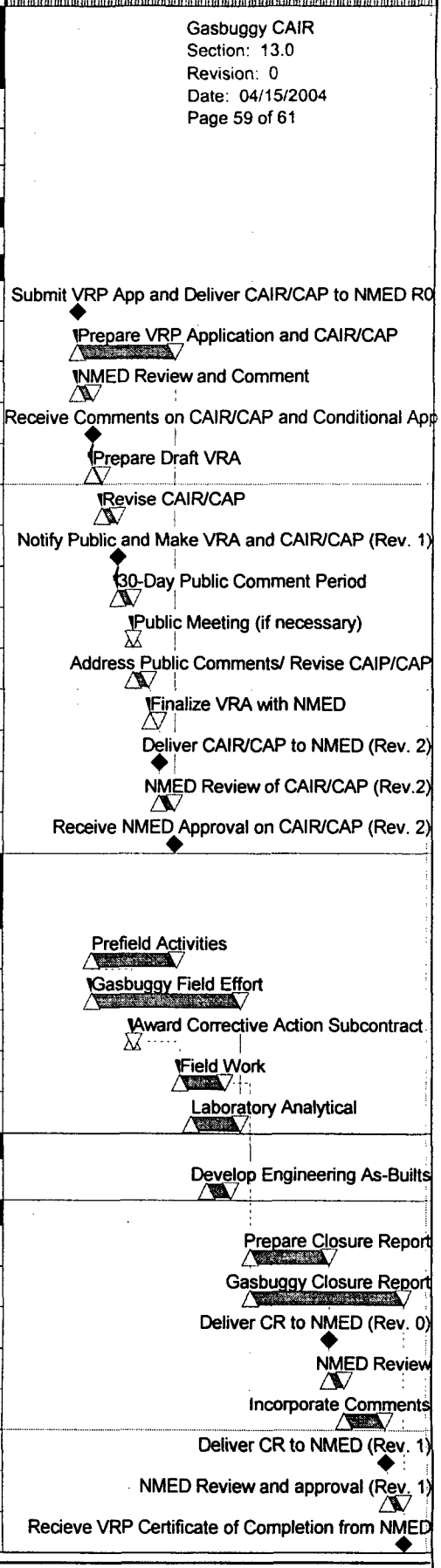
13.0 Recommendations

Based on the conclusions of the corrective action investigation as stated in Section 12.0 and the goal of NNSA/NSO to clean close the Gasbuggy Site surface with no future monitoring requirements in accordance with the New Mexico VRP (NMED, 1999), the following recommendations are made:

- NNSA/NSO will complete the application process for admission of the site into the New Mexico VRP.
- Once accepted into the VRP, NNSA/NSO will work with the New Mexico VRP to complete all required public participation activities.
- A corrective action consisting of the removal of soil contaminated with TPH above 100 mg/kg will be instituted as detailed in Appendix A.
- Although the TMB is not considered to pose a threat to human health or the environment, as a best management practice given that NNSA/NSO will be performing corrective action activities at the site, soil containing TMB above PALs will be removed and transported off site for disposal.
- Upon completion of closure activities, a closure report will be prepared and submitted to the NMED.
- Once closure activities have been completed, all NMED comments on the closure report addressed, and all VRP-required documentation filed, NNSA/NSO will request a certificate of completion for the Gasbuggy Site surface.

Figure 13-1 is provided as an estimated schedule of project activities.

Activity ID	Activity Description	Days	Early Start	Early Finish
1 NNSA Nevada Operations -				
1.4 ENVIRONMENTAL MANAGEMENT PROGRAMS				
1.4.1 ENVIRONMENTAL RESTORATION PROGRAM				
1.4.1.4 OFF SITES PROJECTS				
1.4.1.4.05 NEW MEXICO				
1.4.1.4.05.01 GASBUGGY SITE				
1.4.1.4.05.01.02 GASBUGGY SURFACE				
1.4.1.4.05.01.02.32 CORRECTIVE ACTION PLAN (CAP)				
GBR1002	Submit VRP App and Deliver CAIR/CAP to NMED R0	0	09/30/03*	
GBR1001	Prepare VRP Application and CAIR/CAP	148*	09/30/03	04/22/04
GBR1003	NMED Review and Comment	23	10/01/03	10/31/03
GBR1004	Receive Comments on CAIR/CAP and Conditional App	0	11/03/03	
GBR1005	Prepare Draft VRA	15	11/03/03	11/21/03
GBR1006	Revise CAIR/CAP	23	11/24/03	12/24/03
GBR1007	Notify Public and Make VRA and CAIR/CAP (Rev. 1)	0	12/25/03	
GBR1008	30-Day Public Comment Period	23	12/25/03	01/26/04
GBR1009	Public Meeting (if necessary)	1	01/27/04*	01/27/04
GBR1010	Address Public Comments/ Revise CAIP/CAP	23	01/28/04	02/27/04
GBR1011	Finalize VRA with NMED	15	03/01/04	03/19/04
GBR1012	Deliver CAIR/CAP to NMED (Rev. 2)	0	03/22/04	
GBR1013	NMED Review of CAIR/CAP (Rev.2)	24	03/22/04	04/22/04
GBR1014	Receive NMED Approval on CAIR/CAP (Rev. 2)	0	04/23/04	
1.4.1.4.05.01.02.42 CLOSURE REPORT (CR)				
1.4.1.4.05.01.02.42.03 FIELD EFFORT				
1.4.1.4.05.01.02.42.03.05 Field Effort				
GBR5002	Prefield Activities	130	11/03/03*	04/30/04
GBR5001	Gasbuggy Field Effort	222*	11/03/03	09/07/04
GBR5003	Award Corrective Action Subcontract	1	01/28/04*	01/28/04
GBR5004	Field Work	66	05/07/04	08/06/04
GBR5005	Laboratory Analytical	73	05/28/04	09/07/04
1.4.1.4.05.01.02.42.03.08 As-Builts				
GBR0018	Develop Engineering As-Builts	35	07/01/04	08/18/04
1.4.1.4.05.01.02.42.05 PREPARE DOC				
GBR6002	Prepare Closure Report	116	10/01/04*	03/11/05
GBR6001	Gasbuggy Closure Report	227*	10/01/04	08/15/05
GBR6003	Deliver CR to NMED (Rev. 0)	0	03/14/05	
GBR6004	NMED Review	23	03/14/05	04/13/05
GBR6005	Incorporate Comments	61	04/14/05	07/07/05
GBR6006	Deliver CR to NMED (Rev. 1)	0	07/08/05	
GBR7001	NMED Review and approval (Rev. 1)	25	07/11/05	08/12/05
GBR7001X	Recieve VRP Certificate of Completion from NMED	0		08/15/05



Start Date 10/01/87
Finish Date 08/15/05
Data Date 04/01/03
Run Date 09/10/03 10:20

Early Bar
Progress Bar
Critical Activity

LCBC - GBR0 Sheet 1 of 1

U.S. Department of Energy

OFFSITES GB Remediation

Date	Revision	Checked	Approved

Figure 13-1
Planned Gasbuggy Surface Site Closure Schedule

14.0 References

AEC, see U.S. Atomic Energy Commission.

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Appendix A

Gasbuggy Site Surface
Proposed Corrective Action Plan

A.1.0 Introduction

This document presents the corrective action that NNSA/NSO proposes to be completed at the Gasbuggy Site. The primary objective of the corrective action is to remove drilling mud containing TPH contamination above the action level of 100 mg/kg, while minimizing impact to the surrounding environment.

A.1.1 Report Objective and Organization

The objective of this report is to describe the proposed corrective action with sufficient detail for regulatory and stakeholder review. It is not meant to be detailed enough to guide the corrective action. If the State of New Mexico and stakeholders agree to the methods presented in this proposed plan, then a more detailed design and specifications package will be developed to implement the plan presented herein.

The report has been organized in chronological sections as follows:

- Section A.1.0 provides an introduction to the project, the site description and history.
- Section A.2.0 provides a detailed description of the proposed corrective action in chronological order from the proposed preliminary activities to mobilization through site restoration and demobilization.
- The engineering drawings (i.e., sheets) present the initial site setup, limits of excavation, proposed locations of confirmatory samples, and final site grades.

A.1.2 Site Description and History

A detailed site description depicting current site conditions as well as the operational and regulatory histories for the site are presented in the following sections.

A.1.2.1 Site Description

This section describes the location of the Gasbuggy Site, land status, and environmental setting which includes topography, vegetation, and description of surface waters, wetland, and floodplains present at the Gasbuggy Site.

A.1.2.1.1 Land Status

The Gasbuggy Site is located within the Carson National Forest (CNF), Jicarilla Ranger District. The CNF currently supports multiple uses including recreation, livestock grazing, and resource development.

The Gasbuggy Site is located approximately 55 air miles east of Farmington, New Mexico, in Rio Arriba County within the Carson National Forest (Figure A.1-1). The project site consists of the SGZ area, the Well GB-D area, the RTP, the CP, and the helicopter pad (Figure A.1-2). The proposed corrective action is limited to the drilling mud pits located at SGZ. The use of these lands for Project Gasbuggy was established in a Memorandum of Understanding, dated March 23, 1967, between the U.S. Department of Agriculture's U.S. Forest Service (USFS) and the U.S. Atomic Energy Commission (AEC) (predecessors to the DOE).

Additionally, by land withdrawal action of Public Order 4232, dated June 22, 1967, the U.S. Department of the Interior, Bureau of Land Management (BLM), withdrew from all forms of appropriation, including mining and mineral leasing laws, and reserved for use by the AEC the surface and subsurface of lands within Section 36, Township 29 north, Range 4 west, New Mexico Principal Meridian. A plaque at SGZ states the following (DOE/NV, 1978):

"Project Gasbuggy
Nuclear Explosive Emplacement/Reentry Well (GB-ER)

Site of the first United States underground nuclear experiment for the stimulation of low productivity natural gas reservoir. A 29-kiloton nuclear explosive was detonated at a depth of 4,227 feet below this surface location on December 10, 1967.

No excavation, drilling, and/or removal of subsurface materials to a true vertical depth of 1,500 feet is permitted within a radius of 100 feet of this surface location, nor any similar excavation, drilling, and/or removal of the subsurface materials between the true vertical depths of 1,500 feet and 4,500 feet is permitted within a 600 foot radius of this surface location in the SE quarter of the SW quarter of Section 36, T 29 N, R 4 W, New Mexico Principal Meridian, Rio Arriba County, New Mexico, without Government permission.

United States Department of Energy
November 1978"

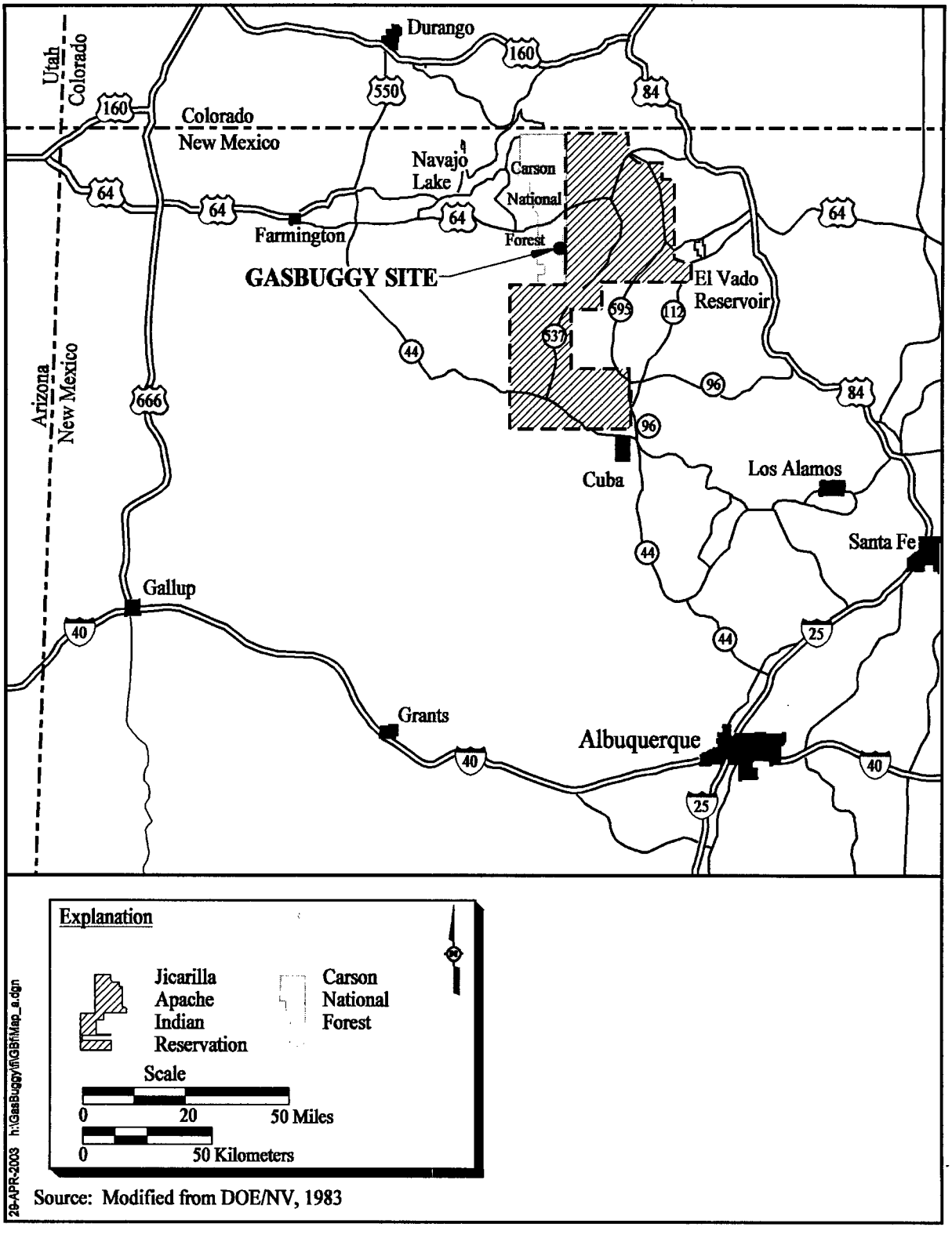


Figure A.1-1
Gasbuggy Site Location Map

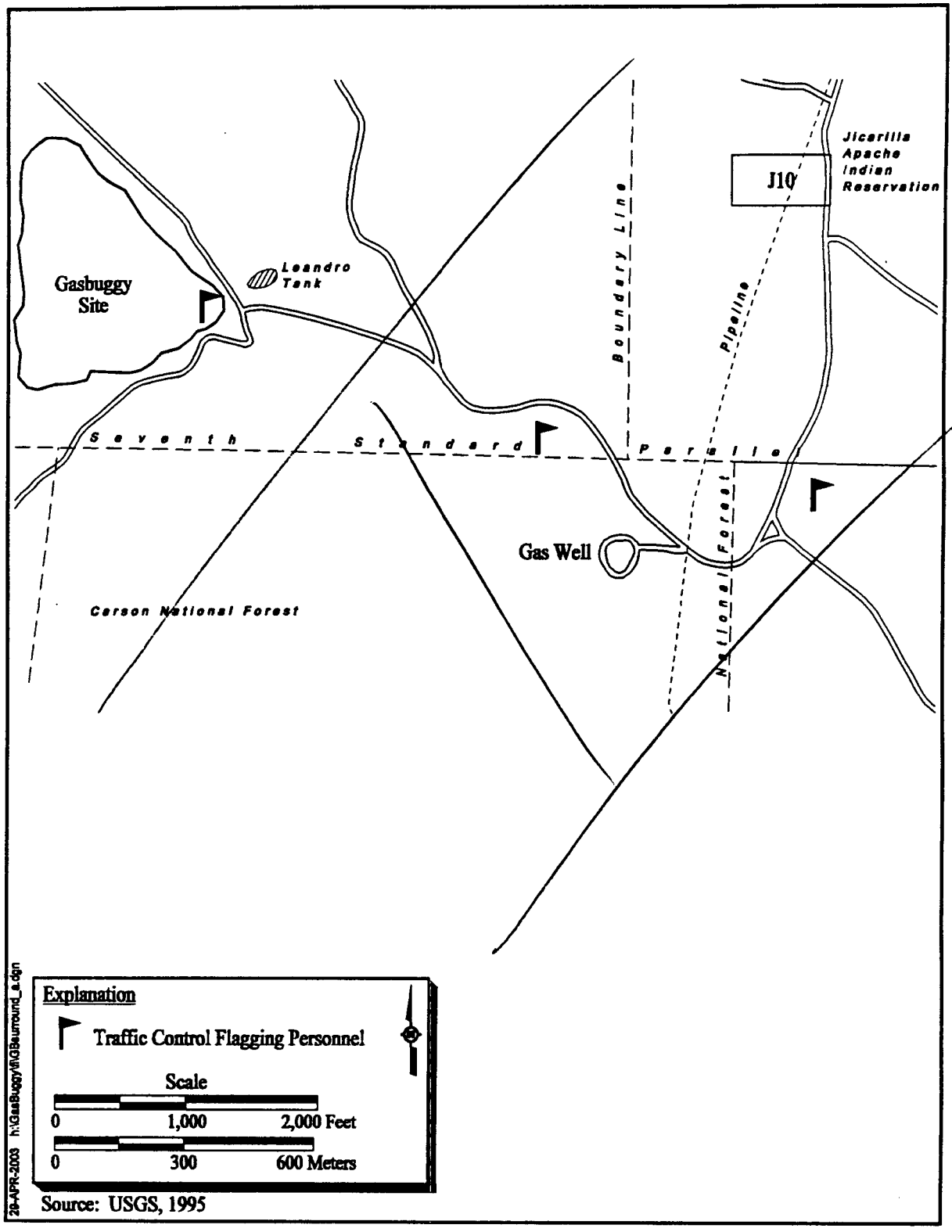


Figure A.1-2
Gasbuggy Site and Surrounding Area

A.1.2.1.2 Environmental Setting

The Gasbuggy Site is located in the northeast portion of the San Juan Basin, a structural feature of the Colorado Plateau Province covering northwestern New Mexico and southeastern Colorado. The Gasbuggy Site is surrounded by typical canyon and plateau topography, with elevations ranging from 6,800 to 7,500 ft in the surrounding area, and from 7,000 to 7,300 ft in the immediate test area (DOE/NV, 1983). Figure A.1-2 presents a topographical map of the Project Gasbuggy location and surrounding area.

The Gasbuggy Site lies within the Cold Temperate climate zone. Three basic vegetation communities (i.e., forest, scrubland, and grassland) are represented at the site. The forest community is classified as Rocky Montane Conifer Forest, which is dominated by Ponderosa pine. The scrubland community is Great Basin Montane Scrub and is found along hilltops above the forest. The grassland community is further divided into two distinct series, the Great Basin Shrub-Grassland, Sagebrush Grass Series, and the Great Basin Shrub-Grassland, Wheatgrass Series (DOE/NV, 1993a).

A.1.2.1.3 Surface Water, Wetlands, and Floodplains

The Gasbuggy Site has no naturally standing water, streams, springs, or seeps. A survey of state wetland inventories did not indicate either wetlands or floodplain areas occurring at the Gasbuggy Site (DOE/NV, 1993b). However, during a site survey conducted in 1993, it was noted that there are four artificially created seasonal ponds within the vicinity of the Gasbuggy Site. Three are cattle ponds constructed with bermed material placed perpendicular to the drainage, and one is the result of water ponding at the upstream end of a culvert under the main access road (DOE/NV, 1993c). Two of the cattle ponds and the berms used to construct them are visible east of SGZ in the 1994 aerial photo of the site as shown in Figure A.1-2. The survey concluded that the areas within the drainage channels upstream of the bermed ponds, the area upstream of the elevated road, as well as the center of the drainage channel, should be considered as a floodplain area (DOE/NV, 1993c). The proposed corrective action shall be limited to the SGZ area, and will not affect the floodplain area north of Forest Service Road (FR) 357.

A.1.2.1.4 Geology and Hydrology

The Gasbuggy Site is situated in the San Juan Basin, a large structural basin containing approximately 12,000 ft of sedimentary rock. The natural contour of the site slopes northeast in Leandro Canyon, which is an ephemeral drainage and tributary of the ephemeral La Jara Creek. The surficial alluvium, the San Jose Formation, the Nacimiento Formation, and the Ojo Alamo Sandstone are the principle aquifers in the Gasbuggy area. The Nacimiento and San Jose formations are continental flood plain deposits and are the predominant surface formations in the Gasbuggy area. They compromise a 3,500-ft sequence of fine- to medium-grained, locally conglomeratic sandstone, interbedded with claystone- and sandy-variegated shale. The beds of sandstone commonly contain water throughout the central San Juan Basin (DOE/NV, 1988).

Descriptions documented during the field investigation indicate the shallow stratigraphy is dominated by poorly graded, red-brown to brown silty sand, poorly graded sand, and silt to a minimum of 30 ft bgs. Weathered sandstone bedrock was encountered between 12 to 24 ft bgs in the northwest portion of the SGZ area.

During the shallow groundwater investigation phase of Gasbuggy Site characterization activities, depth to shallow groundwater was not established at the SGZ area. Three borings were installed at the SGZ area ranging in depth from 45 to 74 ft bgs. Three additional borings were installed at the Well GB-D area, which is located approximately 1,700 ft southeast of the SGZ area. These borings were installed to a depth ranging from 58 to 75 ft bgs, with static water levels measured at depths from 51.9 to 57.5 ft bgs. The proposed corrective action shall be confined to the drilling mud pits at SGZ; therefore, groundwater is not expected to be encountered during excavation activities.

A.1.2.2 Operational History

Project Gasbuggy was the first of three joint government-industry experiments conducted under the Plowshare Program to test the effectiveness of nuclear explosives to fracture low-permeability natural gas reservoirs to simulate production. Gasbuggy consisted of one 29-kiloton nuclear device (DOE/NV, 2000) emplaced in a boring at a depth of 4,240 ft bgs in the Pictured Cliffs sandstone formation and detonated on December 10, 1967 (AEC, 1971). Six major natural gas production tests were conducted after reentry drilling was completed in January 1968. Long-term production testing was completed in November 1973, and pressure-monitoring activities were completed in late 1976 (DOE/NV, 1978).

Site restoration activities were conducted in August and September 1978, and included well plugging and abandonment, decontamination and disposal of equipment, and soil sampling and analysis. No soil or soil moisture samples collected during the 1978 restoration exceeded established release criteria for radioactivity; therefore, no soil remediation was required (DOE/NV, 1983).

A.1.2.3 Regulatory History

In March 2000, DQO meetings were held with NNSA/NSO, NMED, HWB, and OCD. Subsequently, the DQO documents were submitted to the NMED HWB in May 2000. The NNSA/NSO met with the NMED HWB in August of 2000 to discuss comments on the DQO document. A preliminary field investigation was conducted at the Gasbuggy Site in August and September of 2000. The Site Characterization Work Plan (Work Plan), Rev. 0, was submitted to the NMED HWB in February 2001. Comments were received from the NMED HWB in September 2001 at this time, NMED HWB indicated that they had no regulatory authority to oversee the Gasbuggy Site. The revised Work Plan, Rev.1, was submitted to NMED HWB in January 2002, with fieldwork occurring in July through October of 2002.

Following the completion of the field work, NNSA/NSO met with the NMED VRP and NMED HWB on January 30, 2003, to discuss the findings of the field investigation and the actions necessary to close the Gasbuggy Site under the New Mexico VRP regulations (Wycoff, 2003). Additional discussions were held between NNSA/NSO, NMED VRP, and the OCD between January and September of 2003. These discussions were necessary to negotiate the clean up level for TPH contamination at the Gasbuggy Site. Based on the NNSA/NSO goal of ultimately closing the Gasbuggy Site surface with no future monitoring requirements, NNSA/NSO agreed to apply the most stringent TPH cleanup level considered. This level is 100 ppm of TPH and is based on OCD guidance (NMED, 2000). Therefore, drilling mud and/or soil at the Gasbuggy Site which is contaminated with TPH at or above 100 ppm will be removed and transported off site for disposal.

A.2.0 Proposed Corrective Action

The corrective action proposed for the Gasbuggy Site is to remove and dispose of approximately 4,200 cubic yards (CY) of drilling mud containing TPH concentrations greater than the agreed upon action level of 100 mg/kg, while minimizing impact to the surrounding environment.

A.2.1 Scope of Work

The scope of work for the corrective action is comprised of the following components:

- Mobilization
- Site setup
- Contamination control zone delineation
- Installation of temporary construction fence
- Site clearing
- Establishment of field office and laboratory
- Erosion and sedimentation control structure installation
- Access road construction
- Stabilized construction exit installation
- Scale installation
- Construction of decontamination pad
- Excavation of contaminated drilling mud
- Confirmatory sampling and analyses of the excavated mud pits
- Waste transportation and disposal
- Road maintenance
- Backfill of excavated areas
- Site restoration including regrading and revegetation
- Demobilization

A.2.2 Project Organization

The following sections describe the organization that will be adhered to throughout the project. Field operations for the corrective action will be conducted by NNSA/NSO and contracted personnel. Figure A.2-1 presents the Organizational Work Chart for the corrective action.

A.2.2.1 Contractor Roles and Responsibilities

The following sections describe the roles and responsibilities of the various parties.

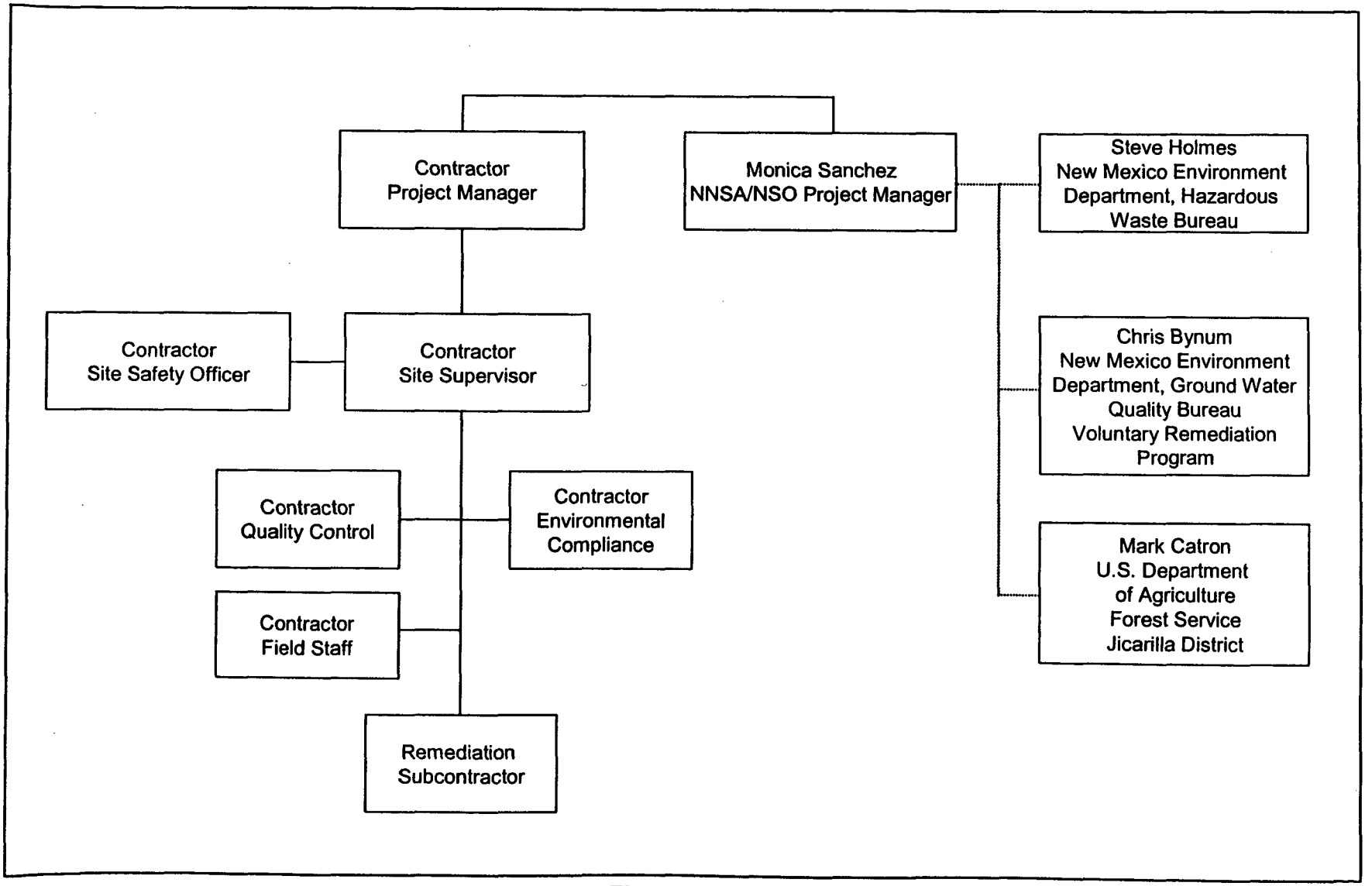


Figure A.2-1
Organizational Work Chart

A.2.2.1.1 Contractor Project Manager

The Project Manager will represent the contractor's central authority for the project and have full project performance and responsiveness to the NNSA/NSO requirements. This position will report directly to the NNSA/NSO Project Manager to ensure that project needs and scope are understood and addressed. The Project Manager will establish project policies; monitor schedule and cost; coordinate reporting; ensure necessary personnel, equipment, and materials are available; identify and resolve potential problems and conflicts in consultation with the NNSA/NSO Project Manager; ensure that health and safety (H&S) and quality control (QC) requirements are adhered to; and ensure that the quality of work is maintained.

A.2.2.1.2 Contractor Site Supervisor

The Site Supervisor will serve as the on-site manager during field operations. The Site Supervisor will coordinate all field activities through a combined and coordinated effort of staff and subcontractors. The Site Supervisor's responsibilities include:

- Assist with procurement of subcontractors and vendors
- Procure project materials
- Manage all subcontractors
- Manage, review, and certify subcontractor vendor invoices
- Execute the technical scope of work
- Ensure complete documentation execution of scope of work
- Report the status and progress of project to the Project Manager according to the established project reporting schedule
- Track the project cost and schedule and report this to the Project Manager
- Comply with all H&S, Quality Assurance (QA) and Quality Control, and waste management (WM) procedures and requirements
- Ensure that all training records for site personnel are complete
- Coordinate work assignments for all site work

- Coordinate with NNSA/NSO on any interaction with the media
- Address audit findings as delegated by the Project Manager
- Assist in the preparation of reports generated by field programs

The Site Supervisor reports directly to the Contractor Project Manager. All contractor field staff will report directly to the Site Supervisor.

A.2.2.1.3 Contractor Field Staff

The field staff will execute the oversight tasks assigned by the Site Supervisor in accordance with the project-specific requirements. The responsibilities include:

- Perform the assigned quality control tasks to confirm that the scope of work is completed in accordance with the contract documents
- Report any H&S, Environmental Compliance (EC)/WM, QA/QC, or technical issues to the Site Supervisor as they arise, and aid in their resolution
- Document field activities in accordance with project-specific requirements
- Support the Site Supervisor in addressing audit findings
- Direct all requests by regulators and media to the Site Supervisor
- Prepare reports upon completion, as applicable

The field staff will report directly to the Site Supervisor for project task assignment.

A.2.2.1.4 Contractor Health and Safety Officer

The Site Safety Officer (SSO) is responsible for establishing a safety culture and ensuring the requirements of the site-specific health and safety plan (SSHASP) are met during the field effort. The SSO will be intimately involved with the preparation of the SSHASP and will report to and assist the Site Supervisor, as needed, to ensure that the scope of work is completed safely.

A.2.2.1.5 Contractor Waste Management and Environmental Compliance

Environmental compliance and use of appropriate waste management practices are a high priority. The EC/WM Liaison will:

- Prepare plans and work documents prior to mobilization to the field that will enable the field staff to comply with applicable laws, rules, regulations, and orders.
- Review the results of analytical sampling in order to determine compliance with waste disposal site waste acceptance criteria.

A.2.2.2 U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office

The NNSA/NSO Project Manager will have the overall management responsibilities for the project. The NNSA/NSO Task Manager, or his designee, will be on site during the corrective action activities and has the overall responsibility for the on-site field activities. The NNSA/NSO Project Manager will plan, authorize, and control project work so that the activities are completed in accordance with the Field Instructions, on schedule, and within budget. The NNSA/NSO Task Manager will be the primary point of contact with the NMED and the USFS. The Contractor's Project Manager will report to the NNSA/NSO Project Manager to ensure that the project needs and scope are understood and addressed.

A.2.2.3 New Mexico Environment Department

The NMED, HWB, contact and the NMED VRP contact, or their designated representatives, will ensure that the State's interests are represented.

A.2.2.4 U.S. Forest Service

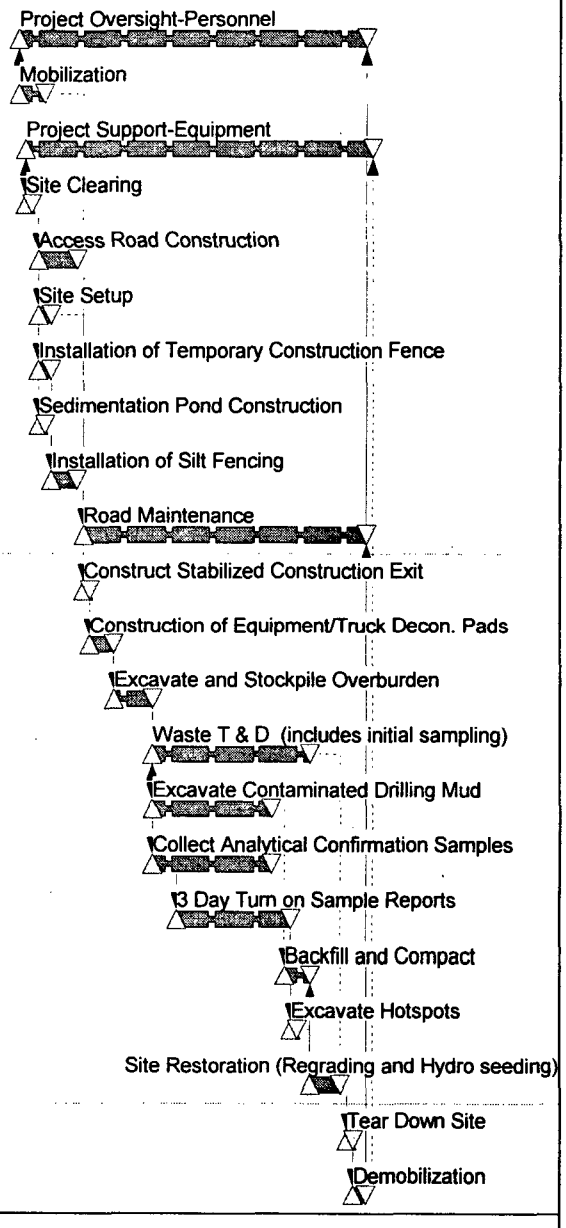
The USFS contact will ensure that the USFS interests are represented.

A.2.3 Schedule

The estimated project duration, based on the scope of work, is approximately eight weeks. The schedule is presented in Figure A.2-2. The weekly work schedule will be comprised of six 10-hour

1 NNSA Nevada Operations -
1.4 ENVIRONMENTAL MANAGEMENT PROGRAMS
1.4.1 ENVIRONMENTAL RESTORATION PROGRAM
1.4.1.4 OFF SITES PROJECTS
1.4.1.4.05 NEW MEXICO
1.4.1.4.05.01 GASBUGGY SITE
1.4.1.4.05.01.02 GASBUGGY SURFACE
1.4.1.4.05.01.02.42 CLOSURE REPORT (CR)
1.4.1.4.05.01.02.42.03 FIELD EFFORT
1.4.1.4.05.01.02.42.03.05 Field Effort

Activity ID	Activity Description	Days	Early Start	Early Finish
GBR0020	Project Oversight-Personnel	47	05/07/04	06/30/04
GBR0003	Mobilization	3	05/07/04	05/10/04
GBR0021	Project Support-Equipment	47	05/08/04	07/01/04
GBR0001	Site Clearing	1	05/08/04	05/08/04
GBR0004	Access Road Construction	6	05/10/04	05/15/04
GBR0002	Site Setup	2	05/10/04	05/11/04
GBR0006	Installation of Temporary Construction Fence	2	05/10/04	05/11/04
GBR0005	Sedimentation Pond Construction	1	05/10/04	05/10/04
GBR0007	Installation of Silt Fencing	4	05/12/04	05/15/04
GBR0019	Road Maintenance	39	05/17/04	06/30/04
GBR0008	Construct Stabilized Construction Exit	1	05/17/04	05/17/04
GBR0009	Construction of Equipment/Truck Decon. Pads	4	05/18/04	05/21/04
GBR0010	Excavate and Stockpile Overburden	5	05/22/04	05/27/04
GBR0013	Waste T & D (includes initial sampling)	21	05/28/04	06/21/04
GBR0011	Excavate Contaminated Drilling Mud	16	05/28/04	06/15/04
GBR0012	Collect Analytical Confirmation Samples	16	05/28/04	06/15/04
GBR0012A	3 Day Turn on Sample Reports	16	06/01/04	06/18/04
GBR0014	Backfill and Compact	3	06/18/04	06/21/04
GBR0012B	Excavate Hotspots	1	06/19/04	06/19/04
GBR0015	Site Restoration (Regrading and Hydro seeding)	5	06/22/04	06/26/04
GBR0016	Tear Down Site	1	06/28/04	06/28/04
GBR0017	Demobilization	2	06/29/04	06/30/04



Start Date 10/01/87
Finish Date 08/15/05
Data Date 04/01/03
Run Date 09/10/03 09:03

Early Bar
Progress Bar
Critical Activity

LCBC - GBR0 Sheet 1 of 1

U.S. Department of Energy

OFFSITES GB Remediation

Date	Revision	Checked	Approved

Primavera Systems, Inc.

Figure A.2-2
Planned Corrective Action Schedule

days, with work hours ranging from approximately 7:00 a.m. to 5:30 p.m. Amendments to the schedule will be made during corrective action activities, as necessary.

A.2.4 Preliminary Activities

Several preliminary activities must be performed prior to mobilization for efficient and effective performance. These activities are required to provide necessary information, as well as the necessary material, equipment, and labor to complete the corrective action. The following sections, which include permits, a traffic plan, and a site visit and scoping meeting, detail the required preliminary activities.

A.2.4.1 Permits

Remediation activities undertaken at the Gasbuggy Site will involve the acquisition of various permits and authorizations. The following is a list and summary of such permits/authorizations that may be required. This list is preliminary and is not meant to be all encompassing. All required documentation shall be in place prior to the start of the associated activity.

- ***National Environmental Policy Act* (NEPA) Compliance.** A NEPA checklist will be completed for the Gasbuggy remediation project. Based on the duration of the project and its potential impacts, it is anticipated that a categorical exclusion will satisfy the NEPA documentation requirements.

- **Site Access Authorization.** The Gasbuggy Site is located entirely within the CNF on land administered by the USFS. A special-use permit will be required in order for NNSA/NSO to access the Gasbuggy Site and conduct remedial activities. The special-use permit may contain additional conditions, such as limits to off-road driving or erosion control measures, that must be complied with during the remediation.

- **Site Clearing.** Clearing the site of underbrush and small shrubs may be required to gain access to the remediation area, to construct access roads, and to prepare staging areas for the decontamination pad, laboratory trailer, and waste storage areas. Such clearing, coupled with the excavation of the mud pits, is expected to disturb a total of approximately 8 acres of surface area. Such disturbance may require an air permit, primarily due to the dust that will be generated by these activities.

  The clearing of various locations on site and the implementation of the remedy may also require a *Clean Water Act* storm water discharge permit. This permit is required, under most circumstances, for construction-type activities that disturb greater than one acre of land. This

permit usually mandates the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which details erosion and sedimentation control measures. Waivers to the storm water discharge permit are available for activities which will have minimal impact to surface water quality, and may be further explored if feasible.

- **Fuel Storage.** Diesel fuel and gasoline will be required to fuel the generators and heavy equipment used during the remediation effort. If fuel is stored on site in bulk storage tanks, development and implementation of a Spill Prevention, Control, and Countermeasures Plan may be required. This plan typically details storage requirements and includes emergency response actions to be taken in the event of a fuel spill.

- **Waste Management.** Implementation of the remedy at the Gasbuggy Site is anticipated to result in approximately 4,200 cy of petroleum-contaminated soil, field laboratory waste, and associated remediation waste (e.g., personal protective equipment [PPE], plastic). The NNSA/NSO was issued an EPA Identification Number as a generator of hazardous waste in 2000. This number is required by EPA for an entity who generates hazardous waste or offers it for transport off site.

- **Wetlands.** Adjacent to the Gasbuggy Site, there is what may be construed as isolated man-made wetlands (i.e., cattle troughs); however, no planned activities will be conducted within these areas or immediately surrounding them. Therefore, wetlands at the site will not be impacted by remediation activities.

A.2.4.2 Site Visit and Scoping Meeting

A site visit and scoping meeting will be required for all perspective remediation subcontractors invited to bid on the Gasbuggy Corrective Action Project. The site visit may include a tour of the proposed disposal facility that has been approved to accept the TPH-contaminated drilling mud, access roads (including the Forest Service Road [FR-357], and J-10 located on the Jicarilla Apache Indian Nation), and the Gasbuggy Site.

A.2.5 Mobilization

All equipment, materials, and personnel will be mobilized to the Gasbuggy Site to perform the approved corrective action.

A.2.5.1 Personnel

Sufficient construction personnel, equipment, and materials will be mobilized to the site to initiate corrective action activities. A New Mexico-licensed contractor will complete all corrective action

activities. Contractor personnel providing oversight for the NNSA/NSO will likely consist of the following:

- Site Supervisor
- Health and Safety Officer
- Two-QA/QC Engineers
- Cost/Schedule Engineer
- Two-Technicians (Confirmatory soil sampling and disposal activities)

An environmental compliance specialist will be mobilized to oversee the removal of waste from the Gasbuggy Site. Additionally, personnel will be mobilized, as necessary, to perform site audits and assessments in accordance with NNSA/NSO policy.

A.2.5.2 Equipment

The major equipment required for the corrective action may consist of one or more of the following items:

- Field and laboratory offices
- Work break trailer and portable toilets
- 40-kilowatt generators
- Pick-up trucks and passenger van
- Fuel/mechanical truck
- 2,000-gallon water truck
- Tracked excavator
- Articulated dump truck
- 20-cubic yard dump trucks
- Truck scale
- Low-ground pressure bulldozer
- Rubber tire loader
- Road grader
- Street sweeper
- Pressure washer
- 2-in. trash pumps
- Hoses, fittings, and related materials
- HNu photoionization detector (PID)
- Explosimeter/Oxygen analyzer

Miscellaneous office and H&S materials, as well as the straw blanket and material needed for general site restoration, will also be obtained and delivered on site prior to, or during, the corrective action.

A.2.6 Site Setup

The first work activities performed as part of the corrective action will be site setup. The primary purpose of the site setup is to establish the field facilities necessary to accomplish the corrective action. Sheet C-2 depicts the proposed site layout for the SGZ area. Although remediation activities will occur at the Well GB-D area, an engineering drawing of the site layout has not been developed. The activities at the Well GB-D site are minimal and the site setup and layout will be at the direction of the Site Supervisor. Site setup activities will include:

- Identifying and designating the temporary laydown areas as well as specific locations for storage/stockpiling of construction equipment and materials and staging of materials
- Identifying and designating the exclusion, contamination reduction, and support zones
- Performing an inventory and inspection of equipment and materials, including health and safety-related items, to verify readiness to perform the corrective action
- Constructing a stabilized construction entrance and haul truck staging area
- Establishing field facilities consisting of an office trailer complete with temporary power, water, and telephone service
- Establishing a personnel decontamination facility
- Installing erosion and sediment controls
- Constructing an equipment decontamination pad
- Installation of a temporary weigh scale.

Each of these tasks are described in detail in the following sections.

A.2.6.1 Contamination Control Zone Delineation

Site control will be maintained by the establishment of control zones consisting of an exclusion zone (EZ), contamination reduction zone (CRZ), and support zone (SZ). All zones will be delineated and appropriately marked by fencing and/or signs. A brief description of each zone and its function is included in the following:

- Exclusion Zone - The EZ includes the mud pits and contiguous areas. This area is known to contain contaminated materials and has the highest potential for exposure to the contaminants by contact, therefore, appropriate PPE must be worn when working in this zone. An area will be established within the EZ adjacent to the CRZ to stockpile construction/remediation materials and stage heavy equipment when not in use.

- Contamination Reduction Zone - The CRZ is comprised of the personnel decontamination facility, the equipment decontamination pad, and a portion of the temporary site access road. This is the corridor through which all personnel and equipment must pass through to enter or exit the EZ to prevent any cross-contamination and for the purpose of accountability. Personal protective outer garments and respiratory protection will be removed in the CRZ. Personnel and equipment decontamination will also occur here.

- Support Zone - The SZ consists of all other areas and will be designated a clean area used for storage and general administrative functions. Specifically, the SZ will be used for field facilities, material staging, parking, and as a site entrance where deliveries are received. Personnel entering this zone may include delivery personnel, visitors, security guards, etc., who will not necessarily be permitted in the EZ. All personnel arriving in the SZ will, upon arrival, report to the site office and the sign the site visitor log.

A.2.6.2 Temporary Construction Fence

A temporary construction fence will be installed along the south side of FR-357 adjacent to SGZ, as shown on Sheet C-2. The corrective action contractor will use a preassembled orange construction fence, manufactured by Tensar Polytechnologies, Inc., or equivalent. The fence will prevent unauthorized vehicular traffic from entering onto the corrective action site.

A.2.6.3 Site Clearing

Because the Gasbuggy Site is located within an open field, it is anticipated that minimal site clearing will be required (see Figure A.2-3).

A.2.6.4 Field Office Establishment

A field office trailer of sufficient size and in good condition will be located in the southeast corner of the site. The trailer is anticipated to be at least 10-ft wide by 24-ft long. The trailer will be equipped with office furniture (e.g., desks, tables, chairs, drawing table, filing cabinets), a computer, and telephone.

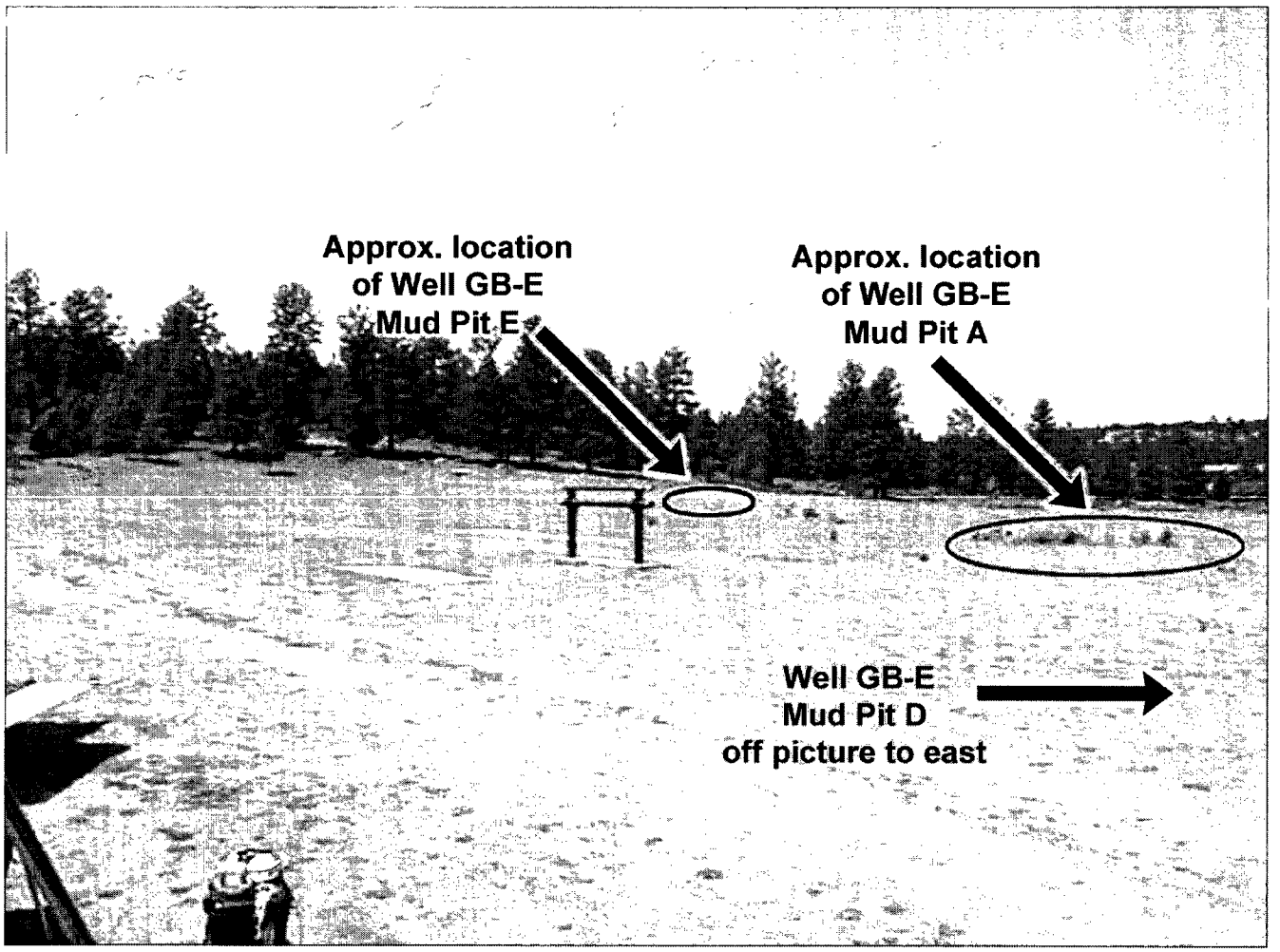


Figure A.2-3
Photograph of the Gasbuggy Site Facing Northwest

After blocking and leveling the trailer, combination landings and steps will be installed at each door. The trailer will comply with appropriate state and local requirements and will be anchored to resist high winds. Temporary power will consist of diesel generators hard wired by a New Mexico-licensed electrician, and will be located adjacent to the site trailers. Due to the remote location of the Gasbuggy Site, telephone service will consist of satellite or cellular service. Drinking water will be provided by a local bottled water service. Sanitary service will be provided locally through the use of portable toilets serviced weekly. A site break trailer should also be located on site for project personnel.

A.2.6.5 Field Laboratory Establishment

A field laboratory trailer of sufficient size and in good condition will be located adjacent to the field office. The trailer is anticipated to be at least 10-ft wide by 24-ft long. The trailer will be equipped with office furniture (e.g., desks, tables, chairs, filing cabinets), a computer, and a refrigerator to control sample temperature. The field laboratory may also be equipped with a field gas chromatograph to assist with making determinations for mud pit excavation activities.

A.2.6.6 Erosion and Sedimentation Control Structure Installation

Temporary controls to minimize erosion and sedimentation will be installed at the mud pits and contiguous work areas during the corrective action as shown on Sheet C-2. The primary erosion and sedimentation control structure utilized will be diversion trenching and silt fencing. Prior to any earth disturbance, a silt fence will be installed downgradient of work areas to prevent sediment-laden storm water from leaving the site. Similar controls will be installed at the Well GB-D area at the direction of the Site Supervisor. The procedures for installing the silt fence as well as inspection, maintenance, and cleanup requirements are discussed in the following paragraphs.

Silt Fence

The remediation contractor will use a preassembled silt fence, manufactured by Mirafi, Inc., or an approved equivalent. The silt fence will be installed in accordance with the manufacturer's recommendations and downgradient of the designated work areas along the entire northern and eastern site boundaries using a walk-behind trencher. Due to the site topography, a silt fence will not

be required along the southern or western boundaries. As applicable, the following procedures will be employed during silt fence installation:

- Excavate a 4- by 4-in. trench along the proposed silt fence alignment.
- Unroll bundles of silt fence and position posts against the downgradient wall of the trench with the reinforcement netting on the downstream side of flow direction.
- Drive posts into the ground until the netting is approximately 2 in. from the trench bottom.
- Lay the toe-in-flap of the filter fabric in the bottom of the trench, backfill the trench, and tamp the soil
- Join the silt fence sections using a coupler.

Inspection and Maintenance

The remediation contractor will inspect erosion control devices after each rainfall and daily during prolonged rainfall. Sediment deposits will be removed from the silt fence after each rainfall or when sediment reaches one-half the barrier height. The contractor will immediately repair damaged erosion control devices as well as damaged areas around and underneath the devices. The erosion control devices will be maintained to assure continued performance of their intended function.

Cleanup

Upon completion of the project, erosion control devices will be removed. Erosion control devices and areas immediately adjacent to the device will be filled where applicable, graded to drain, blended into surrounding contours, and finished as required. Erosion control devices may remain in place, when necessary.

A.2.6.7 Access Road Construction

Access to the mud pits at the Gasbuggy Site will require a temporary site access roadway to be constructed from FR-357 to the mud pits. Actual location of the access road will be determined in the field. The access road will be constructed of a nonwoven geotextile and 6 in. (minimum) of stone. Site traffic will be kept to a minimum and will be confined to the temporary site access roadway. At the completion of the corrective action, the aggregate will be removed and used as backfill material, and the area will be revegetated.

No access road will be constructed at the Well GB-D area due to the limited area to be disturbed and minimal volume of drilling mud to be excavated.

A.2.6.8 Stabilized Construction Exit Installation

A stabilized construction exit will be constructed adjacent to Well GB-E Mud Pit D and the Well GB-D area. The construction site exit, as shown on Detail 4 of Sheet C-7, will be stabilized with large aggregate (riprap) to prevent the traveling of drilling mud or dirt on J-10 and Hwy 64. The construction site exit will be constructed with a layer of nonwoven geotextile overlain with aggregate. The geotextile will be placed on the ground prior to riprap. The stabilized construction exit will be maintained during the corrective action and may require periodic cleaning to remove accumulated drilling mud, dirt, or other debris and/or top dressings, with additional riprap as conditions demand.

A.2.6.9 Scale Installation

A temporary weigh scale will be installed in the SZ to determine the weight of the transport vehicles carrying drilling mud off site to the approved landfarm. Trucks will be weighed prior to and after loading activities to record the weight of the drilling mud and to confirm that the vehicles are in compliance with roadway weight limits.

A.2.6.10 Personnel Decontamination Facility Establishment

A personnel decontamination facility will be established within the CRZ to provide personnel with a controlled transition from the EZ to the SZ. A step-off area will be located at the entrance to the personnel decontamination facility. A boot wash, hand wash, and emergency eyewash will be provided in this area. Personnel will doff PPE in this area. Bags and/or drums will be positioned within this area to contain PPE.

A.2.6.11 Equipment Decontamination Pad Construction

An equipment decontamination pad will be constructed at two mud pit sites at SGZ and the Well GB-D area within the CRZ at the designated locations, as shown on Detail 1 of Sheet C-7. All equipment leaving the EZ which may have come in contact with contaminated material will be decontaminated at this location. A typical equipment decontamination pad will consist of an area

approximately 15-ft wide by 40-ft long, graded to drain to one corner, covered with 2 layers of 30-mil polyethylene liner, and geotextile placed on grade with earthen berms approximately one foot in height around the perimeter. The entrance and exit berms will be constructed so as to allow passage of construction machinery and equipment and site vehicles and still contain the decontamination rinsate. At the designated low corner, a hole will be excavated to allow for installation of a sump. A layer of wooden 4 x 4's will then be placed on the ground over the polyethylene sheeting to prevent damage to the sheeting. The sheeting will be securely anchored around the perimeter by shoveling soil or equivalent onto the outer edge.

A portable, submersible pump will be set in the sump to periodically transfer the decontamination rinsate via hoses to the storage tank (e.g., 21,000-gallon frac tank or similar) staged nearby. Decontamination will be accomplished using a high-pressure washer.

A.2.7 Excavation of Contaminated Drilling Mud

The remediation of the drilling mud pits will consist of excavating the TPH-contaminated drilling mud with concentrations greater that 100 mg/kg. Three mud pits located in the vicinity of SGZ contain approximately 3,560 cy of contaminated drilling mud to be removed. In addition, the Well GB-D area mud pit contains approximately 610 cy of drilling mud to be removed. Table A.2-1 presents the estimated quantities for the four mud pits. Figure A.2-4 presents the location of the three mud pits at SGZ in relation to other site features at SGZ. Figure A.2-5 presents the location of the Well GB-D mud pit. The corrective action will be completed by performance of several sequential tasks using conventional earth-moving equipment. After the "clean" overburden material has been removed and stockpiled for backfill, the drilling mud will be excavated from the following mud pits: Well GB-E Mud Pit A, D, and E, and Well GB-D area. A tracked excavator will remove all drilling mud to the lines and grade shown on Sheet C-4. The drilling mud will be loaded directly into polyethylene-lined haul trucks for off-site disposal.

A.2.8 Traffic Control

The proposed corrective action involves transporting TPH-contaminated drilling mud from the Gasbuggy Site over dirt and paved roads to an approved disposal facility. It is anticipated that the Envirotech landfarm facility will be used. This facility is located 16 mi south of Bloomfield,

Table A.2-1
Estimated Volume of Drilling Mud to be Excavated

Mud Pit	Estimated Volume of Drilling Mud (cubic yards)
Well GB-E Mud Pit A	2,370
Well GB-E Mud Pit D	672
Well GB-E Mud Pit E	520
Well GB-D Mud Pit	609
Total	**4,170**

New Mexico, on U.S. Highway (Hwy) 550. It is anticipated that ten 20-cubic yard haul trucks will be used to transport the drilling mud, with each truck making two round trips per day. After the trucks have been loaded with the drilling mud at the Gasbuggy Site, the trucks will travel east on FR-357 for approximately one mile, thereby leaving the CNF and entering onto the Jicarilla Apache Indian Nation. The trucks will then travel north on Road J-10 for approximately 7 miles to State Hwy 64. The trucks will travel east on Hwy 64 for approximately 55 miles to Bloomfield, New Mexico, and then turn south on Hwy 550 toward Albuquerque. The planed disposal facility is located approximately 16 miles south of Bloomfield on Hwy 550.

The dirt public roads are frequently traveled by oil and gas company lease operators performing routine operation and maintenance on the gas wells in the vicinity of the Gasbuggy Site. Therefore, to eliminate potential accidents, flagging personnel shall be placed at intersections; these include the construction entrance at the Gasbuggy Site, at the top of the hill east of the site where there is a semi-blind turn, and the intersection of Road J-10 and FR-357 (see Figure A.2-2).

A.2.9 Confirmatory Sampling

Confirmatory soil samples will be collected at locations shown on Sheet C-5. These sample locations are based on the cleanup level of 100 mg/kg. The following sections detail the sampling and analysis, which will occur at the site.

Confirmatory Soil Samples

After the drilling mud has been excavated to the dimensions shown on Sheets C-3 and C-4, confirmation soil samples will be collected from the sidewalls and bottom of each excavation. A total

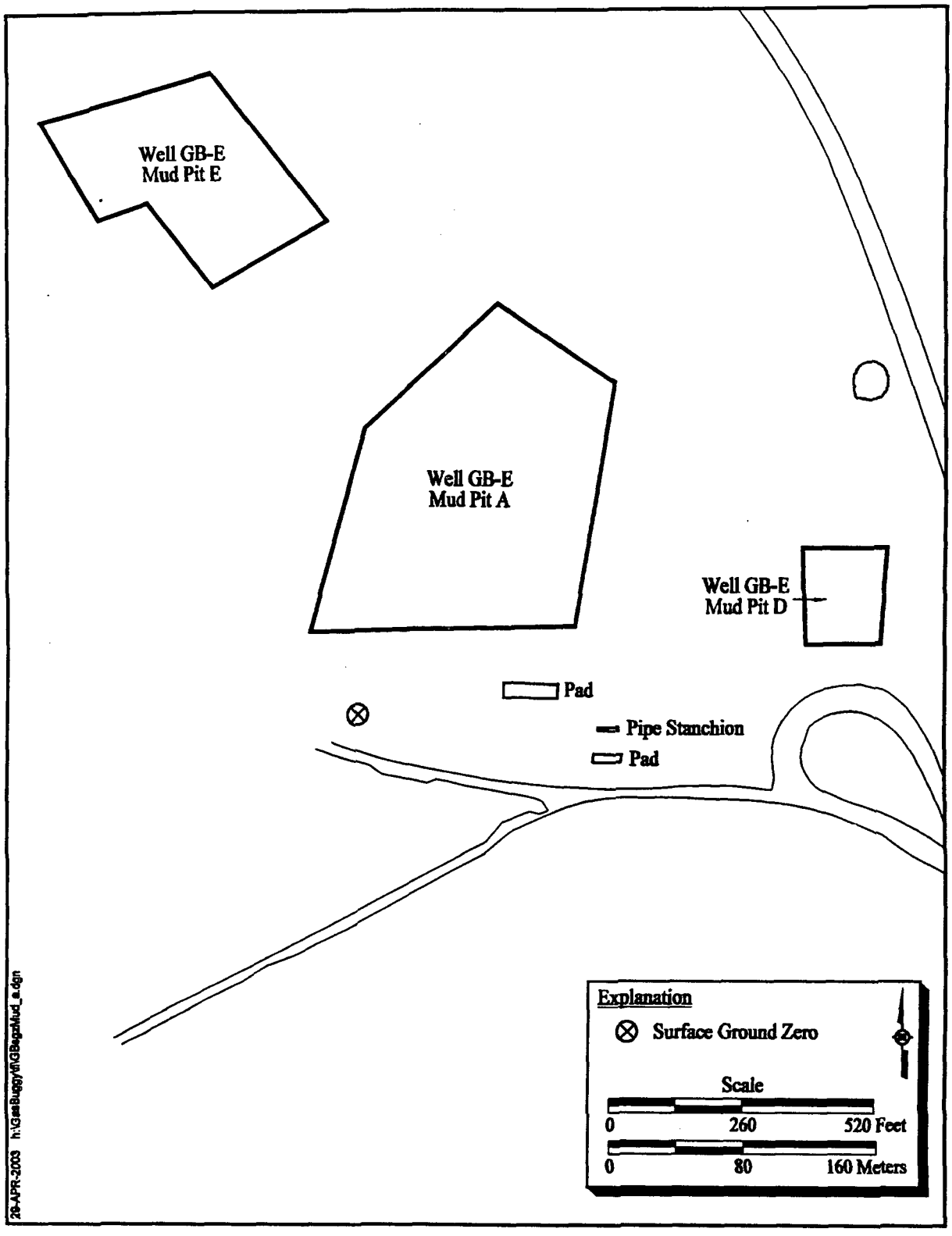


Figure A.2-4
Location of Surface Ground Zero Mud Pits to be Remediated

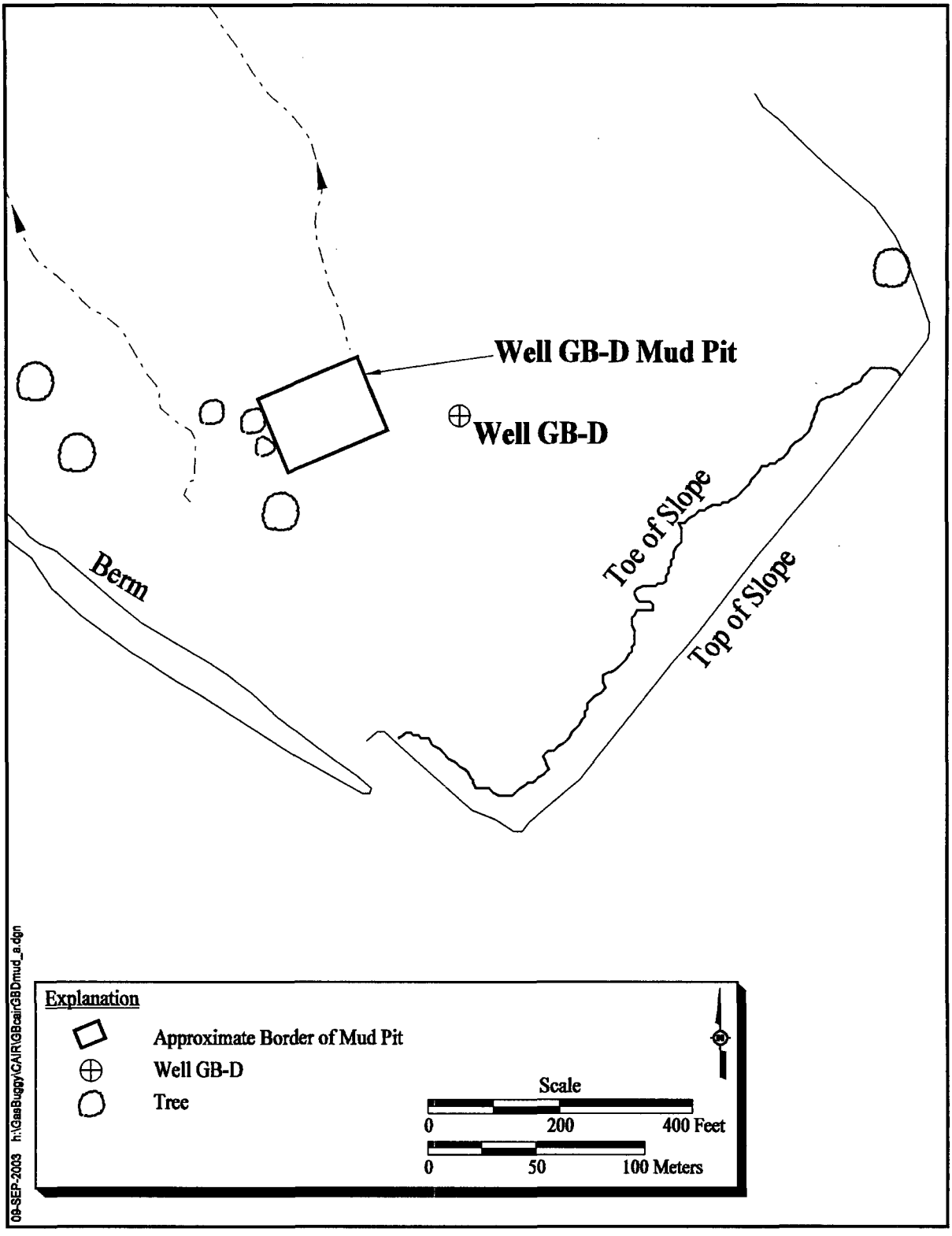


Figure A.2-5
Approximate Location of the Well GB-D Mud Pit

of 11 soil samples, including two from each of the four sidewalls and three sample locations from the bottom of each mud pit excavation, will be sampled for TPH-DRO and TPH-GRO in accordance with EPA Method SW-846 8015B modified to verify that the *in situ* soils are below cleanup levels. The sample collection procedures are listed below:

- The top six inches of soil will be collected using a decontaminated or disposable trowel.
- The soil will be thoroughly homogenized in a stainless-steel mixing bowl and transferred to laboratory-provided containers.

Excavation bottom samples will be taken from the bottom of the excavation. Sidewall samples will be taken along the sidewall at the approximate depth of the site characterization sample that exceeded the cleanup level (e.g., 6-8 ft bgs).

If sample results show that the *in situ* soils are above the regulatory level, additional soil will be excavated and the area resampled until *in situ* soils are below the regulatory level.

While awaiting packaging, all samples will be placed in the secured refrigerator located within the laboratory trailer. Samples will be preserved immediately after collection. If samples cannot be transported on the same day they are collected, packaging of the samples will be delayed until the next day so that "fresh" ice can be included with the sample. These samples will be stored in a secure refrigerator.

After packaging, sample custody will then be transferred to a team member who will ship the coolers via overnight courier or transport the samples directly to the laboratory. The laboratory will be notified that a sample shipment is expected to arrive. Upon receipt, the laboratory custodian accepting the shipment of samples signs the Analysis Request and Chain-of-Custody Record form, noting any broken containers, arrival temperature, date, and any other pertinent information or discrepancies.

A.2.10 Transportation and Disposal of Contaminated Drilling Mud

The following sections discuss the general transportation and disposal requirements.

Transportation

The corrective action contractor will comply with federal, state, and local requirements for transporting hazardous and nonhazardous materials through the applicable jurisdictions. In addition, the contractor will:

- Inspect and document all vehicles and containers for proper operation and covering.
- Inspect all vehicles and containers for proper markings, shipping documents, and other requirements for waste shipment, as applicable.
- Coordinate signing of shipping documents with the Waste Management Compliance Officer, as applicable.
- Perform and document decontamination procedures prior to leaving the work site and again before leaving the disposal site.

Transportation of contaminated materials will be accomplished using containers, tanks, or trucks approved by the U.S. Department of Transportation (DOT) for containment and transportation of the contaminated materials.

Disposal

Hydrocarbon contaminated drilling mud/soil removed from the Gasbuggy Site is considered oil and gas exploration/production (E&P) waste (Price, 2000). This will be disposed only at a New Mexico Oil Conservation Division (OCD)-approved treatment, storage, and disposal facility (TSDF) for oil/gas E&P waste. The Envirotech landfarm in Bloomfield, New Mexico, is anticipated to be the disposal facility.

Documentation

The NNSA/NSO Contractor will originate, use, and maintain the waste shipment records/manifests as required by NMED. The WM compliance officer, or designee, will complete and sign the shipping documents on behalf of the NNSA/NSO.

The NNSA/NSO Contractor will also provide the NMED with the following documentation as requested:

- Verification that the proposed disposal site is permitted to accept the contaminated materials specified prior to the start of excavation
- Copies of shipping documents and other documentation required for shipment of waste materials
- Verification that the wastes were actually delivered and disposed of at the proposed disposal site

A.2.11 Dust Control and Road Maintenance

A water truck will be used to control the spread of dust to avoid the creation of a nuisance or hazard in the surrounding areas. Water for dust control will be supplied from a clean source (i.e., municipal water supply). In addition, a street sweeper will be positioned at the intersection of State Hwy 64 and the Jicarilla Apache Indian Reservation Road J-10 to make sure that any mud tracked from J-10 onto State Hwy 64 is cleaned up, as necessary.

Due to the significant amount of truck traffic expected, as well as frequent afternoon thunderstorms, routine maintenance on FR-357 and J-10 will be performed, as necessary, to ensure the safety of vehicles and work crews. If necessary, a motor grader will be dedicated full time to grading the traveled sections of FR-357 and J-10 to prevent rutting and "soft spots" on the roads.

A.2.12 Backfill of Excavation

After the completion of excavation activities, and confirmation that soil cleanup levels have been met, the mud pits will be backfilled with the stockpiled overburden material in 1-ft lifts and compacted. Prior to backfilling with the overburden material, the aggregate material used for the temporary access roads and construction exits will be placed in the excavated mud pits. The riprap material will be used to fill the voids left after excavating the drilling mud. This will eliminate the need for purchasing fill material as well as eliminate the need for off-site disposal of the aggregate. The overburden material will be regraded to match the surrounding grade, and promote storm water drainage. Although not anticipated, if additional material is required for backfill, it will be imported from a clean source.

A.2.13 Final Survey

A final survey of all work areas will be completed prior to demobilization. The survey will be completed by a surveyor licensed in the State of New Mexico. The survey will be utilized to provide as-built drawings of the backfilled mud pits and other disturbed areas.

A.2.14 Waste Management

The corrective action contractor is responsible for the characterization, on-site management, transportation, and ultimate disposal of all wastes, hazardous and non-hazardous, generated by remediation activities. The following wastes/materials are anticipated to be generated during remediation activities:

- Nonhazardous solid waste, such as used PPE (e.g., Tyvek® coveralls, booties), disposable sampling equipment, plastic liner, and other materials that may come in contact with drilling mud
- Nonhazardous decontamination rinsate, resulting from the decontamination of heavy equipment and other materials
- Recyclable material, in the form of used motor oil, hydraulic fluid, and the like, resulting from the routine maintenance of heavy equipment and vehicles

A.2.15 Site Restoration

After all drilling mud has been removed, the site will be graded to "smooth" the ground surface. The newly graded areas will match the existing surrounding contours to promote storm water drainage. The site will be revegetated with a USFS-approved seed mixture, fertilized, and mulched with straw in accordance with the seed suppliers recommendations.

A.2.15.1 Site Grading

All disturbed areas, including the backfilled mud pits, access roads, and field-office parking area, shall be regraded. The disturbed areas will be graded in such a way as to blend into the surrounding contours, and no slopes steeped greater than 4 horizontal to 1 vertical will remain at the conclusion of the site restoration activities. Sheet C-6 presents the final grading plan for the Gasbuggy Site restoration.

A.2.15.2 Site Revegetation

All disturbed areas, including the backfilled mud pits, access roads, field office parking areas, will be revegetated with an USFS-approved seed mixture. Prior to seeding, the top 4 in. of soil will be scarified to produce an adequate seed bed. The soil will be amended with an USFS-approved fertilizer. After the seed has been placed, straw mulch will be placed to protect the seeds until germination. On areas with a slope of 25 percent (4 Horizontal to 1 Vertical), an erosion control blanket such as Curlex I, as manufactured by American Excelsior Company, or approved equal will be installed over the seeded areas.

A.2.16 Demobilization

Final demobilization will consist of removing all personnel, equipment, and remaining materials at the completion of the corrective action. Prior to demobilization, the site will be inspected with the NMED HWB, and/or VRP, and USFS is to verify that all equipment and materials have been removed and the site restored, as much as practical, to its preconstruction condition.

A.3.0 References

AEC, see U.S. Atomic Energy Commission.

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

NMED, see New Mexico Environment Department.

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Wycoff, R.C., U.S. Department of Energy, Nevada Operations Office. 2003. Letter to C. Bynum (NMED) and Steve Holmes (NMED) entitled, *Minutes from January 30, 2003, Meeting with New Mexico Environment Department Regarding the Gasbuggy and Gnome-Coach, New Mexico Sites*. Las Vegas, NV.

Appendix B

Gasbuggy Site Surface Soil Boring Location Survey Data

B.1.0 Survey Locations

Table B.1-1
Survey Locations - Gasbuggy Site, Rio Arriba County, New Mexico
(Page 1 of 6)

Decimal Degrees		Soil Boring Number	New Mexico Northern Zone (State Plane Coordinates - 1927 Datum)		Universal Tranverse Mercator (UTM) Zone 13 - North (ft)		
Latitude	Longitude		Northing	Easting	Northing	Easting	Elevation
36.67807695	-107.2073963	gbp01	NA	NA	13324243.07	993276.89	7199.298
36.67809761	-107.2075944	gbp02	NA	NA	13324251.93	993218.97	7195.423
36.67818719	-107.2081777	gbp03	NA	NA	13324288.48	993048.68	7200.899
36.67829787	-107.2084067	gbp04	NA	NA	13324330.32	992982.47	7196.411
36.678142	-107.2084164	gbp05	NA	NA	13324273.64	992978.32	7202.703
36.67884504	-107.2088209	gbp06	NA	NA	13324532.28	992865.60	7193.497
36.67873765	-107.2087052	gbp07	NA	NA	13324492.41	992898.63	7197.746
36.67826075	-107.2088689	gbp08	NA	NA	13324319.93	992846.64	7205.728
36.67813457	-107.2088844	gbp09	NA	NA	13324274.10	992841.04	7204.596
36.67816967	-107.2089948	gbp10	NA	NA	13324287.62	992808.96	7206.060
36.67787266	-107.2086373	gbp11	NA	NA	13324177.09	992911.31	7206.115
36.67842219	-107.2088854	gbp12	NA	NA	13324378.80	992843.16	7202.379
36.67804716	-107.2082967	gbp13	NA	NA	13324238.31	993012.61	7202.582
36.67910535	-107.2086946	gbp15	NA	NA	13324626.18	992904.82	7192.047
36.67905945	-107.2086089	gbp16	NA	NA	13324608.90	992929.58	7190.984
36.67899694	-107.2087171	gbp17	NA	NA	13324586.87	992897.31	7189.406
36.67865129	-107.2086854	gbp18	NA	NA	13324460.84	992903.72	7197.736
36.67853148	-107.2089052	gbp19	NA	NA	13324418.71	992838.27	7201.860
36.67850281	-107.2087676	gbp20	NA	NA	13324407.35	992878.38	7203.028
36.67793969	-107.2074419	gbp21	NA	NA	13324193.42	993262.37	7204.301
36.67791047	-107.207312	gbp22	NA	NA	13324181.91	993300.20	7204.357
36.67794293	-107.2084702	gbp23	NA	NA	13324201.54	992960.88	7208.691
36.67830636	-107.2080773	gbp24	NA	NA	13324331.18	993079.13	7203.888
36.67834861	-107.2078551	gbp25	NA	NA	13324345.06	993144.64	7203.225
36.67793035	-107.208339	gbp26	NA	NA	13324196.08	992999.25	7209.282
36.67784453	-107.2083372	gbp27	NA	NA	13324164.83	992999.05	7208.579
36.6782401	-107.207876	gbp28	NA	NA	13324305.70	993137.58	7204.567
36.67839864	-107.2089598	gbp29	NA	NA	13324370.73	992821.16	7205.548

Table B.1-1
Survey Locations - Gasbuggy Site, Rio Arriba County, New Mexico
(Page 2 of 6)

Decimal Degrees		Soil Boring Number	New Mexico Northern Zone (State Plane Coordinates - 1927 Datum)		Universal Tranverse Mercator (UTM) Zone 13 - North (ft)		
Latitude	Longitude		Northing	Easting	Northing	Easting	Elevation
36.67714509	-107.2088294	gbpb01	NA	NA	13323913.55	992848.86	7216.467
36.67790985	-107.2094398	gbpb02	NA	NA	13324196.05	992676.31	7212.293
36.67919065	-107.2093814	gbpb03	NA	NA	13324661.87	992704.16	7198.136
Soil boring locations presented below were surveyed by Daggett Enterprises, Inc. of Farmington, New Mexico							
36.67292241	-107.2138092	GBB04	2065590.152	217348.265	13322388.02	991350.36	7346.665
36.67985808	-107.2094196	GBB05	2068102.139	218660.854	13324882.93	992695.71	7190.504
36.67740972	-107.2061081	GBB06	2067201.118	219623.047	13323969.36	993646.14	7189.298
36.67587239	-107.2045726	GBB07	2066636.971	220067.783	13323399.41	994083.52	7199.359
36.6758006	-107.2039489	GBB08	2066609.014	220250.414	13323369.08	994265.78	7206.525
36.67487784	-107.2043413	GBB09	2066274.232	220132.023	13323035.83	994143.03	7204.529
36.6540408	-107.2310114	GBS030	2058767.562	212233.099	13315631.95	986146.26	7393.674
36.65403588	-107.2310217	GBS031	2058765.804	212230.056	13315630.23	986143.19	7393.606
36.65403789	-107.2310113	GBS032	2058766.505	212233.106	13315630.89	986146.25	7393.755
36.65404318	-107.230998	GBS033	2058768.388	212237.030	13315632.72	986150.20	7394.078
36.65403886	-107.2310231	GBS034	2058766.893	212229.640	13315631.32	986142.79	7393.578
36.65402597	-107.2311068	GBS035	2058762.452	212205.041	13315627.20	986118.13	7391.514
36.65360576	-107.2313224	GBS036	2058610.124	212140.253	13315475.72	986051.36	7390.187
36.65358394	-107.2313735	GBS037	2058602.331	212125.177	13315468.12	986036.18	7388.722
36.67253415	-107.2143116	GBS038	2065450.289	217199.520	13322250.09	991199.80	7346.858
36.67248426	-107.2143305	GBS039	2065432.181	217193.774	13322232.06	991193.81	7346.642
36.67244903	-107.2143313	GBS040	2065419.358	217193.433	13322219.24	991193.31	7346.541
36.67237751	-107.214337	GBS041	2065393.338	217191.485	13322193.24	991191.02	7346.776
36.67237466	-107.2143338	GBS042	2065392.294	217192.428	13322192.19	991191.95	7346.661
36.67251669	-107.2141711	GBS043	2065443.517	217240.636	13322242.78	991240.82	7347.098
36.67256914	-107.2142892	GBS044	2065462.960	217206.193	13322262.67	991206.63	7348.027
36.67249067	-107.2143913	GBS045	2065434.695	217175.963	13322234.80	991176.04	7347.183
36.67498871	-107.2045728	GBS046	2066315.272	220064.529	13323077.75	994076.07	7204.248
36.67501864	-107.2045742	GBS047	2066326.169	220064.206	13323088.66	994075.89	7204.112
36.67504136	-107.2045886	GBS048	2066334.485	220060.072	13323097.02	994071.86	7204.072
36.67506468	-107.2045224	GBS049	2066342.779	220079.586	13323105.06	994091.48	7203.998
36.67526218	-107.2046303	GBS050	2066414.996	220048.654	13323177.68	994061.49	7203.608

Table B.1-1
Survey Locations - Gasbuggy Site, Rio Arriba County, New Mexico
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Decimal Degrees		Soil Boring Number	New Mexico Northern Zone (State Plane Coordinates - 1927 Datum)		Universal Tranverse Mercator (UTM) Zone 13 - North (ft)		
Latitude	Longitude		Northing	Easting	Northing	Easting	Elevation
36.67525813	-107.2046652	GBS051	2066413.622	220038.406	13323176.44	994051.23	7203.272
36.67528096	-107.2045624	GBS052	2066421.634	220068.633	13323184.06	994081.56	7203.869
36.67529636	-107.2045096	GBS053	2066427.084	220084.174	13323189.31	994097.17	7204.054
36.67531568	-107.2046083	GBS054	2066434.408	220055.286	13323197.01	994068.38	7203.272
36.67530604	-107.2046229	GBS055	2066430.940	220050.973	13323193.60	994064.02	7203.399
36.67531094	-107.2046437	GBS056	2066432.783	220044.907	13323195.52	994057.98	7203.380
36.67532039	-107.2046438	GBS057	2066436.226	220044.901	13323198.96	994058.02	7203.420
36.67535347	-107.2045857	GBS058	2066448.097	220062.049	13323210.61	994075.32	7203.701
36.67533877	-107.204669	GBS059	2066442.989	220037.589	13323205.82	994050.79	7203.521
36.67538237	-107.2046156	GBS060	2066458.707	220053.389	13323221.34	994066.80	7203.920
36.67544987	-107.2046581	GBS061	2066483.403	220041.171	13323246.19	994054.90	7203.734
36.67535203	-107.204791	GBS062	2066448.173	220001.850	13323211.47	994015.12	7203.024
36.67535389	-107.2048432	GBS063	2066449.002	219986.560	13323212.50	993999.84	7202.657
36.67529356	-107.2048465	GBS064	2066427.050	219985.353	13323190.56	993998.35	7202.849
36.67533005	-107.204808	GBS065	2066440.220	219996.781	13323203.59	994009.95	7203.008
36.67524335	-107.2047752	GBS066	2066408.562	220006.102	13323171.81	994018.86	7203.381
36.67540621	-107.2048886	GBS067	2066468.182	219973.425	13323231.85	993986.96	7202.484
36.67543904	-107.2045925	GBS068	2066479.270	220060.371	13323241.81	994074.05	7203.907
36.67539718	-107.2045179	GBS069	2066463.812	220082.088	13323226.07	994095.56	7203.842
36.67534083	-107.2044775	GBS070	2066443.180	220093.759	13323205.28	994106.97	7204.050
36.67533085	-107.2044238	GBS071	2066439.390	220109.447	13323201.29	994122.61	7204.166
36.67533894	-107.2043694	GBS072	2066442.176	220125.433	13323203.87	994138.63	7204.336
36.67519034	-107.204415	GBS073	2066388.212	220111.523	13323150.08	994124.01	7204.322
36.6779195	-107.2074019	GBS074	2067390.487	219245.499	13324163.65	993271.07	7203.895
36.6779629	-107.2074052	GBS075	2067406.297	219244.689	13324179.47	993270.46	7203.571
36.67784429	-107.2074032	GBS076	2067363.110	219244.844	13324136.29	993270.05	7204.042
36.67790776	-107.2073015	GBS077	2067385.919	219274.898	13324158.70	993300.41	7203.459
36.67790189	-107.207244	GBS078	2067383.613	219291.738	13324156.18	993317.22	7203.492
36.67790309	-107.2075155	GBS079	2067384.846	219212.127	13324158.45	993237.62	7204.822
36.67790633	-107.2075229	GBS080	2067386.047	219209.968	13324159.68	993235.48	7204.831
36.67792483	-107.2084296	GBS081	2067395.442	218944.148	13324172.54	992969.78	7203.002
36.6779277	-107.2084332	GBS082	2067396.496	218943.099	13324173.60	992968.75	7202.674
36.67796904	-107.2084785	GBS083	2067411.677	218929.964	13324188.96	992955.81	7202.665

Table B.1-1
Survey Locations - Gasbuggy Site, Rio Arriba County, New Mexico
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Decimal Degrees		Soil Boring Number	New Mexico Northern Zone (State Plane Coordinates - 1927 Datum)		Universal Tranverse Mercator (UTM) Zone 13 - North (ft)		
Latitude	Longitude		Northing	Easting	Northing	Easting	Elevation
36.67792378	-107.2085048	GBS084	2067395.277	218922.099	13324172.66	992947.73	7202.888
36.67791184	-107.2085575	GBS085	2067391.087	218906.590	13324168.67	992932.17	7202.979
36.67797379	-107.2083676	GBS086	2067413.082	218962.497	13324189.94	992988.36	7202.665
36.67775178	-107.2088585	GBS087	2067333.700	218817.744	13324112.44	992842.57	7203.865
36.67773856	-107.2088266	GBS088	2067328.794	218827.033	13324107.41	992851.80	7203.807
36.67777752	-107.208883	GBS089	2067343.144	218810.655	13324121.98	992835.61	7203.861
36.67779295	-107.2088207	GBS090	2067348.576	218828.957	13324127.17	992853.98	7203.416
36.67849041	-107.2082898	GBS091	2067600.927	218987.191	13324377.46	993015.50	7192.905
36.67835441	-107.2083175	GBS092	2067551.499	218978.564	13324328.15	993006.23	7195.934
36.67854002	-107.2083161	GBS093	2067619.065	218979.658	13324395.70	993008.21	7191.787
36.67849576	-107.2083294	GBS094	2067602.990	218975.600	13324379.68	993003.94	7192.273
36.67853372	-107.2082463	GBS095	2067616.566	219000.118	13324392.93	993028.64	7192.457
36.67841756	-107.2082407	GBS096	2067574.264	219001.330	13324350.62	993029.30	7195.572
36.67828163	-107.2078658	GBS097	2067523.678	219110.780	13324298.60	993138.09	7198.697
36.67829938	-107.2078632	GBS098	2067530.132	219111.587	13324305.05	993138.98	7198.556
36.67832252	-107.2078431	GBS099	2067538.498	219117.581	13324313.33	993145.08	7197.892
36.67830765	-107.2078843	GBS100	2067533.206	219105.445	13324308.20	993132.87	7198.332
36.67826911	-107.2078593	GBS101	2067519.101	219112.627	13324294.00	993139.87	7198.898
36.67844931	-107.2081845	GBS102	2067585.658	219017.932	13324361.79	993046.05	7195.723
36.67850087	-107.2080523	GBS103	2067604.040	219056.879	13324379.67	993085.23	7195.743
36.6782598	-107.2080367	GBS104	2067516.234	219060.580	13324291.81	993087.79	7197.192
36.67817879	-107.2080502	GBS105	2067486.782	219056.334	13324262.42	993083.16	7198.164
36.67821191	-107.2079088	GBS106	2067498.423	219097.903	13324273.51	993124.88	7198.679
36.6783093	-107.2079079	GBS107	2067533.877	219098.526	13324308.96	993125.96	7197.912
36.6785674	-107.2080132	GBS108	2067628.145	219068.598	13324403.62	993097.27	7194.713
36.67850438	-107.2078653	GBS109	2067604.768	219111.733	13324379.68	993140.10	7196.062
36.6785316	-107.2078439	GBS110	2067614.615	219118.100	13324389.45	993146.59	7195.245
36.6782579	-107.2083199	GBS111	2067516.371	218977.517	13324293.03	993004.73	7198.558
36.67820457	-107.2082055	GBS112	2067496.621	219010.889	13324272.85	993037.84	7198.679
36.6780934	-107.2081687	GBS113	2067456.044	219021.256	13324232.13	993047.68	7199.656
36.67812575	-107.2081724	GBS114	2067467.829	219020.310	13324243.93	993046.89	7199.462
36.67817261	-107.2081293	GBS115	2067484.765	219033.105	13324260.70	993059.90	7198.447
36.67812196	-107.2080347	GBS116	2067466.047	219060.677	13324241.62	993087.23	7198.680

Table B.1-1
Survey Locations - Gasbuggy Site, Rio Arriba County, New Mexico
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Decimal Degrees		Soil Boring Number	New Mexico Northern Zone (State Plane Coordinates - 1927 Datum)		Universal Tranverse Mercator (UTM) Zone 13 - North (ft)		
Latitude	Longitude		Northing	Easting	Northing	Easting	Elevation
36.67816197	-107.2080296	GBS117	2067480.598	219062.305	13324256.15	993089.05	7198.039
36.67804723	-107.2077165	GBS118	2067437.910	219153.714	13324212.27	993179.90	7195.321
36.67803691	-107.207609	GBS119	2067433.836	219185.179	13324207.79	993211.31	7195.338
36.6781044	-107.2075894	GBS120	2067458.350	219191.179	13324232.23	993217.63	7194.244
36.67810959	-107.2077054	GBS121	2067460.578	219157.184	13324234.90	993183.67	7193.717
36.67829622	-107.2076433	GBS122	2067528.340	219176.069	13324302.41	993203.43	7191.997
36.67822396	-107.2076141	GBS123	2067501.946	219184.383	13324275.91	993211.40	7192.387
36.67822272	-107.207732	GBS124	2067501.841	219149.786	13324276.26	993176.81	7193.513
36.6782884	-107.2076763	GBS125	2067525.587	219166.381	13324299.79	993193.71	7192.677
36.67829955	-107.2074886	GBS126	2067529.099	219221.455	13324302.58	993248.83	7191.159
36.67823311	-107.2075177	GBS127	2067504.997	219212.682	13324278.59	993239.74	7192.316
36.67831418	-107.2078235	GBS128	2067535.405	219123.291	13324310.17	993150.75	7196.833
36.67840288	-107.2079215	GBS129	2067567.983	219094.894	13324343.11	993122.78	7196.841
36.67835337	-107.2079411	GBS130	2067550.018	219088.939	13324325.23	993116.59	7197.191
36.67829018	-107.207887	GBS131	2067526.854	219104.575	13324301.86	993131.92	7198.381
36.67828267	-107.2079584	GBS132	2067524.328	219083.624	13324299.61	993110.94	7196.875
36.67834323	-107.2079722	GBS133	2067546.416	219079.784	13324321.74	993107.39	7197.222
36.67824656	-107.2079587	GBS134	2067511.184	219083.395	13324286.46	993110.54	7197.275
36.67804034	-107.2078757	GBS135	2067435.869	219106.990	13324210.84	993133.15	7201.457
36.67810874	-107.2074378	GBS136	2067459.485	219235.671	13324232.78	993262.14	7195.795
36.67809495	-107.2074136	GBS137	2067454.396	219242.711	13324227.60	993269.11	7196.132
36.67814331	-107.2073478	GBS138	2067471.807	219262.172	13324244.76	993288.80	7195.371
36.67807864	-107.2074346	GBS139	2067448.519	219236.488	13324221.80	993262.81	7196.443
36.67808458	-107.2074634	GBS140	2067450.767	219228.049	13324224.16	993254.40	7195.906
36.67804925	-107.2074663	GBS141	2067437.913	219227.072	13324211.32	993253.26	7196.600
36.67805383	-107.2073987	GBS142	2067439.381	219246.926	13324212.53	993273.13	7197.009
36.67806491	-107.2073764	GBS143	2067443.350	219253.511	13324216.41	993279.77	7196.781
36.67809647	-107.2073718	GBS144	2067454.824	219254.980	13324227.87	993281.39	7196.134
36.6781302	-107.2073802	GBS145	2067467.127	219252.632	13324240.20	993279.20	7195.503
36.67825314	-107.2073912	GBS146	2067511.918	219249.859	13324285.03	993277.01	7191.464
36.67835143	-107.2088896	GBS147	2067552.093	218810.802	13324330.93	992838.48	7200.662
36.67837543	-107.2089246	GBS148	2067560.930	218800.616	13324339.90	992828.41	7200.535
36.67838967	-107.2089237	GBS149	2067566.114	218800.929	13324345.08	992828.79	7200.506

Table B.1-1
Survey Locations - Gasbuggy Site, Rio Arriba County, New Mexico
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Decimal Degrees		Soil Boring Number	New Mexico Northern Zone (State Plane Coordinates - 1927 Datum)		Universal Tranverse Mercator (UTM) Zone 13 - North (ft)		
Latitude	Longitude		Northing	Easting	Northing	Easting	Elevation
36.67843493	-107.2090068	GBS150	2067582.833	218776.736	13324362.11	992804.82	7200.557
36.67840342	-107.2088224	GBS151	2067570.821	218830.700	13324349.39	992858.62	7200.719
36.678353	-107.2088622	GBS152	2067552.584	218818.828	13324331.31	992846.51	7200.589
36.67830364	-107.2088208	GBS153	2067534.493	218830.798	13324313.07	992858.25	7201.201
36.67829716	-107.2089563	GBS154	2067532.531	218791.044	13324311.62	992818.47	7202.045
36.67827085	-107.2087704	GBS155	2067522.409	218845.467	13324300.79	992872.76	7201.431
36.67835367	-107.2088922	GBS156	2067552.914	218810.033	13324331.76	992837.72	7200.670
36.6783596	-107.2088984	GBS157	2067555.091	218808.243	13324333.96	992835.96	7200.630
36.67885147	-107.2088599	GBS158	2067734.043	218821.333	13324512.74	992851.38	7191.502
36.67886754	-107.2087852	GBS159	2067739.674	218843.297	13324518.09	992873.42	7191.110
36.67876101	-107.208902	GBS160	2067701.235	218808.644	13324480.10	992838.27	7195.204
36.67873272	-107.2088305	GBS161	2067690.724	218829.522	13324469.32	992859.01	7196.084
36.67876196	-107.2090216	GBS162	2067701.930	218773.593	13324481.25	992803.23	7195.939
36.67875902	-107.2087133	GBS163	2067699.958	218863.983	13324478.10	992893.59	7194.701
36.67865241	-107.208706	GBS164	2067661.125	218865.737	13324439.24	992894.84	7196.490
36.67863836	-107.2087501	GBS165	2067656.137	218852.746	13324434.43	992881.78	7196.835
36.67866009	-107.2086784	GBS166	2067663.839	218873.850	13324441.85	992902.99	7196.292
36.67859689	-107.208668	GBS167	2067640.802	218876.667	13324418.78	992905.50	7196.881
36.67873792	-107.2087067	GBS168	2067692.257	218865.847	13324470.37	992895.35	7195.908
36.67875457	-107.2086396	GBS169	2067698.121	218885.573	13324475.98	992915.16	7194.134
36.67876094	-107.2087045	GBS170	2067700.631	218866.554	13324478.74	992896.17	7194.488
36.67857601	-107.2087951	GBS171	2067633.573	218839.324	13324412.04	992868.07	7198.677
36.67877634	-107.2086656	GBS172	2067706.121	218878.019	13324484.08	992907.71	7193.358
36.67881329	-107.2086987	GBS173	2067719.672	218868.473	13324497.76	992898.34	7191.902
36.6786192	-107.2085025	GBS174	2067648.437	218925.289	13324425.78	992954.22	7192.786
36.67873508	-107.2086403	GBS175	2067691.027	218885.293	13324468.89	992914.78	7194.756
36.67876076	-107.2086736	GBS176	2067700.472	218875.640	13324478.46	992905.25	7194.137
36.67748619	-107.2089131	GBW177	2067237.172	218800.748	13324016.13	992824.32	7211.098
36.67620091	-107.204585	GBW179	2066756.601	220065.349	13323519.08	994082.64	7195.216
36.67619976	-107.2052392	GBW180	2066758.097	219873.479	13323523.07	993890.79	7191.699
36.67854356	-107.2075658	GBW181	2067618.156	219199.699	13324391.92	993228.24	7188.652
36.67891677	-107.2082084	GBW182	2067755.905	219012.620	13324532.11	993042.96	7187.139

Appendix C

Gasbuggy Site Surface Investigation
Chemical Quality Control
Summary Report

C.1.0 Quality Assurance/Data Assessment

This appendix contains a summary of the QA/QC process implemented during the Gasbuggy field investigation, and an assessment of Gasbuggy data validation results. Laboratory analyses were conducted for samples used in the decision-making process to provide a quantitative measurement of any COPCs present. The QA/QC process was implemented for all laboratory samples including documentation, data verification and validation of analytical results, and affirmation of data requirements related to laboratory analyses. Detailed information regarding the QA program is contained in the New Mexico QAPP (DOE/NV, 2002).

C.1.1 Data Validation

Data validation was performed in accordance with the New Mexico QAPP (DOE/NV, 2002) and approved procedures. All laboratory data from samples collected and analyzed for Gasbuggy were evaluated for data quality according to the *EPA Functional Guidelines* (EPA, 1994 and 1999). These guidelines are implemented in a tiered process and are presented in Section C.1.1.1 through Section C.1.1.3. Data were reviewed to ensure that samples were appropriately processed and analyzed, and the results passed data validation criteria. Documentation of the data qualifications resulting from these reviews is retained in project files as a hard copy and electronic media.

One hundred percent of the data analyzed as part of this investigation were subjected to Tier I and Tier II evaluations. A Tier III evaluation was performed on approximately seven percent of the samples.

C.1.1.1 Tier I Evaluation

Tier I evaluation for both chemical and radiological analysis examines, but was not limited to:

- Sample count/type consistent with chain of custody
- Analysis count/type consistent with chain of custody
- Correct sample matrix
- Significant problems stated in cover letter or case narrative
- Completeness of certificates of analysis
- Completeness of Contract Laboratory Program (CLP) or CLP-like packages
- Completeness of signatures, dates, and times on chain of custody

- Condition-upon-receipt variance form included
- Requested analyses performed on all samples
- Date received/analyzed given for each sample
- Correct concentration units indicated
- Electronic data transfer supplied
- Results reported for field and laboratory QC samples
- Whether or not the deliverable met the overall objectives of the project
- Proper field documentation accompanies project packages

C.1.1.2 Tier II Evaluation

Tier II evaluation for both chemical and radiological analysis examines, but is not limited to:

Chemical:

- Correct detection limits achieved
- Sample date, preparation date, and analysis date for each sample
- Holding time criteria met
- QC batch association for each sample
- Cooler temperature upon receipt
- Sample pH for aqueous samples, as required
- Detection limits properly adjusted for dilution, as required
- Blank contamination evaluated and applied to sample results/qualifiers
- Matrix spike/matrix spike duplicate, percent recovery (%R), and relative percent difference (RPDs) evaluated and applied to laboratory results/qualifiers
- Field duplicate relative percent differences (RPDs) evaluated using professional judgement and applied to laboratory results/qualifiers
- Laboratory duplicate RPDs evaluated and applied to laboratory results/qualifiers
- Surrogate %Rs evaluated and applied to laboratory results/qualifiers
- Laboratory control sample %R evaluated and applied to laboratory results/qualifiers

- Initial and continuing calibration evaluated and applied to laboratory results/qualifiers
- Internal standard evaluated and applied to laboratory results/qualifiers
- Mass spectrometer tuning criteria
- Organic compound quantitation
- Inductively coupled plasma (ICP) interference check sample evaluation
- Graphite furnace atomic absorption quality control
- ICP serial dilution effects
- Recalculation of 10 percent of laboratory results from raw data

Radioanalytical:

- Correct detection limits achieved
- Blank contamination evaluated and applied to sample results/qualifiers
- Certificate of analysis consistent with data package documentation
- Quality control sample results (duplicates, laboratory control samples, laboratory blanks) evaluated and applied to laboratory result qualifiers
- Sample results, errors, and minimum detectable activity evaluated and applied to laboratory result qualifiers
- Detector system calibrated to National Institute for Standards and Technology (NIST)-traceable sources
- Calibration sources preparation was documented, demonstrating proper preparation and appropriateness for sample matrix, emission energies, and concentrations
- Detector system response to daily, weekly, and monthly background and calibration checks, which may include peak energy, peak centroid, peak full-width half-maximum, and peak efficiency, depending on the detection system
- Tracers NIST-traceable, appropriate for the analysis performed, and recoveries that met QC requirements
- Documentation of all QC sample preparation complete and properly performed

- QC sample results (e.g., calibration source concentration, %R, and RPD) verified
- Spectra lines, emissions, particle energies, peak areas, and background peak areas support the identified radionuclide and its concentration
- Recalculation of 10 percent of laboratory results from raw data

C.1.1.3 Tier III Review

Tier III evaluations examine a limited portion of data reviewed during Tier II validation. The Tier III review includes the evaluations discussed in the following paragraphs.

Chemical:

- Recalculation of laboratory results from raw data

Radioanalytical:

- Radionuclides and their concentration appropriate considering their decay schemes and half-lives
- Each identified line in spectra verified against emission libraries and calibration results
- Independent identification of spectra lines, area under the peaks, and quantification of radionuclide concentration in a random number of sample results
- Recalculation of laboratory results from raw data

A Tier III review of approximately seven percent of the samples was conducted by TechLaw, Inc. in Lakewood, Colorado. Tier II and Tier III results were compared and, where differences were noted, data were reviewed, and changes made accordingly.

C.1.2 Quality Control Samples

There were 73 trip blanks, 15 field blanks, 6 source blanks, 5 equipment rinsate blanks, 15 matrix spike (MS)/matrix spike duplicates (MSD), and 15 field duplicates collected and submitted for laboratory analysis as shown in Table C.1-1. The quality control samples were assigned individual sample numbers and sent to the laboratory "blind." Additional samples were selected by the laboratory to be analyzed as laboratory duplicates.

Table C.1-1
QA/QC Sample Summary
(Page 1 of 4)

Sample Type	Sample Number	Sample Matrix	Analyses
Trip blank	GBP001	Water	VOCs
Trip blank	GBP002	Water	VOCs
Trip blank	GBP003	Water	VOCs
Trip blank	GBP004	Water	VOCs
Trip blank	GBP005	Water	VOCs
Trip blank	GBP006	Water	VOCs
Trip blank	GBP007	Water	VOCs
Trip blank	GBP008	Water	VOCs
Trip blank	GBP009	Water	VOCs
Field blank	GBP010	Water	SC, Tritium
Trip blank	GBP011	Water	VOCs
Equipment rinsate blank	GBP012	Water	SC, Tritium
Trip blank	GBP013	Water	VOCs
Trip blank	GBP014	Water	VOCs
Source blank for decontamination water	GBP015	Water	SC, Tritium
Trip blank	GBP016	Water	VOCs
Source blank for Lexan™ tube	GBP017	Water	SC, Tritium
Trip blank	GBP018	Water	VOCs
Trip blank	GBP020	Water	VOCs
Trip blank	GBP021	Water	VOCs
Trip blank	GBP022	Water	VOCs
Field blank	GBP023	Water	VOCs, Tritium
Trip blank	GBP024	Water	VOCs
Field blank	GBP025	Water	SC, Tritium
Trip blank	GBP026	Water	VOCs
Trip blank	GBP027	Water	VOCs
Field blank	GBP028	Water	SC, Tritium
Trip blank	GBP029	Water	VOCs

Table C.1-1
QA/QC Sample Summary
(Page 2 of 4)

Sample Type	Sample Number	Sample Matrix	Analyses
Source blank for Lexan™ tube	GBP030	Water	SC, Tritium
Trip blank	GBP031	Water	VOCs
Trip blank	GBP032	Water	VOCs
Trip blank	GBE033	Water	VOCs
Trip blank	GB035	Water	VOCs
Source blank from original decon water tank	GB036	Water	SC, Tritium
Field blank	GB037	Water	SC, Tritium
Source blank from second decon water tank	GB038	Water	SC, Tritium
Trip blank	GB039	Water	VOCs
Trip blank	GB040	Water	VOCs
Trip blank	GB041	Water	VOCs
Source blank from Command Post	GB042	Water	SC, Tritium
Trip blank	GB043	Water	VOCs
Trip blank	GB045	Water	VOCs
Trip blank	GB047	Water	VOCs
Equipment rinsate from Command Post	GB048	Water	SC, Tritium
Trip blank	GB046	Water	VOCs
Trip blank	GB049	Water	VOCs
Field blank from Well GB-D	GB051	Water	SC, Tritium
Trip blank	GB052	Water	VOCs
Equipment rinsate from Command Post	GB053	Water	SC, Tritium
Trip blank	GB054	Water	VOCs
Trip blank	GB055	Water	VOCs
Trip blank	GB056	Water	VOCs
Trip blank	GB057	Water	VOCs
Trip blank	GB058	Water	VOCs
Trip blank	GB059	Water	VOCs

Table C.1-1
QA/QC Sample Summary
(Page 3 of 4)

Sample Type	Sample Number	Sample Matrix	Analyses
Trip blank	GB060	Water	VOCs
Trip blank	GB061	Water	VOCs
Field blank from SGZ - Mud Trench D	GB062	Water	SC, Tritium
Trip blank	GB064	Water	VOCs
Trip blank	GB065	Water	VOCs
Trip blank	GB066	Water	VOCs
Trip blank	GB067	Water	VOCs
Field blank from SGZ - Mud Pit GBE-A	GB069	Water	SC, Tritium
Trip blank	GB070	Water	VOCs
Trip blank	GB071	Water	VOCs
Trip blank	GB072	Water	VOCs
Trip blank	GB073	Water	VOCs
Trip blank	GB074	Water	VOCs
Field blank from SGZ - Mud Pit GB2	GB075	Water	SC, Tritium
Trip blank	GB077	Water	VOCs
Trip blank	GB078	Water	VOCs
Trip blank	GB079	Water	VOCs
Trip blank	GB080	Water	VOCs
Field blank from SGZ - Mud Pit GBE-D	GB081	Water	SC, Tritium
Trip blank	GB083	Water	VOCs
Trip blank	GB084	Water	VOCs
Trip blank	GB086	Water	VOCs
Field blank from SGZ - Mud Pit GBE-D	GB087	Water	SC, Tritium
Trip blank	GB088	Water	VOCs
Trip blank	GB089	Water	VOCs
Equipment rinsate - Sleeve - from SGZ - Mud Pit GB1	GB090	Water	SC, Tritium

Table C.1-1
QA/QC Sample Summary
(Page 4 of 4)

Sample Type	Sample Number	Sample Matrix	Analyses
Equipment rinsate - Shoe - from SGZ - Mud Pit GB1	GB091	Water	SC, Tritium
Trip blank	GB092	Water	VOCs
Trip blank	GB095	Water	VOCs
Trip blank	GB093	Water	VOCs
Field blank from SGZ - EPNG 10-36 Sump	GB094	Water	SC, Tritium
Trip blank	GB098	Water	VOCs
Trip blank	GB099	Water	VOCs
Trip blank	GB100	Water	VOCs
Field blank from SGZ - Mud Pit GBE-E	GB101	Water	SC, Tritium
Field blank from SGZ - Mud Pit GBE-E	GB103	Water	SC, Tritium
Trip blank	GB104	Water	VOCs
Trip blank	GB105	Water	VOCs
Trip blank	GB106	Water	VOCs
Field blank from SGZ - Mud Pit GBE-E	GB107	Water	SC, Tritium
SGZ - Mud Pit GBE-E	GB108	Water	VOCs
Trip blank	GB110	Water	VOCs
Trip blank	GB111	Water	VOCs
Trip blank	GB112	Water	VOCs

SC = Site Characterization parameters are: Total VOCs, Total SVOCs, RCRA Metals, TPH (diesel-range organics [DRO] and gasoline-range organics [GRO])

C.1.2.1 Field Quality Control Samples

Review of the field blank analytical data for the Gasbuggy soil sampling indicates that cross contamination from field methods did not occur during sample collection. Field, equipment rinsate, and source blanks were analyzed for the parameters listed in Table C.1-1, and trip blanks were analyzed for VOCs only. Several different contaminants were detected in some of the samples, but they were below or slightly above the contract-required detection limits.

During the sampling events, 14 field duplicate soil samples were sent as blind samples to the laboratory to be analyzed for the same parameters as the primary sample (Table C.1-1). For these samples, the duplicate results precision (i.e., RPDs between the environmental sample results and their corresponding field duplicate sample results) were evaluated to the guidelines set forth in EPA's Functional Guidelines (EPA, 1994).

C.1.2.2 Laboratory Quality Control Samples

Analysis of method QC blanks were performed on each sample delivery group (SDG) for inorganics. Analysis for surrogate spikes and preparation blanks (PBs) were performed on each SDG for organics only. Initial and continuing calibration and laboratory control samples (LCS) were performed for each SDG by Paragon Analytics Laboratory. The results of these analyses were used to qualify associated environmental sample results according to EPA's Functional Guidelines (EPA, 1994 and 1999). Documentation of data qualifications resulting from the application of these guidelines is retained in project files as both hard copy and electronic media. Problems identified with laboratory quality control samples during the 2000 field effort are discussed in the Work Plan (DOE/NV, 2002). No problems were identified with the 2002 laboratory quality control samples.

C.1.3 Field Nonconformances

During the Gasbuggy Site field investigation, the DOE contractor QA representatives provided field guidance and oversight to verify that sampling activities were performed in accordance with applicable requirements. Quality assurance representatives did not observe findings, deficiencies, or nonconformances with sampling activities. There were no nonconfomances found during data review and validation.

C.1.4 Laboratory Nonconformances

Five SDGs had laboratory nonconformances (NCR) identified during the sample analysis for Gasbuggy. Three NCRs were reported for mercury/TCLP mercury analysis, one NCR for volatile organic analysis, and one NCR for TPH-DRO/semivolatile organic analysis. Corrective actions, where appropriate, were implemented by the laboratory to address these issues. In addition, every NCR was documented in the case narrative for the applicable analysis. As a result of these actions, no data was rejected for the Gasbuggy investigation as a result of the laboratory's performance.

C.2.0 Data Assessment

This section provides a summary of the assessment of Gasbuggy data validation results for each data quality indicator (DQI). In addition, a reconciliation of the data with the general conceptual site model established for this project is provided.

C.2.1 Statement of Acceptability and Usability

This section provides an evaluation of the DQIs in determining the degree of acceptability and usability of the reported data in the decision-making process.

Data were evaluated against specific criteria to verify the achievement of DQI goals established to meet the project DQOs as provided in the New Mexico QAPP (Appendix A of the Work Plan, [DOE/NV, 2002]) and the Gasbuggy Work Plan (DOE/NV, 2002). The DQIs for this project include precision, accuracy, completeness representativeness, and comparability.

C.2.2 Precision

Precision is a measure of agreement among a replicate set of measurements of the same property under similar conditions. This agreement is expressed as the RPD between duplicate measurements (EPA, 1996). The RPD is determined by dividing the difference between the replicate measurement values by the average measurement value and multiplying the result by 100.

Determinations of precision can be made for field duplicates, laboratory duplicates, or both. For field duplicates, samples are collected simultaneously with a sample from the same source under similar conditions in separate containers. The duplicate sample is treated independently of the original sample in order to assess field impacts and laboratory performance on precision through a comparison of results. Laboratory precision is evaluated as part of the required laboratory internal QC program to assess performance of analytical procedures. The laboratory sample duplicates are generated in a laboratory and are an aliquot or subset of the same field sample. Typically, other laboratory duplicate QC samples include matrix spike duplicate and laboratory control sample duplicate (LCSD) samples for organic and inorganic analytes.

The variability in results from analyses of field duplicates is generally greater than the variability in the results of laboratory duplicates. This higher variability for field duplicates results from the increased potential to introduce factors influencing the analytical results during sampling, sample preparation, containerization, handling, packaging, preservation, and environmental conditions before the samples reach the laboratory. Laboratory QC samples assess only the variability of results introduced by sample handling and preparation in the laboratory and by the analytical procedure, which also impacts field duplicates. In addition, the variability in duplicate results is expected to be greater for soil samples than water samples, primarily due to the inherent nonhomogeneous nature of soil samples, despite sample preparation methods that include mixing to improve sample homogeneity.

C.2.2.1 Precision for Chemical Analysis

Precision measures the reproducibility of data under a given set of conditions. Specifically, precision is a quantitative measurement of the variability of a population of measurements compared to their average. Precision was assessed by the collecting, preparing, and analyzing of duplicate field samples, duplicate laboratory samples, MS and MSD samples, and LCS and LCSD samples. Precision was reported as RPD. When the RPD exceeded predetermined limits for a given parameter, the data was evaluated for usability based on the purpose for the data and reasons for the increased RPD. No data were rejected due to problems with precision. Precision for chemical analysis included TPH-DRO and -GRO, VOCs, SVOCs, and metals analytes.

C.2.3 Accuracy

Accuracy is a measure of the closeness of an individual measurement or the average of a number of measurements to the true value. Accuracy includes a combination of random error (precision) and systematic error (bias) components that result from sampling and analytical operations.

The accuracy of the LCS determination is expressed as a percent recovery by the following:

$$\%\ \text{Recovery}\ (\%R) = \frac{\text{Amount of Analyte Measured}}{\text{Amount of Analyte Added}} \times 100$$

The accuracy of the matrix spike determination is expressed as a percent recovery by the following:

$$\%\ \text{Recovery}\ (\%R) = \frac{\text{MS Result} - \text{Sample Result}}{\text{Amount of Analyte Added}} \times 100$$

If LCS results are outside acceptable control limits, qualifiers will be added to the field samples analyzed with the LCS. However, matrix spike results outside acceptable control limits may not result in qualification of the data. An assessment of the entire analytical process including the sample matrix is performed to determine if qualification is necessary.

C.2.3.1 Accuracy for Chemical Analysis

Laboratory accuracy measurements for surrogates, MSs and LCSs were calculated as percent recovery, which was calculated by dividing the measured sample concentration by the true concentration and multiplying the quotient by 100. Values exceeding the acceptance criteria were evaluated for corrective actions. The only data rejected due to problems with laboratory accuracy were four antimony results. These results were rejected because the associated MS/MSD recoveries were < 30 percent.

Field accuracy is assessed by confirming that the documents of record track the sample from origin, through transfer of custody, to disposal. The goal of field accuracy is for all samples to be collected from the correct locations, at the correct time, placed in a correctly labeled container with the correct preservative, and sealed with custody tape to prevent tampering. No data were rejected due to problems with field accuracy.

C.2.4 Completeness

Completeness was calculated for the investigative soil sample data based on the number of measurements analyzed, minus the number of measurements rejected during validation, divided by the number of measurements analyzed, and multiplied by 100 percent. All investigative soil samples were collected in accordance with the approved Work Plan (DOE/NV, 2002).

Samples GBS164 through GBS176 (soil samples), and samples GB097 through GB104 (QA/QC samples) collected from the Well GB-E Mud Pit E arrived warm to the laboratory (15.5 degrees Celsius) due to weather problems resulting in flight delays. The soil samples were resampled and named as GBR164 through GBR176.

A total of 324 samples were collected and analyzed during the Gasbuggy Site surface investigation. Out of a total of 37,140 measurements analyzed, 1,508 measurements for Methods 6010B, 8260B, 8270C, and 8015B_modified were rejected (see Table E.1-5). No measurements were rejected in the other methods for Gasbuggy. The resulting calculated completeness is 95.94 percent for investigative soil sample data. Of the rejected data, 1,233 measurements out of the 1,508 were related to samples that arrived at the laboratory warm due to flight delays. All related soil samples were recollected. Subtracting these measurements from the completeness calculation, results in a completeness rate of greater than 99 percent.

C.2.5 Representativeness

A seven-step DQO process was utilized to identify Gasbuggy requirements. During the process, locations were selected which enabled the samples collected to be representative of the media being evaluated. Samples were collected as planned. Quality control blanks are used as a way of measuring outside factors that could impact sample results. No data was qualified due to QC blanks. Therefore, the analytical data acquired during the Gasbuggy corrective action investigation are representative of site characteristics.

C.2.6 Comparability

Field sampling activities were performed and documented in accordance with approved procedures that are comparable to standard industry practices. Approved standardized analytical methods and procedures were used to analyze, report, and validate the data. Therefore, datasets within this project are comparable to all other datasets generated using standardized quality procedures.

C.2.7 Reconciliation of DQOs and Conceptual Model(s)

This section provides a reconciliation of the data collected and analyzed during this investigation, with the preliminary conceptual site models established in the DQO process.

C.2.7.1 Initial Conceptual Model

A surface/shallow subsurface conceptual model was developed for Gasbuggy as presented in the Work Plan (DOE/NV, 2002) based on historical information, previous site restoration activities, and process knowledge. This data assessment reconciles the investigation results with the conceptual model.

The surface/shallow subsurface conceptual model was applied at Gasbuggy. This model assumed that any contamination would be located in the shallow subsurface. The extent of underlying soil impacted was expected to be dependent upon the nature of COPCs and other factors.

C.2.7.2 Investigation Design and Contaminant Identification

The presence of contamination was identified by sample results showing COPC concentrations exceeding PALs, thereby defining COCs at the Gasbuggy Site. All COCs were identified in association with the location of the drilling mud pits and/or the flare stack. Arsenic, although detected above PALs, was not considered a COC because it was identified at concentrations considered to be representative of background conditions. See Section 5.3.1 for a discussion of the arsenic results. Soil sample results demonstrated that COCs were identified in soil within the physical boundaries of the general surface/shallow subsurface model defined in the Work Plan (DOE/NV, 2002).

C.2.7.3 Contaminant Nature and Extent

The conceptual site model was used as the basis for identifying appropriate sampling strategies and data collection methods.

To address the conceptual model, shallow subsurface samples were collected for analyses designed to define the extent of the COPCs identified in the Work Plan. A biased strategy was developed to focus the investigation on areas of potential contamination. The models assumed that the contamination would be limited to the boundaries of the site due to the minimal potential for migration based on the geological, historical information for the site, information from other similar sites, and the physical properties of the COPCs.

Implementation of the investigation design has shown that contamination did not extend beyond the drilling mud pits; therefore, the pattern of contamination agreed with the conceptual site model.

C.2.8 Conclusions

The DQIs (i.e., precision, accuracy, completeness, representativeness, and comparability) were all evaluated for quality and impact to the data. All of the data, except data qualified as rejected, can be used in project decisions.

C.3.0 References

U.S. Department of Energy, Nevada Operations Office. 2002. *Site Characterization Work Plan for Gasbuggy, New Mexico*, DOE/NV-690-Rev.1. Las Vegas, NV.

U.S. Environmental Protection Agency. 1994. *Contracts Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA 540-R-94/013. Washington, DC.

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U.S. Environmental Protection Agency. 1999. *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, EPA-540 R-99/008. Washington, DC.

Appendix D

Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico

D.1.0 Sample Log

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
(Page 1 of 15)

Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBP01	Well GB-2 Mud Pit and Well GB-E Mud Pit D[e]	GBPS010609	Soil	SC, WC
		GBPS010911	Soil	SC, WC
		GBPS011214	Soil	SC
		GBPS011921	Soil	SC
GBP02	Well GB-2 Mud Pit	GBPS020610	Soil	SC, WC
		GBPS021719	Soil	SC
GBP03	Well GB-E Mud Pit A	GBPS030406	Soil	SC, WC
		GBPS030911	Soil	SC
		GBPS031416	Soil	SC
GBP04	Landfill E	GBPS040406	Soil	SC, WC
		GBPS040911	Soil	SC
		GBPS041416	Soil	SC
GBP05	Landfill E	GBPS050408	Soil	SC, WC
		GBPS051012	Soil	SC
		GBPS051820	Soil	SC
		GBPS01	Soil	Duplicate of above
GBP06	Well EPNG 10-36 Sump	GBPS060608	Soil	SC, WC
		GBPS061012	Soil	SC
		GBPS061618	Soil	SC
GBP07	Well GB-E Mud Pit E	GBPS070608	Soil	SC, WC
		GBPS071012	Soil	SC
		GBPS071618	Soil	SC
GBP08	Well GB-1 Drill Pad	GBPS080204	Soil	SC
		GBPS081416	Soil	SC
GBP09	Well GB-1 Drill Pad	GBPS090204	Soil	SC
		GBPS091416	Soil	SC
GBP10	Well GB-1 Drill Pad	GBPS100204	Soil	SC, WC
		GBPS101416	Soil	SC

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
(Page 2 of 15)

Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBP11	Well GB-E Drill Pad	GBPS110204	Soil	SC, WC
		GBPS111416	Soil	SC
GBP12	Well GB-1 Mud Pit	GBPS120204	Soil	SC, WC
		GBPS120608	Soil	SC
		GBPS121719	Soil	SC
GBP13	Well GB-E Mud Pit A[f]	GBPS131920	Soil	SC
GBP14	Flare Stack Area	GBPS140304	Soil	Tritium
		GBPS140708	Soil	Tritium
		GBPS141112	Soil	Tritium
		GBPS141516	Soil	Tritium
		GBPS141920	Soil	Tritium
GBP15	Well EPNG 10-36 Drill Pad	GBPS150204	Soil	SC
		GBPS151416	Soil	SC
GBP16	Well EPNG 10-36 Drill Pad	GBPS160204	Soil	SC
		GBPS02	Soil	Duplicate of above
		GBPS161416	Soil	SC
GBP17	Well EPNG 10-36 Drill Pad	GBPS170204	Soil	SC, WC
		GBPS171314	Soil	SC
		GBPS172123	Soil	SC
GBP18	Well GB-E Mud Pit E	GBPS180608	Soil	SC
		GBPS180911	Soil	SC, WC
		GBPS181416	Soil	SC
		GBPS182122	Soil	SC
GBP19	Well GB-3 Drill Pad	GBPS190204	Soil	SC
		GBPS191416	Soil	SC
GBP20	Well GB-3 Drill Pad	GBPS200204	Soil	SC
		GBPS201416	Soil	SC
GBP21	Well GB-2 Drill Pad	GBPS210204	Soil	SC, WC
		GBPS210608	Soil	SC
		GBPS211416	Soil	SC

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
(Page 3 of 15)

Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBP22	Well GB-2 Drill Pad	GBPS220204	Soil	SC
		GBPS221416	Soil	SC
		GBPS03	Soil	Duplicate of above
		GBPS222021	Soil	SC
GBP23	Water/Gas Separator Area	GBPS230304	Soil	Tritium
		GBPS230708	Soil	Tritium
		GBPS231112	Soil	Tritium
		GBPS231516	Soil	Tritium
		GBPS231920	Soil	Tritium
GBP24	Well GB-E Mud Pit A	GBPS240304	Soil	Tritium
		GBPS240506	Soil	SC, Tritium
		GBPS241112	Soil	Tritium
		GBPS241416	Soil	SC, Tritium
GBP25	Flare Stack Area	GBPS250304	Soil	Tritium
		GBPS250507	Soil	SC
		GBPS250708	Soil	Tritium
		GBPS251012	Soil	SC, Tritium
GBP26	Well GB-E Drill Pad	GBPS260204	Soil	SC
		GBPS261416	Soil	SC
		GBPS04	Soil	Duplicate of above
GBP27	Well GB-E Drill Pad	GBPS270204	Soil	SC
		GBPS271416	Soil	SC
GBP28	Berm that Separates the Well GB-E Mud Pit A and the Well GB-2 Mud Pit	GBPS280608	Soil	SC
		GBPS281012	Soil	SC
		GBPS282224	Soil	SC
		GBPS283032	Soil	SC
		GBPS283436	Soil	SC
GBP29	Well GB-1 Mud Pit	GBPS290103	Soil	SC
		GBPS291416	Soil	SC
GBPB01	Background	GBPB010204	Soil	BG, VOCs
		GBPB010912	Soil	BG, VOCs

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
(Page 4 of 15)

Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBPB03	Background	GBPB030407	Soil	BG
		GBPB031012	Soil	BG
		GBPB031416	Soil	BG
NA	Trip blank	GBP001	Water	VOCs
NA	Trip blank	GBP002	Water	VOCs
NA	Trip blank	GBP003	Water	VOCs
NA	Trip blank	GBP004	Water	VOCs
NA	Trip blank	GBP005	Water	VOCs
NA	Trip blank	GBP006	Water	VOCs
NA	Trip blank	GBP007	Water	VOCs
NA	Trip blank	GBP008	Water	VOCs
NA	Trip blank	GBP009	Water	VOCs
NA	Field blank	GBP010	Water	SC, Tritium
NA	Trip blank	GBP011	Water	VOCs
NA	Equipment rinsate blank	GBP012	Water	SC, Tritium
NA	Trip blank	GBP013	Water	VOCs
NA	Trip blank	GBP014	Water	VOCs
NA	Source blank for decontamination water	GBP015	Water	SC, Tritium
NA	Trip blank	GBP016	Water	VOCs
NA	Source blank for Lexan™ tube[g]	GBP017	Water	SC, Tritium
NA	Trip blank	GBP018	Water	VOCs
NA	Trip blank	GBP020	Water	VOCs
NA	Trip blank	GBP021	Water	VOCs
NA	Trip blank	GBP022	Water	VOCs
NA	Field blank	GBP023	Water	VOCs, Tritium
NA	Trip blank	GBP024	Water	VOCs
NA	Field blank	GBP025	Water	SC, Tritium
NA	Trip blank	GBP026	Water	VOCs
NA	Trip blank	GBP027	Water	VOCs
NA	Field blank	GBP028	Water	SC, Tritium
NA	Trip blank	GBP029	Water	VOCs

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
(Page 5 of 15)

Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
NA	Source blank for Lexan™ tube[g]	GBP030	Water	SC, Tritium
NA	Trip blank	GBP031	Water	VOCs
NA	Trip blank	GBP032	Water	VOCs
GBE021	Foot of slope south of SGZ	GBE0210203	Soil	SC, Tritium, TCLP-metals
NA	Trip blank	GBE033	Water	VOCs
NA	Trip blank	GB035	Water	VOCs
NA	Source blank from original decon water tank	GB036	Water	SC, Tritium
NA	Field blank	GB037	Water	SC, Tritium
NA	Source blank from second decon water tank	GB038	Water	SC, Tritium
GBS032	Control Point	GBS0320204	Soil	SC, Tritium
GBS033	Control Point	GBS0330204	Soil	SC, Tritium
GBS034	Control Point	GBS0340103	Soil	SC, Tritium
GBS035	Control Point	GBS0350103	Soil	SC, Tritium
NA	Trip blank	GB039	Water	VOCs
NA	Trip blank	GB040	Water	VOCs
GBS037	Control Point Anomaly E	GBS0370204	Soil	SC, Tritium
GBS036	Control Point Anomaly E	GBS0360911	Soil	SC, Tritium
GBS038	Recording Trailer Park Anomaly G	GBS0380709	Soil	SC, Tritium
GBS039	Recording Trailer Park Anomaly G	GBS0390204	Soil	SC, Tritium
	Recording Trailer Park Anomaly G	GBS0391012	Soil	SC, Tritium
GBS040	Recording Trailer Park Anomaly G	GBS0400709	Soil	SC
BGS042	Recording Trailer Park Anomaly G	GBS0420305	Soil	SC
NA	Trip blank	GB041	Water	VOCs
NA	Source blank from Command Post	GB042	Water	SC, Tritium
NA	Trip blank	GB043	Water	VOCs
GBS043	Recording Trailer Park	GBS0430709	Soil	SC

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBS044	Recording Trailer Park	GBS0440709	Soil	SC
	Recording Trailer Park	GB044	Soil	Duplicate of above
GBS045	Recording Trailer Park	GBS0450608	Soil	SC
GBB04	Recording Trailer Park	GBB04	Soil	RCRA metals
GBB05	Near SGZ Soil Mound	GBB05	Soil	RCRA metals
GBB06	Between SGZ and Well GB-D	GBB06	Soil	RCRA metals
GBB07	Near Well GB-D	GBB07	Soil	RCRA metals
GBB08	Near Well GB-D	GBB08	Soil	RCRA metals
GBB09	Near Well GB-D	GBB09	Soil	RCRA metals
NA	Trip blank	GB045	Water	VOCs
GBS046	Well GB-D, Anomaly B	GBS0461012	Soil	SC
GBS047	Well GB-D, Anomaly B	GBS0470709	Soil	SC
GBS048	Well GB-D, Anomaly B	GBS0480709	Soil	SC
GBS049	Well GB-D, Anomaly B	GBS0490507	Soil	SC
NA	Trip blank	GB047	Water	VOCs
NA	Equipment rinsate from Command Post	GB048	Water	SC, Tritium
NA	Trip blank	GB046	Water	VOCs
GBS054	Well GB-D	GBS0540911	Soil	TPH-G, TPH-D
	Well GB-D	GBS0541416	Soil	SC
GBS055	Well GB-D	GBS0550507	Soil	TPH-G, TPH-D, TCLP-metals
GBS056	Well GB-D	GBS0560507	Soil	SC
	Well GB-D	GBS0560810	Soil	TPH-G, TPH-D
	Well GB-D	GBS0561416	Soil	SC
NA	Trip blank	GB049	Water	VOCs
NA	Field blank from Well GB-D	GB051	Water	SC, Tritium
NA	Trip blank	GB052	Water	VOCs
NA	Equipment rinsate from Command Post	GB053	Water	SC, Tritium
NA	Trip blank	GB054	Water	VOCs
NA	Trip blank	GB055	Water	VOCs

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBS057	Well GB-D	GBS0570507	Soil	TPH-G, TPH-D, TCLP-metals
GBS058	Well GB-D	GBS0580507	Soil	TPH-G, TPH-D, TCLP-metals
	Well GB-D	GB050	Soil	Duplicate of above
GBS059	Well GB-D	GBS0590507	Soil	SC
	Well GB-D	GBS0590810	Soil	TPH-G, TPH-D
	Well GB-D	GBS0591416	Soil	SC
GBS060	Well GB-D	GBS0600507	Soil	SC
	Well GB-D	GBS0600911	Soil	TPH-G, TPH-D
	Well GB-D	GBS0601618	Soil	SC
GBS062	Well GB-D	GBS0620507	Soil	SC
	Well GB-D	GBS0621012	Soil	TPH-G, TPH-D
	Well GB-D	GBS0621416	Soil	SC
NA	Trip blank	GB056	Water	VOCs
GBS063	Well GB-D	GBS0630507	Soil	TPH-G, TPH-D, TCLP-metals
GBS065	Well GB-D	GBS0650507	Soil	SC
	Well GB-D	GBS0650911	Soil	TPH-G, TPH-D
	Well GB-D	GBS0651416	Soil	SC
NA	Trip blank	GB057	Water	VOCs
GBS071	Well GB-D	GBS0711012	Soil	SC
GBS072	Well GB-D	GBS0720305	Soil	SC
GBS073	Well GB-D	GBS0730204	Soil	SC
NA	Trip blank	GB058	Water	VOCs
GBS074	SGZ - Mud Trench A	GBS0740204	Soil	SC
	SGZ - Mud Trench A	GBS0740304	Soil	TCLP-metals
	SGZ - Mud Trench A	GBS0740507	Soil	SC
	SGZ - Mud Trench A	GBS0741416	Soil	SC
NA	Trip blank	GB059	Water	VOCs
GBS082	SGZ- Mud Trench D	GBS0820608	Soil	SC, TCLP-metals
NA	Trip blank	GB060	Water	VOCs
NA	Trip blank	GB061	Water	VOCs

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
NA	Field blank from SGZ- Mud Trench D	GB062	Water	SC, Tritium
NA	Trip blank	GB064	Water	VOCs
GBS084	SGZ - Mud Trench D	GBS0840103	Soil	SC
	SGZ - Mud Trench D	GBS0840406	Soil	SC
	SGZ - Mud Trench D	GBS0841113	Soil	SC
GBS087	Drum near SGZ	GBS0870406	Soil	SC
	Drum near SGZ	GBS0871012	Soil	SC
NA	Trip blank	GB065	Water	VOCs
GBS098	Flare stack	GBS0980608	Soil	SC, TCLP VOCs
	Flare stack	GB063	Soil	Duplicate of above
	Flare stack	GBS0980810	Soil	SC, TCLP VOCs
	Flare stack	GBS0981416	Soil	SC
	Flare stack	GBS0982224	Soil	SC
GBS099	Flare stack	GBS0990507	Soil	SC
GBS100	Flare stack	GBS1000507	Soil	SC
GBS101	Flare stack	GBS1010507	Soil	SC
NA	Trip blank	GB066	Water	VOCs
GBS102	SGZ - Mud Pit GBE-A	GBS1020406	Soil	TPH-G, TPH-D, TCLP-metals
GBS103	SGZ - Mud Pit GBE-A	GBS1030406	Soil	SC
	SGZ - Mud Pit GBE-A	GBS1030911	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1031416	Soil	SC
GBS104	SGZ - Mud Pit GBE-A	GBS1040507	Soil	TPH-G, TPH-D, TCLP-metals
GBS105	SGZ - Mud Pit GBE-A	GBS1050507	Soil	TPH-G, TPH-D, TCLP-metals
NA	Trip blank	GB067	Water	VOCs
NA	SGZ - Mud Pit GBE-A	GB069	Water	SC, Tritium
NA	Trip blank	GB070	Water	VOCs
GBS106	SGZ - Mud Pit GBE-A	GBS1060608	Soil	SC
	SGZ - Mud Pit GBE-A	GB068	Soil	Duplicate of above
	SGZ - Mud Pit GBE-A	GBS1060810	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1061820	Soil	SC

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBS107	SGZ - Mud Pit GBE-A	GBS1070608	Soil	SC
	SGZ - Mud Pit GBE-A	GBS1071214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1071820	Soil	SC
GBS108	SGZ - Mud Pit GBE-A	GBS1080608	Soil	TPH-G, TPH-D
GBS110	SGZ - Mud Pit GBE-A	GBS1100608	Soil	TPH-G, TPH-D
NA	Trip blank	GB071	Water	VOCs
GBS112	SGZ - Mud Pit GBE-A	GBS1120406	Soil	TPH-G, TPH-D, TCLP-metals
GBS114	SGZ - Mud Pit GBE-A	GBS1140204	Soil	TPH-G, TPH-D
GBS115	SGZ - Mud Pit GBE-A	GBS1150507	Soil	SC
	SGZ - Mud Pit GBE-A	GBS1151012	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1151820	Soil	SC
GBS116	SGZ - Mud Pit GBE-A	GBS1160406	Soil	TPH-G, TPH-D
GBS117	SGZ - Mud Pit GBE-A	GBS1170507	Soil	SC
	SGZ - Mud Pit GBE-A	GBS1171012	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1171820	Soil	SC
NA	Trip blank	GB072	Water	VOCs
GBS118	SGZ - Mud Pit GB2	GBS1180406	Soil	TPH-G, TPH-D
GBS119	SGZ - Mud Pit GB2	GBS1190406	Soil	TPH-G, TPH-D
GBS120	SGZ - Mud Pit GB2	GBS1200406	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GB2	GBS1200809	Soil	TPH-G, TPH-D
GBS121	SGZ - Mud Pit GB2	GBS1210708	Soil	TPH-G, TPH-D
NA	Trip blank	GB073	Water	VOCs
GBS122	SGZ - Mud Pit GB2	GBS1220608	Soil	TPH-G, TPH-D
GBS123	SGZ - Mud Pit GB2	GBS1230608	Soil	TPH-G, TPH-D
NA	Trip blank	GB074	Water	VOCs
GBS124	SGZ - Mud Pit GB2	GBS1240608	Soil	SC
NA	Field blank from SGZ - Mud Pit GB2	GB075	Water	SC, Tritium
GBS125	SGZ - Mud Pit GB2	GBS1250608	Soil	TPH-G, TPH-D
GBS126	SGZ - Mud Pit GB2	GBS1260608	Soil	TPH-G, TPH-D
GBS127	SGZ - Mud Pit GB2	GBS1270608	Soil	TPH-G, TPH-D

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBS128	SGZ - Mud Pit GB2	GBS1280709	Soil	SC
	SGZ - Mud Pit GB2	GBS1281416	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GB2	GBS1282224	Soil	SC
NA	Trip blank	GB077	Water	VOCs
GBS129	SGZ-Mud Pit GBE-A	GBS1290608	Soil	SC
	SGZ - Mud Pit GBE-A	GB076	Soil	Duplicate of above
	SGZ - Mud Pit GBE-A	GBS1291012	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1292224	Soil	SC
GBS130	SGZ - Mud Pit GBE-A	GBS1300507	Soil	SC
NA	Trip blank	GB078	Water	VOCs
GBS130	SGZ - Mud Pit GBE-A	GBS1300507	Soil	SC
	SGZ - Mud Pit GBE-A	GBS1301012	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1301820	Soil	SC
GBS131	SGZ - Mud Pit GBE-A	GBS1310608	Soil	SC
	SGZ - Mud Pit GBE-A	GBS1311012	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1311820	Soil	SC
GBS132	SGZ - Mud Pit GBE-A	GBS1320507	Soil	SC
	SGZ - Mud Pit GBE-A	GBS1321012	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-A	GBS1321820	Soil	SC
GBS133	SGZ - Mud Pit GBE-A	GBS1330507	Soil	SC, TCLP-metals, TCLP-VOCs
GBS134	SGZ - Mud Pit GBE-A	GBS1340507	Soil	TPH-G, TPH-D, TCLP-metals
GBS135	SGZ - Mud Pit GBE-A	GBS1350507	Soil	TPH-G, TPH-D
NA	Trip blank	GB079	Water	VOCs
GBS136	SGZ - Mud Pit GBE-D	GBS1360911	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1360709	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1361315	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-D	GBS1362022	Soil	SC
NA	Trip blank	GB080	Water	VOCs
NA	Field blank from SGZ - Mud Pit GBE-D	GB081	Water	SC, Tritium

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBS137	SGZ - Mud Pit GBE-D	GBS1370709	Soil	SC
	SGZ - Mud Pit GBE-D	GB082	Soil	Duplicate of above
	SGZ - Mud Pit GBE-D	GBS1370911	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1371315	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-D	GBS1371719	Soil	SC
GBS138	SGZ - Mud Pit GBE-D	GBS1380911	Soil	TPH-G, TPH-D
NA	Trip blank	GB083	Water	VOCs
GBS139	SGZ - Mud Pit GBE-D	GBS1390709	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1390911	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1391315	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-D	GBS1392123	Soil	SC
GBS140	SGZ - Mud Pit GBE-D	GBS1400709	Soil	TPH-G, TPH-D, TCLP-metals
	SGZ - Mud Pit GBE-D	GBS1400911	Soil	TPH-G, TPH-D, TCLP-metals
GBS141	SGZ - Mud Pit GBE-D	GBS1410608	Soil	TPH-G, TPH-D, TCLP-metals
	SGZ - Mud Pit GBE-D	GBS1410810	Soil	TPH-G, TPH-D, TCLP-metals
GBS142	SGZ - Mud Pit GBE-D	GBS1420507	Soil	TPH-G, TPH-D, TCLP-metals
GBS143	SGZ - Mud Pit GBE-D	GBS1430709	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1430911	Soil	SC
NA	Trip blank	GB084	Water	VOCs
NA	Trip blank	GB086	Water	VOCs
NA	Field blank from SGZ - Mud Pit GBE-D	GB087	Water	SC, Tritium
GBS143	SGZ - Mud Pit GBE-D	GBS1431214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-D	GB085	Soil	Duplicate of above
	SGZ - Mud Pit GBE-D	GBS1432022	Soil	SC
GBS144	SGZ - Mud Pit GBE-D	GBS1440709	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1440911	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1441214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-D	GBS1441618	Soil	SC

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBS145	SGZ - Mud Pit GBE-D	GBS1450709	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1450911	Soil	SC
	SGZ - Mud Pit GBE-D	GBS1451214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-D	GBS1451719	Soil	SC
GBS146	SGZ - Mud Pit GBE-D	GBS1460911	Soil	TPH-G, TPH-D
NA	Trip blank	GB088	Water	VOCs
GBS147	SGZ - Mud Pit GB1	GBS1470406	Soil	TPH-G, TPH-D, TCLP-metals
GBS148	SGZ - Mud Pit GB1	GBS1480406	Soil	SC
	SGZ - Mud Pit GB1	GBS1480608	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GB1	GBS1481416	Soil	SC
NA	Trip blank	GB089	Water	VOCs
GBS149	SGZ - Mud Pit GB1	GBS1490406	Soil	TPH-G, TPH-D, TCLP-metals
NA	Equipment rinsate - Sleeve - from SGZ - Mud Pit GB1	GB090	Water	SC, Tritium
NA	Equipment rinsate - Shoe - from SGZ - Mud Pit GB1	GB091	Water	SC, Tritium
GBS150	SGZ - Mud Pit GB1	GBS1500406	Soil	TPH-G, TPH-D
GBS151	SGZ - Mud Pit GB1	GBS1510406	Soil	TPH-G, TPH-D
GBS152	SGZ - Mud Pit GB1	GBS1520406	Soil	SC
	SGZ - Mud Pit GB1	GBS1520810	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GB1	GBS1521416	Soil	SC
GBS153	SGZ - Mud Pit GB1	GBS1530406	Soil	TPH-G, TPH-D, TCLP-metals
NA	Trip blank	GB092	Water	VOCs
GBS154	SGZ - Mud Pit GB1	GBS1540406	Soil	TPH-G, TPH-D
GBS155	SGZ - Mud Pit GB1	GBS1550406	Soil	TPH-G, TPH-D
GBS157	SGZ - Mud Pit GB1	GBS1570406	Soil	SC
	SGZ - Mud Pit GB1	GBS1570608	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GB1	GBS1571416	Soil	SC
NA	Trip blank	GB095	Water	VOCs
GBS158	SGZ - EPNG 10-36 Sump	GBS1581012	Soil	SC
NA	Trip blank	GB093	Water	VOCs

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
NA	Field blank from SGZ - EPNG 10-36 Sump	GB094	Water	VOCs, TPH-G, RCRA metals, SVOCs, TPH-D, Tritium
GBS159	SGZ - EPNG 10-36 Sump	GBS1590204	Soil	SC
	SGZ - EPNG 10-36 Sump	GB096	Soil	Duplicate of above
GBS161	SGZ - Mud Pit GBE-E	GBS1610204	Soil	SC
	SGZ - Mud Pit GBE-E	GBS1610608	Soil	SC
GBS162	SGZ - Mud Pit GBE-E	GBS1620608	Soil	SC
NA	Trip blank	GB098	Water	VOCs
GBS164	SGZ - Mud Pit GBE-E	GBS1640911	Soil	SC
	SGZ - Mud Pit GBE-E	GBS1641214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBS1642123	Soil	SC
GBS165	SGZ - Mud Pit GBE-E	GBS1650911	Soil	TPH-G, TPH-D, TCLP-metals
	SGZ - Mud Pit GBE-E	GB097	Soil	Duplicate of above
GBS166	SGZ - Mud Pit GBE-E	GBS1661012	Soil	SC
	SGZ - Mud Pit GBE-E	GBS1661214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBS1662123	Soil	SC
GBS167	SGZ - Mud Pit GBE-E	GBS1670911	Soil	SC
	SGZ - Mud Pit GBE-E	GBS1671214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBS1671820	Soil	SC
NA	Trip blank	GB099	Water	VOCs
GBS168	SGZ - Mud Pit GBE-E	GBS1681214	Soil	SC
	SGZ - Mud Pit GBE-E	GBS1681618	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBS1682325	Soil	SC
NA	Trip blank	GB100	Water	VOCs
NA	Field blank from SGZ - Mud Pit GBE-E	GB101	Water	SC, Tritium
NA	Field blank from SGZ - Mud Pit GBE-E	GB103	Water	SC, Tritium
GBS169	SGZ - Mud Pit GBE-E	GBS1691416	Soil	SC
	SGZ - Mud Pit GBE-E	GB102	Soil	Duplicate of above
	SGZ - Mud Pit GBE-E	GBS1691719	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBS1692527	Soil	SC

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBS170	SGZ - Mud Pit GBE-E	GBS1701012	Soil	TPH-G, TPH-D, TCLP-metals
	SGZ - Mud Pit GBE-E	GBS1701315	Soil	TPH-G, TPH-D, TCLP-metals
NA	Trip blank	GB104	Water	VOCs
GBS171	SGZ - Mud Pit GBE-E	GBS1711416	Soil	TPH-G, TPH-D
GBS172	SGZ - Mud Pit GBE-E	GBS1721416	Soil	TPH-G, TPH-D
GBS173	SGZ - Mud Pit GBE-E	GBS1731416	Soil	TPH-G, TPH-D
GBS174	SGZ - Mud Pit GBE-E	GBS1741416	Soil	TPH-G, TPH-D
GBS175	SGZ - Mud Pit GBE-E	GBS1751012	Soil	TPH-G, TPH-D, TCLP-metals
GBS176	SGZ - Mud Pit GBE-E	GBS1761012	Soil	TPH-G, TPH-D, TCLP-metals
NA	Trip blank	GB105	Water	VOCs
NA	Trip blank	GB106	Water	VOCs
NA	Field blank from SGZ - Mud Pit GBE-E	GB107	Water	SC, Tritium
GBR164	SGZ - Mud Pit GBE-E	GBR1640911	Soil	SC
	SGZ - Mud Pit GBE-E	GBR1641214	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBR1642022	Soil	SC
GBR165	SGZ - Mud Pit GBE-E	GBR1650911	Soil	TPH-G, TPH-D, TCLP-metals
GBR166	SGZ - Mud Pit GBE-E	GBR1660810	Soil	SC
	SGZ - Mud Pit GBE-E	GBR1661113	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBR1662022	Soil	SC
GBR167	SGZ - Mud Pit GBE-E	GBR1670709	Soil	SC
	SGZ - Mud Pit GBE-E	GBR1671113	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBR1671820	Soil	SC
NA	Trip blank	GB108	Water	VOCs
GBR168	SGZ - Mud Pit GBE-E	GBR1681113	Soil	SC
	SGZ - Mud Pit GBE-E	GBR1681921	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBR1682628	Soil	SC

Table D.1-1
Sample Log for the Surface Investigation at the Gasbuggy Site, New Mexico
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Borehole Number[a]	Site Feature (Soil Samples) or Sample Type[b]	Sample Number[c]	Sample Matrix	Analyses[d]
GBR169	SGZ - Mud Pit GBE-E	GBR1691416	Soil	SC
	SGZ - Mud Pit GBE-E	GBR1691719	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GBR1692426	Soil	SC
GBR170	SGZ - Mud Pit GBE-E	GBR1701012	Soil	TPH-G, TPH-D, TCLP-metals
	SGZ - Mud Pit GBE-E	GBR1701315	Soil	TPH-G, TPH-D, TCLP-metals
GBR171	SGZ - Mud Pit GBE-E	GBR1711416	Soil	TPH-G, TPH-D
GBR172	SGZ - Mud Pit GBE-E	GBR1721416	Soil	TPH-G, TPH-D
GBR173	SGZ - Mud Pit GBE-E	GBR1731416	Soil	TPH-G, TPH-D
	SGZ - Mud Pit GBE-E	GB109	Soil	Duplicate of above
NA	Trip blank	GB110	Water	VOCs
GBR174	SGZ - Mud Pit GBE-E	GBR1741416	Soil	TPH-G, TPH-D
NA	Trip blank	GB111	Water	VOCs
GBR175	SGZ - Mud Pit GBE-E	GBR1751214	Soil	TPH-G, TPH-D, TCLP-metals
GBR176	SGZ - Mud Pit GBE-E	GBR1761113	Soil	TPH-G, TPH-D, TCLP-metals
NA	Trip blank	GB112	Water	VOCs

[a]The alphanumerical characters indicated that the borehole was drilled during the Gasbuggy preliminary investigation (GBP), which occurred in August-September of 2000 and GBS (Summer 2002), if it is a background borehole (GBPB or GBS) and the sequential boring number.
[b]If sample matrix is soil, the description in this column describes the site features (e.g., mud pit, landfill) that the samples from the borehole were intended to capture.
[c]See Table 2-1 for an explanation of the sample nomenclature.
[d]See explanation of abbreviations below for the specific analysis.
[e]The Well GB-E Mud Pit D is located within the bounds of the Well GB-2 Mud Pit and appears to overlay the Well GB-2 Mud Pit.
[f]Visual observation of the soil core did not indicate a layer of drilling mud within this borehole.
[g]Two different types of Lexan™ tubes were used to line the sample core. Samples were collected by pouring deionized water through the tube.

SC = Site Characterization parameters are: Total VOCs, Total SVOCs, RCRA Metals, TPH-D (diesel-range organics) and TPH-G (gasoline-range organics)
WC = Waste Characterization parameters are: TCLP metals, TCLP VOCs, TCLP SVOCS, and Tritium
BG = Background parameters are: RCRA Metals
NA = Not applicable

Appendix E

Analytical Results for Samples Collected During the Surface Investigation at the Gasbuggy Site, New Mexico

E.1.0 Analytical Tables

Table E.1-1
Results of Total RCRA Metals Analysis of Background Soil Samples
(Page 1 of 2)

Sample Number	Parameter	Result (mg/kg)	Detect Limit (mg/kg)	Qualifier
GBB09	Arsenic	3.8	1	
GBB06	Arsenic	3.8	1.1	
GBB05	Arsenic	3.5	1.1	
GBB07	Arsenic	3.5	1.1	
GBPB030407	Arsenic	3.2	1.1	
GBB08	Arsenic	3	1	
GBPB031012	Arsenic	2.5	1.1	
GBB04	Arsenic	2	1.1	
GBPB010204	Arsenic	1.8	1.1	
GBPB010912	Arsenic	1.6	1.1	
GBPB031416	Arsenic	1.5	1.1	
GBB04	Barium	510	11	
GBPB010204	Barium	310	11	
GBPB031416	Barium	290	11	
GBPB030407	Barium	280	11	
GBPB010912	Barium	250	11	
GBPB031012	Barium	240	11	
GBB07	Barium	230	11	
GBB06	Barium	220	11	
GBB05	Barium	210	11	
GBB09	Barium	160	10	
GBB08	Barium	130	10	
GBB04	Cadmium	0.28	0.55	B
GBB09	Cadmium	0.24	0.52	B
GBB06	Cadmium	0.23	0.55	B
GBB05	Cadmium	0.21	0.55	B
GBB07	Cadmium	0.19	0.54	B
GBB08	Cadmium	0.18	0.52	B
GBB04	Chromium	17	1.1	

Table E.1-1
Results of Total RCRA Metals Analysis of Background Soil Samples
(Page 2 of 2)

Sample Number	Parameter	Result (mg/kg)	Detect Limit (mg/kg)	Qualifier
GBPB010912	Chromium	15	1.1	
GBB05	Chromium	14	1.1	
GBPB030407	Chromium	13	1.1	
GBPB031012	Chromium	13	1.1	
GBB06	Chromium	12	1.1	
GBB08	Chromium	12	1	
GBPB010204	Chromium	11	1.1	
GBB07	Chromium	10	1.1	
GBPB031416	Chromium	9.7	1.1	
GBB09	Chromium	6.4	1	
GBB04	Lead	12	0.33	
GBB05	Lead	12	0.33	
GBPB031416	Lead	11	0.67	
GBB06	Lead	10	0.33	
GBPB031012	Lead	9.9	0.33	
GBPB030407	Lead	8.5	0.32	
GBPB010912	Lead	7.2	0.65	
GBB07	Lead	6.6	0.33	
GBB08	Lead	5.9	0.31	
GBPB010204	Lead	5.6	0.32	
GBB09	Lead	5.1	0.31	
GBB04	Mercury	0.053	0.11	B
GBB07	Mercury	0.026	0.11	B
GBB06	Selenium	1.3	0.55	
GBB07	Selenium	1.1	0.54	
GBB05	Selenium	0.92	0.55	
GBB08	Selenium	0.71	0.52	
GBB04	Selenium	0.64	0.55	
GBB09	Selenium	0.53	0.52	
GBPB031012	Selenium	0.31	0.56	B

mg/kg = Milligrams per kilogram

B = Value less than the instrument detection limit, but greater than or equal to the contract-required detection limit

Table E.1-2
Results of Chemical Analysis of Soil Samples
(Page 1 of 52)

Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS240506DUP	Arsenic	8.58	mg/kg	2.7	HIT	1.19	
GBE0210203	Arsenic	7.2	mg/kg	2.7	HIT	1.1	
GBPS010609	Arsenic	7	mg/kg	2.7	HIT	1.2	
GBS0480709	Arsenic	6.6	mg/kg	2.7	HIT	1.1	
GBS0591416	Arsenic	5.6	mg/kg	2.7	HIT	1.3	
GBS0601618	Arsenic	5.2	mg/kg	2.7	HIT	1.2	
GBS0561416	Arsenic	4.8	mg/kg	2.7	HIT	1.3	
GBS0621416	Arsenic	4.4	mg/kg	2.7	HIT	1.2	
GBS0651416	Arsenic	4.2	mg/kg	2.7	HIT	1.2	
GBS0720305	Arsenic	3.9	mg/kg	2.7	HIT	1.1	
GBS0841113	Arsenic	3.9	mg/kg	2.7	HIT	1.1	
GBS0870406	Arsenic	3.9	mg/kg	2.7	HIT	1.1	
GBR1681113DUP	Arsenic	3.83	mg/kg	2.7	HIT	1.31	
GBS0590507DUP	Arsenic	3.83	mg/kg	2.7	HIT	1.07	
GBPS241416	Arsenic	3.8	mg/kg	2.7	HIT	1.2	
GBS1280709	Arsenic	3.8	mg/kg	2.7	HIT	1.2	
GBS1691416	Arsenic	3.8	mg/kg	2.7	HIT	1.4	J
GB076	Arsenic	3.7	mg/kg	2.7	HIT	1.2	
GBS1060608	Arsenic	3.7	mg/kg	2.7	HIT	1.3	
GBS0541416	Arsenic	3.6	mg/kg	2.7	HIT	1.2	
GBS0840406	Arsenic	3.6	mg/kg	2.7	HIT	1.1	
GBS0980810	Arsenic	3.6	mg/kg	2.7	HIT	1.2	
GB068	Arsenic	3.5	mg/kg	2.7	HIT	1.3	
GBPS101416	Arsenic	3.5	mg/kg	2.7	HIT	1.1	
GBPS251012	Arsenic	3.5	mg/kg	2.7	HIT	1.2	
GBS0590507	Arsenic	3.5	mg/kg	2.7	HIT	1.1	
GBR1681113	Arsenic	3.4	mg/kg	2.7	HIT	1.3	
GBPS050408	Arsenic	3.3	mg/kg	2.7	HIT	1.2	
GBPS100204	Arsenic	3.3	mg/kg	2.7	HIT	1.1	
GBPS111416	Arsenic	3.3	mg/kg	2.7	HIT	1.1	
GBPS190204	Arsenic	3.3	mg/kg	2.7	HIT	1.1	
GBPS281012	Arsenic	3.3	mg/kg	2.7	HIT	1.1	
GBS0620507	Arsenic	3.3	mg/kg	2.7	HIT	1.2	
GBS1610608	Arsenic	3.3	mg/kg	2.7	HIT	1.1	

Table E.1-2
Results of Chemical Analysis of Soil Samples
(Page 2 of 52)

Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS050408DUP	Arsenic	3.24	mg/kg	2.7	HIT	1.15	
GBPS04	Arsenic	3.2	mg/kg	2.7	HIT	1.1	
GBS0560507	Arsenic	3.2	mg/kg	2.7	HIT	1.5	
GBS1240608	Arsenic	3.2	mg/kg	2.7	HIT	1.1	
GBS1320507	Arsenic	3.2	mg/kg	2.7	HIT	1.2	
GBS1450709	Arsenic	3.2	mg/kg	2.7	HIT	1.2	
GBS1681214	Arsenic	3.2	mg/kg	2.7	HIT	1.2	J
GB082	Arsenic	3.1	mg/kg	2.7	HIT	1.2	
GBPS040406	Arsenic	3.1	mg/kg	2.7	HIT	1.1	
GBPS041416	Arsenic	3.1	mg/kg	2.7	HIT	1.1	
GBPS110204	Arsenic	3.1	mg/kg	2.7	HIT	1.1	
GBR1691416	Arsenic	3.1	mg/kg	2.7	HIT	1.3	
GBS1170507	Arsenic	3.1	mg/kg	2.7	HIT	1.1	
GBS1430709	Arsenic	3.1	mg/kg	2.7	HIT	1.3	
GBS1590204	Arsenic	3.1	mg/kg	2.7	HIT	1.1	
GBPS030911	Arsenic	3	mg/kg	2.7	HIT	1.1	
GBPS031416	Arsenic	3	mg/kg	2.7	HIT	1.1	
GBPS131920	Arsenic	3	mg/kg	2.7	HIT	1.1	
GBPS181416	Arsenic	3	mg/kg	2.7	HIT	1.1	
GBPS240506	Arsenic	3	mg/kg	2.7	HIT	1.2	
GBPS280608	Arsenic	3	mg/kg	2.7	HIT	1.1	
GBR1660810	Arsenic	3	mg/kg	2.7	HIT	1.1	
GBS1480406	Arsenic	3	mg/kg	2.7	HIT	1.1	
GBS1481416	Arsenic	3	mg/kg	2.7	HIT	1.1	
GB102	Arsenic	2.9	mg/kg	2.7	HIT	1.2	J
GBPS01	Arsenic	2.9	mg/kg	2.7	HIT	1.1	
GBPS040911	Arsenic	2.9	mg/kg	2.7	HIT	1.1	
GBPS060608	Arsenic	2.9	mg/kg	2.7	HIT	1	
GBPS180911	Arsenic	2.9	mg/kg	2.7	HIT	1.4	
GBPS271416	Arsenic	2.9	mg/kg	2.7	HIT	1.1	
GBS0461012	Arsenic	2.9	mg/kg	2.7	HIT	1.1	
GBS0490507	Arsenic	2.9	mg/kg	2.7	HIT	1.1	
GBS0600507	Arsenic	2.9	mg/kg	2.7	HIT	1.1	
GBS1000507	Arsenic	2.9	mg/kg	2.7	HIT	1.1	

Table E.1-2
Results of Chemical Analysis of Soil Samples
(Page 3 of 52)

Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1282224	Arsenic	2.9	mg/kg	2.7	HIT	1.1	
GBS1390709	Arsenic	2.9	mg/kg	2.7	HIT	1.2	
GBS1440911	Arsenic	2.9	mg/kg	2.7	HIT	1.2	
GBS1450911	Arsenic	2.9	mg/kg	2.7	HIT	1.5	
GBPS090204	Arsenic	2.8	mg/kg	2.7	HIT	1.1	
GBPS171314	Arsenic	2.8	mg/kg	2.7	HIT	1.1	
GBS0540507	Arsenic	2.8	mg/kg	2.7	HIT	1.4	
GBS0650507	Arsenic	2.8	mg/kg	2.7	HIT	1.1	
GBS0990507	Arsenic	2.8	mg/kg	2.7	HIT	1.1	
GBS1031416	Arsenic	2.8	mg/kg	2.7	HIT	1.1	
GBS1440709	Arsenic	2.8	mg/kg	2.7	HIT	1.2	
GB096	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBPS02	Arsenic	2.7	mg/kg	2.7	HIT	1	
GBPS020610	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBPS051012	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBPS070608	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBPS180608	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBPS182122	Arsenic	2.7	mg/kg	2.7	HIT	1.2	
GBPS201416	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBPS210608	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBPS211416	Arsenic	2.7	mg/kg	2.7	HIT	1.2	
GBPS250507	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBR1640911	Arsenic	2.7	mg/kg	2.7	HIT	1.2	
GBS0470709	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBS1300507	Arsenic	2.7	mg/kg	2.7	HIT	1.2	
GBS1571416	Arsenic	2.7	mg/kg	2.7	HIT	1.1	
GBS1671820	Arsenic	2.7	mg/kg	2.7	HIT	1.1	J
GBS1620608DUP	Arsenic	2.65	mg/kg	2.7		1.06	
GBS1581012DUP	Arsenic	2.64	mg/kg	2.7		1.05	
GBPS160204	Arsenic	2.6	mg/kg	2.7		1	
GBPS191416	Arsenic	2.6	mg/kg	2.7		1.1	
GBPS283032	Arsenic	2.6	mg/kg	2.7		1.2	
GBR1662022	Arsenic	2.6	mg/kg	2.7		1.2	
GBS0400709	Arsenic	2.6	mg/kg	2.7		1.1	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0730204	Arsenic	2.6	mg/kg	2.7		1.1	
GBS0980608	Arsenic	2.6	mg/kg	2.7		1.1	
GBS1360709	Arsenic	2.6	mg/kg	2.7		1.2	
GBS1620608	Arsenic	2.6	mg/kg	2.7		1.1	
GBS0982224DUP	Arsenic	2.56	mg/kg	2.7		1.1	
GBPS190204DUP	Arsenic	2.54	mg/kg	2.7		1.08	
GBS1071820DUP	Arsenic	2.52	mg/kg	2.7		1.07	
GBPS051820	Arsenic	2.5	mg/kg	2.7		1.1	
GBPS170204	Arsenic	2.5	mg/kg	2.7		1.1	
GBPS220204	Arsenic	2.5	mg/kg	2.7		1.1	
GBPS261416	Arsenic	2.5	mg/kg	2.7		1.1	
GBPS283436	Arsenic	2.5	mg/kg	2.7		1.2	
GBR1642022	Arsenic	2.5	mg/kg	2.7		1.1	
GBS0982224	Arsenic	2.5	mg/kg	2.7		1.1	
GBS1070608	Arsenic	2.5	mg/kg	2.7		1.3	
GBS1150507	Arsenic	2.5	mg/kg	2.7		1.1	
GBS1570406	Arsenic	2.5	mg/kg	2.7		1.1	
GBS1661012	Arsenic	2.5	mg/kg	2.7		1.1	J
GBPS071012	Arsenic	2.4	mg/kg	2.7		1.1	
GBPS120608	Arsenic	2.4	mg/kg	2.7		1.1	
GBPS151416	Arsenic	2.4	mg/kg	2.7		1.2	
GBPS270204	Arsenic	2.4	mg/kg	2.7		1.1	
GBR1670709	Arsenic	2.4	mg/kg	2.7		1.2	
GBR1671820	Arsenic	2.4	mg/kg	2.7		1.2	
GBS0840103	Arsenic	2.4	mg/kg	2.7		1	
GBS1171820	Arsenic	2.4	mg/kg	2.7		1.1	
GBS1370709	Arsenic	2.4	mg/kg	2.7		1.2	
GBS1520406	Arsenic	2.4	mg/kg	2.7		1.1	
GBS1521416	Arsenic	2.4	mg/kg	2.7		1.1	
GBS1610204	Arsenic	2.4	mg/kg	2.7		1.1	
GBPS061012DUP	Arsenic	2.39	mg/kg	2.7		1.07	
GBS1370911DUPDUP	Arsenic	2.34	mg/kg	2.7		1.21	
GBS1642123DUP	Arsenic	2.33	mg/kg	2.7		1.14	
GBS1610204DUP	Arsenic	2.31	mg/kg	2.7		1.07	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GB063	Arsenic	2.3	mg/kg	2.7		1.2	
GBPS071618	Arsenic	2.3	mg/kg	2.7		1.1	
GBPS081416	Arsenic	2.3	mg/kg	2.7		1.1	
GBPS150204	Arsenic	2.3	mg/kg	2.7		1	
GBPS200204	Arsenic	2.3	mg/kg	2.7		1.1	
GBPS282224	Arsenic	2.3	mg/kg	2.7		1.1	
GBPS290103	Arsenic	2.3	mg/kg	2.7		1.1	
GBS0390204	Arsenic	2.3	mg/kg	2.7		1.1	
GBS0820608	Arsenic	2.3	mg/kg	2.7		1.1	
GBS0871012	Arsenic	2.3	mg/kg	2.7		1.1	
GBS1061820	Arsenic	2.3	mg/kg	2.7		1.1	
GBS1151820	Arsenic	2.3	mg/kg	2.7		1.1	
GBS1301820	Arsenic	2.3	mg/kg	2.7		1.1	
GBS1330507	Arsenic	2.3	mg/kg	2.7		1.2	
GBS1392123	Arsenic	2.3	mg/kg	2.7		1.1	
GBS1581012	Arsenic	2.3	mg/kg	2.7		1.1	
GBS1670911	Arsenic	2.3	mg/kg	2.7		1.4	J
GBS1682325DUP	Arsenic	2.27	mg/kg	2.7		1.14	
GBPS030406	Arsenic	2.2	mg/kg	2.7		1.2	
GBPS061012	Arsenic	2.2	mg/kg	2.7		1.1	
GBPS121719	Arsenic	2.2	mg/kg	2.7		1.2	
GBS0981416	Arsenic	2.2	mg/kg	2.7		1.1	
GBS1071820	Arsenic	2.2	mg/kg	2.7		1.1	
GBS1642123	Arsenic	2.2	mg/kg	2.7		1.1	J
GBPS270204DUP	Arsenic	2.19	mg/kg	2.7		1.05	
GBPS011214	Arsenic	2.1	mg/kg	2.7		1.2	
GBPS091416	Arsenic	2.1	mg/kg	2.7		1.1	
GBPS260204	Arsenic	2.1	mg/kg	2.7		1	
GBS1292224	Arsenic	2.1	mg/kg	2.7		1.1	
GBS1310608	Arsenic	2.1	mg/kg	2.7		1.1	
GBS1311820	Arsenic	2.1	mg/kg	2.7		1.1	
GBS1662123	Arsenic	2.1	mg/kg	2.7		1.2	J
GBS0450608DUP	Arsenic	2.01	mg/kg	2.7		1.12	
GBPS061618	Arsenic	2	mg/kg	2.7		1.2	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0370204	Arsenic	2	mg/kg	2.7		1	
GBS1430911	Arsenic	2	mg/kg	2.7		1.2	
GBS1432022	Arsenic	2	mg/kg	2.7		1.1	
GBPS120204	Arsenic	1.9	mg/kg	2.7		1.1	
GBS1360911	Arsenic	1.9	mg/kg	2.7		1.2	
GBS1362022	Arsenic	1.9	mg/kg	2.7		1.1	
GBS1371719	Arsenic	1.9	mg/kg	2.7		1.1	
GBS1441618	Arsenic	1.9	mg/kg	2.7		1.2	
GBS1682325	Arsenic	1.9	mg/kg	2.7		1.1	J
GBPS080204	Arsenic	1.8	mg/kg	2.7		1	
GBPS161416	Arsenic	1.8	mg/kg	2.7		1.2	
GBPS210204	Arsenic	1.8	mg/kg	2.7		1.1	
GBS0340103	Arsenic	1.8	mg/kg	2.7		1	
GBS0350103	Arsenic	1.8	mg/kg	2.7		1	
GBS0360911	Arsenic	1.8	mg/kg	2.7		1.1	
GBS1370911	Arsenic	1.8	mg/kg	2.7		1.2	
GBPS010911	Arsenic	1.7	mg/kg	2.7		1.2	
GBS0320204	Arsenic	1.7	mg/kg	2.7		1.1	
GBPS03	Arsenic	1.6	mg/kg	2.7		1.1	
GBPS221416	Arsenic	1.6	mg/kg	2.7		1.1	
GBPS291416	Arsenic	1.6	mg/kg	2.7		1.2	
GBS0330204	Arsenic	1.6	mg/kg	2.7		1	
GBPS021719	Arsenic	1.5	mg/kg	2.7		1.2	
GBS1390911	Arsenic	1.5	mg/kg	2.7		1.4	
GBS1451719	Arsenic	1.5	mg/kg	2.7		1.1	
GBPS011921	Arsenic	1.4	mg/kg	2.7		1.1	
GBR1692426	Arsenic	1.4	mg/kg	2.7		1.1	
GBS1640911	Arsenic	1.4	mg/kg	2.7		1.3	J
GBS1692527	Arsenic	1.3	mg/kg	2.7		1.1	J
GBR1682628	Arsenic	1.2	mg/kg	2.7		1.1	
GBPS222021	Arsenic	1.1	mg/kg	2.7		1.1	
GBPS172123	Arsenic	0.62	mg/kg	2.7		1.1	B
GBPS120608	Barium	2,300	mg/kg	100,000		32	
GBPS220204	Barium	1,500	mg/kg	100,000		22	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1682325DUP	Barium	698	mg/kg	100,000		11.4	
GBR1662022	Barium	590	mg/kg	100,000		12	
GBPS182122	Barium	580	mg/kg	100,000		12	
GB068	Barium	570	mg/kg	100,000		13	J
GBS1060608	Barium	570	mg/kg	100,000		13	J
GBS1480406	Barium	560	mg/kg	100,000		11	
GBS1642123DUP	Barium	545	mg/kg	100,000		11.4	
GBS1662123	Barium	500	mg/kg	100,000		12	J
GBS0740204	Barium	490	mg/kg	100,000		11	
GBS0450608	Barium	450	mg/kg	100,000		11	J
GBPS120204	Barium	430	mg/kg	100,000		11	
GBPS290103	Barium	410	mg/kg	100,000		11	
GBS1642123	Barium	400	mg/kg	100,000		11	J
GBPS281012	Barium	390	mg/kg	100,000		11	
GBPS021719	Barium	380	mg/kg	100,000		12	
GBPS210204	Barium	380	mg/kg	100,000		11	
GBS0561416	Barium	380	mg/kg	100,000		13	
GBS0450608DUP	Barium	373	mg/kg	100,000		11.2	
GBPS251012	Barium	370	mg/kg	100,000		12	
GBS1070608	Barium	370	mg/kg	100,000		13	J
GBR1681113DUP	Barium	362	mg/kg	100,000		13.1	
GBS0980810	Barium	350	mg/kg	100,000		12	J
GBPS061618	Barium	340	mg/kg	100,000		12	
GBPS222021	Barium	330	mg/kg	100,000		11	
GBPS280608	Barium	330	mg/kg	100,000		11	
GBR1681113	Barium	330	mg/kg	100,000		13	
GBS0420305	Barium	330	mg/kg	100,000		11	J
GBS1280709	Barium	330	mg/kg	100,000		12	
GBS1370709	Barium	330	mg/kg	100,000		12	
GBPS011214	Barium	320	mg/kg	100,000		12	
GBPS291416	Barium	320	mg/kg	100,000		12	
GBS0541416	Barium	320	mg/kg	100,000		12	
GBS0651416	Barium	320	mg/kg	100,000		12	
GB076	Barium	310	mg/kg	100,000		12	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS070608	Barium	310	mg/kg	100,000		11	
GBS0390204	Barium	310	mg/kg	100,000		11	J
GBS1320507	Barium	310	mg/kg	100,000		12	
GBS1691416	Barium	310	mg/kg	100,000		14	J
GBS0621416	Barium	300	mg/kg	100,000		12	
GBPS071618	Barium	290	mg/kg	100,000		11	
GBPS190204	Barium	290	mg/kg	100,000		11	
GBPS200204	Barium	290	mg/kg	100,000		11	
GBS0400709	Barium	290	mg/kg	100,000		11	J
GBS0601618	Barium	290	mg/kg	100,000		12	
GBPS241416	Barium	280	mg/kg	100,000		12	
GBPS283436	Barium	280	mg/kg	100,000		12	
GBS0820608	Barium	280	mg/kg	100,000		11	
GBS1000507	Barium	280	mg/kg	100,000		11	J
GBS1300507	Barium	280	mg/kg	100,000		12	
GBS1682325	Barium	280	mg/kg	100,000		11	J
GBPS010609	Barium	270	mg/kg	100,000		12	
GBS0870406	Barium	270	mg/kg	100,000		11	
GBS1430709	Barium	270	mg/kg	100,000		13	
GBS1440709	Barium	270	mg/kg	100,000		12	
GBS1450911	Barium	270	mg/kg	100,000		15	
GBS1520406	Barium	270	mg/kg	100,000		11	
GBPS010911	Barium	260	mg/kg	100,000		12	
GBR1691416	Barium	260	mg/kg	100,000		13	
GBS0841113	Barium	260	mg/kg	100,000		11	
GBS1031416	Barium	260	mg/kg	100,000		11	J
GBS1290608	Barium	260	mg/kg	100,000		14	
GBS1570406	Barium	260	mg/kg	100,000		11	
GBS1670911	Barium	260	mg/kg	100,000		14	J
GBS1681214	Barium	260	mg/kg	100,000		12	J
GBS1030406	Barium	250	mg/kg	100,000		12	J
GBS1170507	Barium	250	mg/kg	100,000		11	J
GBS1610204	Barium	250	mg/kg	100,000		11	
GBS1610204DUP	Barium	245	mg/kg	100,000		10.7	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS101416	Barium	240	mg/kg	100,000		11	
GBPS110204	Barium	240	mg/kg	100,000		11	
GBPS111416	Barium	240	mg/kg	100,000		11	
GBPS283032	Barium	240	mg/kg	100,000		12	
GBR1670709	Barium	240	mg/kg	100,000		12	
GBS0391012	Barium	240	mg/kg	100,000		11	J
GBS1010507	Barium	240	mg/kg	100,000		11	J
GBS1390709	Barium	240	mg/kg	100,000		12	
GBS1640911	Barium	240	mg/kg	100,000		13	J
GBPS240506DUP	Barium	239	mg/kg	100,000		11.9	
GBPS190204DUP	Barium	238	mg/kg	100,000		10.8	
GBPS050408DUP	Barium	234	mg/kg	100,000		11.5	
GB044	Barium	230	mg/kg	100,000		11	J
GBPS041416	Barium	230	mg/kg	100,000		11	
GBPS100204	Barium	230	mg/kg	100,000		11	
GBPS180911	Barium	230	mg/kg	100,000		14	
GBPS250507	Barium	230	mg/kg	100,000		11	
GBS0440709	Barium	230	mg/kg	100,000		11	J
GBS0600507	Barium	230	mg/kg	100,000		11	
GBS0980608	Barium	230	mg/kg	100,000		11	J
GBS0990507	Barium	230	mg/kg	100,000		11	J
GBS1390911	Barium	230	mg/kg	100,000		14	
GBS0982224DUP	Barium	221	mg/kg	100,000		11	
GBE0210203	Barium	220	mg/kg	100,000		11	
GBPS030911	Barium	220	mg/kg	100,000		11	
GBPS031416	Barium	220	mg/kg	100,000		11	
GBPS040406	Barium	220	mg/kg	100,000		11	
GBPS050408	Barium	220	mg/kg	100,000		12	
GBPS211416	Barium	220	mg/kg	100,000		12	
GBS0380709	Barium	220	mg/kg	100,000		11	J
GBS0490507	Barium	220	mg/kg	100,000		11	J
GBS1610608	Barium	220	mg/kg	100,000		11	
GB063	Barium	210	mg/kg	100,000		12	J
GBPS090204	Barium	210	mg/kg	100,000		11	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS151416	Barium	210	mg/kg	100,000		12	
GBPS180608	Barium	210	mg/kg	100,000		11	
GBPS240506	Barium	210	mg/kg	100,000		12	
GBS0540507	Barium	210	mg/kg	100,000		14	
GBS1360911	Barium	210	mg/kg	100,000		12	
GBS1370911	Barium	210	mg/kg	100,000		12	
GBS1441618	Barium	210	mg/kg	100,000		12	
GBPS04	Barium	200	mg/kg	100,000		11	
GBPS040911	Barium	200	mg/kg	100,000		11	
GBR1660810	Barium	200	mg/kg	100,000		11	
GBS0430709	Barium	200	mg/kg	100,000		11	J
GBS0560507	Barium	200	mg/kg	100,000		15	
GBS0720305	Barium	200	mg/kg	100,000		11	
GBS0840406	Barium	200	mg/kg	100,000		11	
GBS1310608	Barium	200	mg/kg	100,000		11	
GB102	Barium	190	mg/kg	100,000		12	J
GBPS01	Barium	190	mg/kg	100,000		11	
GBPS02	Barium	190	mg/kg	100,000		10	
GBPS020610	Barium	190	mg/kg	100,000		11	
GBPS030406	Barium	190	mg/kg	100,000		12	
GBPS071012	Barium	190	mg/kg	100,000		11	
GBPS271416	Barium	190	mg/kg	100,000		11	
GBS0360911	Barium	190	mg/kg	100,000		11	
GBS0470709	Barium	190	mg/kg	100,000		11	J
GBS0591416	Barium	190	mg/kg	100,000		13	
GBS0620507	Barium	190	mg/kg	100,000		12	
GBS0730204	Barium	190	mg/kg	100,000		11	
GBS0741416	Barium	190	mg/kg	100,000		12	
GBS1430911	Barium	190	mg/kg	100,000		12	
GBS1440911	Barium	190	mg/kg	100,000		12	
GBS1661012	Barium	190	mg/kg	100,000		11	J
GB082	Barium	180	mg/kg	100,000		12	
GB096	Barium	180	mg/kg	100,000		11	
GBPS121719	Barium	180	mg/kg	100,000		12	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS160204	Barium	180	mg/kg	100,000		10	
GBPS221416	Barium	180	mg/kg	100,000		11	
GBR1640911	Barium	180	mg/kg	100,000		12	
GBS0590507	Barium	180	mg/kg	100,000		11	
GBS0650507	Barium	180	mg/kg	100,000		11	
GBS0711012	Barium	180	mg/kg	100,000		11	
GBS1150507	Barium	180	mg/kg	100,000		11	J
GBS1240608	Barium	180	mg/kg	100,000		11	
GBS1330507	Barium	180	mg/kg	100,000		12	
GBS1360709	Barium	180	mg/kg	100,000		12	
GBS1450709	Barium	180	mg/kg	100,000		12	
GBS1590204	Barium	180	mg/kg	100,000		11	
GBS1370911DUPDUP	Barium	179	mg/kg	100,000		12.1	
GBS0590507DUP	Barium	174	mg/kg	100,000		10.7	
GBPS170204	Barium	170	mg/kg	100,000		11	
GBPS201416	Barium	170	mg/kg	100,000		11	
GBPS210608	Barium	170	mg/kg	100,000		11	
GBPS282224	Barium	170	mg/kg	100,000		11	
GBS0320204	Barium	170	mg/kg	100,000		11	
GBS0480709	Barium	170	mg/kg	100,000		11	J
GBS0871012	Barium	170	mg/kg	100,000		11	
GBS1151820	Barium	170	mg/kg	100,000		11	J
GBS1521416	Barium	170	mg/kg	100,000		11	
GBPS051012	Barium	160	mg/kg	100,000		11	
GBPS150204	Barium	160	mg/kg	100,000		10	
GBPS161416	Barium	160	mg/kg	100,000		12	
GBPS171314	Barium	160	mg/kg	100,000		11	
GBPS181416	Barium	160	mg/kg	100,000		11	
GBS0330204	Barium	160	mg/kg	100,000		10	
GBS0740507	Barium	160	mg/kg	100,000		11	
GBS0981416	Barium	160	mg/kg	100,000		11	J
GBS0982224	Barium	160	mg/kg	100,000		11	J
GBS1620608DUP	Barium	159	mg/kg	100,000		10.6	
GBPS03	Barium	150	mg/kg	100,000		11	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS051820	Barium	150	mg/kg	100,000		11	
GBPS081416	Barium	150	mg/kg	100,000		11	
GBPS131920	Barium	150	mg/kg	100,000		11	
GBS0461012	Barium	150	mg/kg	100,000		11	J
GBS0840103	Barium	150	mg/kg	100,000		10	
GBS1071820	Barium	150	mg/kg	100,000		11	J
GBS1481416	Barium	150	mg/kg	100,000		11	
GBPS270204DUP	Barium	147	mg/kg	100,000		10.5	
GBS1581012DUP	Barium	142	mg/kg	100,000		10.5	
GBPS061012	Barium	140	mg/kg	100,000		11	
GBPS091416	Barium	140	mg/kg	100,000		11	
GBPS191416	Barium	140	mg/kg	100,000		11	
GBPS261416	Barium	140	mg/kg	100,000		11	
GBPS270204	Barium	140	mg/kg	100,000		11	
GBS0370204	Barium	140	mg/kg	100,000		10	
GBS1171820	Barium	140	mg/kg	100,000		11	J
GBS1282224	Barium	140	mg/kg	100,000		11	
GBS1571416	Barium	140	mg/kg	100,000		11	
GBS1581012	Barium	140	mg/kg	100,000		11	
GBS1671820	Barium	140	mg/kg	100,000		11	J
GBPS060608	Barium	130	mg/kg	100,000		10	
GBR1671820	Barium	130	mg/kg	100,000		12	
GBS1061820	Barium	130	mg/kg	100,000		11	J
GBS1311820	Barium	130	mg/kg	100,000		11	
GBS1392123	Barium	130	mg/kg	100,000		11	
GBPS061012DUP	Barium	121	mg/kg	100,000		10.7	
GBPS080204	Barium	120	mg/kg	100,000		10	
GBPS260204	Barium	120	mg/kg	100,000		10	
GBS0350103	Barium	120	mg/kg	100,000		10	
GBS1301820	Barium	120	mg/kg	100,000		11	
GBS1432022	Barium	120	mg/kg	100,000		11	
GBS1620608	Barium	120	mg/kg	100,000		11	
GBS1071820DUP	Barium	112	mg/kg	100,000		10.7	
GBPS172123	Barium	110	mg/kg	100,000		11	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1292224	Barium	110	mg/kg	100,000		11	
GBS1321820	Barium	110	mg/kg	100,000		11	
GBS1451719	Barium	110	mg/kg	100,000		11	
GBS1692527	Barium	110	mg/kg	100,000		11	J
GBS0340103	Barium	100	mg/kg	100,000		10	
GBS1371719	Barium	100	mg/kg	100,000		11	
GBS1362022	Barium	92	mg/kg	100,000		11	
GBR1642022	Barium	89	mg/kg	100,000		11	
GBPS011921	Barium	88	mg/kg	100,000		11	
GBR1692426	Barium	63	mg/kg	100,000		11	
GBR1682628	Barium	60	mg/kg	100,000		11	
GBS1480406	Cadmium	1.5	mg/kg	810		0.55	
GBPS200204	Cadmium	1.1	mg/kg	810		0.53	
GBS1000507	Cadmium	1.1	mg/kg	810		0.56	
GBE0210203	Cadmium	0.97	mg/kg	810		1.6	B
GBS1371719	Cadmium	0.89	mg/kg	810		1.1	B
GBS1441618	Cadmium	0.79	mg/kg	810		1.2	B
GBS0840103	Cadmium	0.63	mg/kg	810		0.52	
GBS0820608	Cadmium	0.46	mg/kg	810		0.54	B
GBS1390911	Cadmium	0.41	mg/kg	810		0.69	B
GBS0591416	Cadmium	0.39	mg/kg	810		1.3	B
GBS0740204	Cadmium	0.39	mg/kg	810		0.56	B
GBS0450608DUP	Cadmium	0.378	mg/kg	810		1.12	B
GBPS210204	Cadmium	0.37	mg/kg	810		0.55	B
GBR1682628	Cadmium	0.37	mg/kg	810		0.56	B
GBS0841113	Cadmium	0.35	mg/kg	810		0.57	B
GBS1451719	Cadmium	0.34	mg/kg	810		0.57	B
GBS0561416	Cadmium	0.32	mg/kg	810		1.3	B
GBS0560507	Cadmium	0.25	mg/kg	810		0.76	B
GBS0980608	Cadmium	0.25	mg/kg	810		0.56	B
GBS0541416	Cadmium	0.22	mg/kg	810		0.62	B
GBS0590507	Cadmium	0.22	mg/kg	810		0.54	B
GBS0982224DUP	Cadmium	0.217	mg/kg	810		0.551	B
GBS0590507DUP	Cadmium	0.204	mg/kg	810		0.536	B

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0540507	Cadmium	0.18	mg/kg	810		0.69	B
GBS1280709	Cadmium	0.18	mg/kg	810		1.2	B
GBS1320507	Cadmium	0.17	mg/kg	810		0.61	B
GBS1440911	Cadmium	0.1	mg/kg	810		0.61	B
GBPS222021	Cadmium	0.071	mg/kg	810		0.55	B
GBS1370911DUPDUP	Cadmium	0.0278	mg/kg	810		0.605	B
GBS1691416	Chromium	160	mg/kg	450		1.4	J
GBR1691416	Chromium	110	mg/kg	450		1.3	
GBPS280608	Chromium	66	mg/kg	450		1.1	
GBS1070608	Chromium	61	mg/kg	450		1.3	
GBS1681214	Chromium	54	mg/kg	450		1.2	J
GB102	Chromium	48	mg/kg	450		1.2	J
GBS1170507	Chromium	47	mg/kg	450		1.1	
GBS1310608	Chromium	42	mg/kg	450		1.1	
GBPS250507	Chromium	39	mg/kg	450		1.1	
GBS1060608	Chromium	37	mg/kg	450		1.3	
GBS0990507	Chromium	36	mg/kg	450		1.1	
GBR1681113	Chromium	35	mg/kg	450		1.3	
GBPS240506DUP	Chromium	34.7	mg/kg	450		1.19	
GBR1681113DUP	Chromium	33.5	mg/kg	450		1.31	
GBS0560507	Chromium	33	mg/kg	450		1.5	
GB068	Chromium	31	mg/kg	450		1.3	
GBPS240506	Chromium	30	mg/kg	450		1.2	
GBS1430709	Chromium	30	mg/kg	450		1.3	
GBS1300507	Chromium	27	mg/kg	450		1.2	
GBPS060608	Chromium	26	mg/kg	450		1	
GBS0540507	Chromium	24	mg/kg	450		1.4	
GBS1150507	Chromium	24	mg/kg	450		1.1	
GBPS030406	Chromium	22	mg/kg	450		1.2	
GBS1000507	Chromium	22	mg/kg	450		1.1	
GBS1280709	Chromium	22	mg/kg	450		1.2	
GBS1450911	Chromium	22	mg/kg	450		1.5	
GBPS220204	Chromium	20	mg/kg	450		1.1	
GBPS221416	Chromium	20	mg/kg	450		1.1	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0561416	Chromium	20	mg/kg	450		1.3	
GBS1390709	Chromium	20	mg/kg	450		1.2	
GBS0450608DUP	Chromium	19.1	mg/kg	450		1.12	
GBPS03	Chromium	19	mg/kg	450		1.1	
GBS0980810	Chromium	19	mg/kg	450		1.2	
GBS1030406	Chromium	19	mg/kg	450		1.2	
GBS1320507	Chromium	19	mg/kg	450		1.2	
GBS0450608	Chromium	18	mg/kg	450		1.1	
GBS0591416	Chromium	18	mg/kg	450		1.3	
GBS1010507	Chromium	18	mg/kg	450		1.1	
GBS1371719	Chromium	18	mg/kg	450		1.1	
GBS1441618	Chromium	18	mg/kg	450		1.2	
GB076	Chromium	17	mg/kg	450		1.2	
GBE0210203	Chromium	17	mg/kg	450		1.1	
GBPS011214	Chromium	17	mg/kg	450		1.2	
GBPS241416	Chromium	17	mg/kg	450		1.2	
GBR1662022	Chromium	17	mg/kg	450		1.2	
GBS0390204	Chromium	17	mg/kg	450		1.1	
GBS0420305	Chromium	17	mg/kg	450		1.1	
GBS1240608	Chromium	17	mg/kg	450		1.1	
GBS1290608	Chromium	17	mg/kg	450		1.4	
GBS1360709	Chromium	17	mg/kg	450		1.2	
GBS1360911	Chromium	17	mg/kg	450		1.2	
GBS1370709	Chromium	17	mg/kg	450		1.2	
GBS1392123	Chromium	17	mg/kg	450		1.1	
GBS1440709	Chromium	17	mg/kg	450		1.2	
GBS1640911	Chromium	17	mg/kg	450		1.3	J
GBPS100204	Chromium	16	mg/kg	450		1.1	
GBPS182122	Chromium	16	mg/kg	450		1.2	
GBPS251012	Chromium	16	mg/kg	450		1.2	
GBPS290103	Chromium	16	mg/kg	450		1.1	
GBR1640911	Chromium	16	mg/kg	450		1.2	
GBS0400709	Chromium	16	mg/kg	450		1.1	
GBS0541416	Chromium	16	mg/kg	450		1.2	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0601618	Chromium	16	mg/kg	450		1.2	
GBS0651416	Chromium	16	mg/kg	450		1.2	
GBS0841113	Chromium	16	mg/kg	450		1.1	
GBS0870406	Chromium	16	mg/kg	450		1.1	
GBS1362022	Chromium	16	mg/kg	450		1.1	
GBS1432022	Chromium	16	mg/kg	450		1.1	
GBS1481416	Chromium	16	mg/kg	450		1.1	
GBS1682325DUP	Chromium	15.4	mg/kg	450		1.14	
GBS1642123DUP	Chromium	15.3	mg/kg	450		1.14	
GB082	Chromium	15	mg/kg	450		1.2	
GBPS010609	Chromium	15	mg/kg	450		1.2	
GBPS050408	Chromium	15	mg/kg	450		1.2	
GBPS120204	Chromium	15	mg/kg	450		1.1	
GBPS222021	Chromium	15	mg/kg	450		1.1	
GBPS281012	Chromium	15	mg/kg	450		1.1	
GBR1692426	Chromium	15	mg/kg	450		1.1	
GBS0391012	Chromium	15	mg/kg	450		1.1	
GBS0621416	Chromium	15	mg/kg	450		1.2	
GBS0740204	Chromium	15	mg/kg	450		1.1	
GBS0820608	Chromium	15	mg/kg	450		1.1	
GBS0840406	Chromium	15	mg/kg	450		1.1	
GBS1430911	Chromium	15	mg/kg	450		1.2	
GBS1570406	Chromium	15	mg/kg	450		1.1	
GBS1662123	Chromium	15	mg/kg	450		1.2	J
GBS1682325	Chromium	15	mg/kg	450		1.1	J
GBS1692527	Chromium	15	mg/kg	450		1.1	J
GBPS050408DUP	Chromium	14.9	mg/kg	450		1.15	
GB063	Chromium	14	mg/kg	450		1.2	
GBPS040406	Chromium	14	mg/kg	450		1.1	
GBPS180608	Chromium	14	mg/kg	450		1.1	
GBPS190204	Chromium	14	mg/kg	450		1.1	
GBPS291416	Chromium	14	mg/kg	450		1.2	
GBS0360911	Chromium	14	mg/kg	450		1.1	
GBS0380709	Chromium	14	mg/kg	450		1.1	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0600507	Chromium	14	mg/kg	450		1.1	
GBS0980608	Chromium	14	mg/kg	450		1.1	
GBS1330507	Chromium	14	mg/kg	450		1.2	
GBS1370911	Chromium	14	mg/kg	450		1.2	
GBS1450709	Chromium	14	mg/kg	450		1.2	
GBS1451719	Chromium	14	mg/kg	450		1.1	
GBS1571416	Chromium	14	mg/kg	450		1.1	
GBS1642123	Chromium	14	mg/kg	450		1.1	J
GBS1670911	Chromium	14	mg/kg	450		1.4	J
GBPS190204DUP	Chromium	13.6	mg/kg	450		1.08	
GBS0590507DUP	Chromium	13.5	mg/kg	450		1.07	
GBPS02	Chromium	13	mg/kg	450		1	
GBPS020610	Chromium	13	mg/kg	450		1.1	
GBPS030911	Chromium	13	mg/kg	450		1.1	
GBPS041416	Chromium	13	mg/kg	450		1.1	
GBPS061618	Chromium	13	mg/kg	450		1.2	
GBPS090204	Chromium	13	mg/kg	450		1.1	
GBPS110204	Chromium	13	mg/kg	450		1.1	
GBPS151416	Chromium	13	mg/kg	450		1.2	
GBPS160204	Chromium	13	mg/kg	450		1	
GBPS180911	Chromium	13	mg/kg	450		1.4	
GBPS211416	Chromium	13	mg/kg	450		1.2	
GBR1671820	Chromium	13	mg/kg	450		1.2	
GBR1682628	Chromium	13	mg/kg	450		1.1	
GBS0370204	Chromium	13	mg/kg	450		1	
GBS0430709	Chromium	13	mg/kg	450		1.1	
GBS0590507	Chromium	13	mg/kg	450		1.1	
GBS0620507	Chromium	13	mg/kg	450		1.2	
GBS0650507	Chromium	13	mg/kg	450		1.1	
GBS0741416	Chromium	13	mg/kg	450		1.2	
GBS1390911	Chromium	13	mg/kg	450		1.4	
GBS1480406	Chromium	13	mg/kg	450		1.1	
GBS1610204	Chromium	13	mg/kg	450		1.1	
GBS1610204DUP	Chromium	12.9	mg/kg	450		1.07	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1370911DUPDUP	Chromium	12.8	mg/kg	450		1.21	
GB044	Chromium	12	mg/kg	450		1.1	
GBPS031416	Chromium	12	mg/kg	450		1.1	
GBPS070608	Chromium	12	mg/kg	450		1.1	
GBPS101416	Chromium	12	mg/kg	450		1.1	
GBPS120608	Chromium	12	mg/kg	450		1.1	
GBPS121719	Chromium	12	mg/kg	450		1.2	
GBPS161416	Chromium	12	mg/kg	450		1.2	
GBPS170204	Chromium	12	mg/kg	450		1.1	
GBPS200204	Chromium	12	mg/kg	450		1.1	
GBPS283032	Chromium	12	mg/kg	450		1.2	
GBR1642022	Chromium	12	mg/kg	450		1.1	
GBR1660810	Chromium	12	mg/kg	450		1.1	
GBS0440709	Chromium	12	mg/kg	450		1.1	
GBS0720305	Chromium	12	mg/kg	450		1.1	
GBS0840103	Chromium	12	mg/kg	450		1	
GBS1031416	Chromium	12	mg/kg	450		1.1	
GBS1171820	Chromium	12	mg/kg	450		1.1	
GBS1440911	Chromium	12	mg/kg	450		1.2	
GBS1521416	Chromium	12	mg/kg	450		1.1	
GBS1590204	Chromium	12	mg/kg	450		1.1	
GBS1610608	Chromium	12	mg/kg	450		1.1	
GBS0982224DUP	Chromium	11.4	mg/kg	450		1.1	
GBPS061012DUP	Chromium	11.2	mg/kg	450		1.07	
GB096	Chromium	11	mg/kg	450		1.1	
GBPS011921	Chromium	11	mg/kg	450		1.1	
GBPS04	Chromium	11	mg/kg	450		1.1	
GBPS061012	Chromium	11	mg/kg	450		1.1	
GBPS111416	Chromium	11	mg/kg	450		1.1	
GBPS150204	Chromium	11	mg/kg	450		1	
GBPS172123	Chromium	11	mg/kg	450		1.1	
GBPS181416	Chromium	11	mg/kg	450		1.1	
GBPS210204	Chromium	11	mg/kg	450		1.1	
GBPS283436	Chromium	11	mg/kg	450		1.2	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0320204	Chromium	11	mg/kg	450		1.1	
GBS0871012	Chromium	11	mg/kg	450		1.1	
GBS0982224	Chromium	11	mg/kg	450		1.1	
GBS1151820	Chromium	11	mg/kg	450		1.1	
GBS1282224	Chromium	11	mg/kg	450		1.1	
GBS1661012	Chromium	11	mg/kg	450		1.1	J
GBS1671820	Chromium	11	mg/kg	450		1.1	J
GBS1581012DUP	Chromium	10.7	mg/kg	450		1.05	
GBPS270204DUP	Chromium	10.5	mg/kg	450		1.05	
GBPS01	Chromium	10	mg/kg	450		1.1	
GBPS040911	Chromium	10	mg/kg	450		1.1	
GBPS071012	Chromium	10	mg/kg	450		1.1	
GBPS071618	Chromium	10	mg/kg	450		1.1	
GBPS131920	Chromium	10	mg/kg	450		1.1	
GBPS171314	Chromium	10	mg/kg	450		1.1	
GBPS201416	Chromium	10	mg/kg	450		1.1	
GBPS270204	Chromium	10	mg/kg	450		1.1	
GBPS271416	Chromium	10	mg/kg	450		1.1	
GBR1670709	Chromium	10	mg/kg	450		1.2	
GBS0340103	Chromium	10	mg/kg	450		1	
GBS1061820	Chromium	10	mg/kg	450		1.1	
GBPS021719	Chromium	9.9	mg/kg	450		1.2	
GBS1071820	Chromium	9.8	mg/kg	450		1.1	
GBS1620608	Chromium	9.8	mg/kg	450		1.1	
GBPS010911	Chromium	9.7	mg/kg	450		1.2	
GBPS282224	Chromium	9.7	mg/kg	450		1.1	
GBS1301820	Chromium	9.7	mg/kg	450		1.1	
GBS1620608DUP	Chromium	9.56	mg/kg	450		1.06	
GBPS210608	Chromium	9.5	mg/kg	450		1.1	
GBPS051820	Chromium	9.4	mg/kg	450		1.1	
GBS0330204	Chromium	9.4	mg/kg	450		1	
GBS1520406	Chromium	9.4	mg/kg	450		1.1	
GBS0490507	Chromium	9.3	mg/kg	450		1.1	
GBS0740507	Chromium	9.2	mg/kg	450		1.1	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1292224	Chromium	9.1	mg/kg	450		1.1	
GBS1311820	Chromium	9.1	mg/kg	450		1.1	
GBS0981416	Chromium	9	mg/kg	450		1.1	
GBS1581012	Chromium	9	mg/kg	450		1.1	
GBS0350103	Chromium	8.9	mg/kg	450		1	
GBPS051012	Chromium	8.8	mg/kg	450		1.1	
GBPS081416	Chromium	8.8	mg/kg	450		1.1	
GBPS261416	Chromium	8.7	mg/kg	450		1.1	
GBPS091416	Chromium	8.6	mg/kg	450		1.1	
GBS1071820DUP	Chromium	8.6	mg/kg	450		1.07	
GBS1321820	Chromium	8.6	mg/kg	450		1.1	
GBPS260204	Chromium	8.3	mg/kg	450		1	
GBPS080204	Chromium	8.2	mg/kg	450		1	
GBPS191416	Chromium	8.1	mg/kg	450		1.1	
GBS0730204	Chromium	8	mg/kg	450		1.1	
GBS0470709	Chromium	7.8	mg/kg	450		1.1	
GBS0480709	Chromium	7.2	mg/kg	450		1.1	
GBS0461012	Chromium	6.9	mg/kg	450		1.1	
GBS0711012	Chromium	6.3	mg/kg	450		1.1	
GBS1670911	Lead	140	mg/kg	1,000		0.42	J
GBS1640911	Lead	130	mg/kg	1,000		0.39	J
GBS0601618	Lead	110	mg/kg	1,000		0.73	
GBS0600507	Lead	97	mg/kg	1,000		0.33	
GBR1670709	Lead	96	mg/kg	1,000		0.36	
GBS1480406	Lead	73	mg/kg	1,000		0.33	
GBS1520406	Lead	69	mg/kg	1,000		0.34	
GBS1570406	Lead	69	mg/kg	1,000		0.34	
GBPS180911	Lead	63	mg/kg	1,000		0.41	
GBPS010911	Lead	62	mg/kg	1,000		0.36	
GBS1450911	Lead	59	mg/kg	1,000		0.46	
GBS1360911	Lead	54	mg/kg	1,000		0.36	J
GBS1430709	Lead	53	mg/kg	1,000		0.38	
GBS1390709	Lead	51	mg/kg	1,000		0.35	
GBE0210203	Lead	41	mg/kg	1,000		0.96	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0560507	Lead	38	mg/kg	1,000		0.46	
GBS1390911	Lead	37	mg/kg	1,000		0.41	
GBPS240506DUP	Lead	35.7	mg/kg	1,000		0.358	
GBS1370911DUPDUP	Lead	33.3	mg/kg	1,000		0.363	
GBS1060608	Lead	33	mg/kg	1,000		0.78	
GBS1070608	Lead	33	mg/kg	1,000		0.39	
GBPS120608	Lead	31	mg/kg	1,000		0.32	
GBR1691416	Lead	31	mg/kg	1,000		0.39	
GB068	Lead	30	mg/kg	1,000		0.8	
GBS0820608	Lead	30	mg/kg	1,000		0.32	
GBS0390204	Lead	29	mg/kg	1,000		0.67	
GBS0540507	Lead	29	mg/kg	1,000		0.42	
GBPS020610	Lead	27	mg/kg	1,000		0.34	
GBS1691416	Lead	27	mg/kg	1,000		0.42	J
GBPS200204	Lead	26	mg/kg	1,000		0.32	
GBS1370911	Lead	23	mg/kg	1,000		0.36	J
GBS1170507	Lead	22	mg/kg	1,000		0.34	
GBS1440709	Lead	20	mg/kg	1,000		0.35	
GBS1610204	Lead	20	mg/kg	1,000		0.32	
GBPS240506	Lead	19	mg/kg	1,000		0.36	J
GBR1681113DUP	Lead	19	mg/kg	1,000		0.393	
GBS1030406	Lead	19	mg/kg	1,000		0.37	
GBS1681214	Lead	19	mg/kg	1,000		0.36	J
GBS1610204DUP	Lead	17.7	mg/kg	1,000		0.322	
GBPS120204	Lead	17	mg/kg	1,000		0.33	
GBPS280608	Lead	17	mg/kg	1,000		0.34	
GBR1640911	Lead	17	mg/kg	1,000		0.35	
GBR1681113	Lead	17	mg/kg	1,000		0.39	
GBS1300507	Lead	16	mg/kg	1,000		0.35	
GBS1430911	Lead	16	mg/kg	1,000		0.35	
GBS1441618	Lead	16	mg/kg	1,000		0.69	
GBPS010609	Lead	15	mg/kg	1,000		0.71	
GB044	Lead	14	mg/kg	1,000		0.32	
GBPS011214	Lead	14	mg/kg	1,000		0.71	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS070608	Lead	14	mg/kg	1,000		0.34	
GBPS180608	Lead	14	mg/kg	1,000		0.33	
GBS0561416	Lead	14	mg/kg	1,000		0.76	
GBS0591416	Lead	14	mg/kg	1,000		0.76	
GBS0740204	Lead	14	mg/kg	1,000		0.34	
GBS1362022	Lead	14	mg/kg	1,000		0.68	J
GBS1392123	Lead	14	mg/kg	1,000		0.69	
GBS1432022	Lead	14	mg/kg	1,000		0.68	
GBS1451719	Lead	14	mg/kg	1,000		0.34	
GB102	Lead	13	mg/kg	1,000		0.37	J
GBPS190204	Lead	13	mg/kg	1,000		0.65	
GBPS220204	Lead	13	mg/kg	1,000		0.67	
GBPS250507	Lead	13	mg/kg	1,000		0.34	J
GBS1000507	Lead	13	mg/kg	1,000		0.33	
GBS1280709	Lead	13	mg/kg	1,000		0.71	
GBS1370709	Lead	13	mg/kg	1,000		0.35	J
GBS1662123	Lead	13	mg/kg	1,000		0.72	J
GBS1642123DUP	Lead	12.8	mg/kg	1,000		0.684	
GBPS011921	Lead	12	mg/kg	1,000		0.34	
GBPS03	Lead	12	mg/kg	1,000		0.67	
GBPS182122	Lead	12	mg/kg	1,000		0.71	
GBPS210204	Lead	12	mg/kg	1,000		0.33	
GBPS221416	Lead	12	mg/kg	1,000		0.67	
GBPS290103	Lead	12	mg/kg	1,000		0.65	
GBR1662022	Lead	12	mg/kg	1,000		0.72	
GBS0541416	Lead	12	mg/kg	1,000		0.37	
GBS0621416	Lead	12	mg/kg	1,000		0.75	
GBS0980810	Lead	12	mg/kg	1,000		0.73	
GBS0990507	Lead	12	mg/kg	1,000		0.33	
GBS1010507	Lead	12	mg/kg	1,000		0.34	
GBS1290608	Lead	12	mg/kg	1,000		0.43	
GBS1310608	Lead	12	mg/kg	1,000		0.34	
GBS1481416	Lead	12	mg/kg	1,000		0.69	
GBS1642123	Lead	12	mg/kg	1,000		0.68	J

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1661012	Lead	12	mg/kg	1,000		0.33	J
GBS1682325	Lead	12	mg/kg	1,000		0.69	J
GBS1682325DUP	Lead	11.4	mg/kg	1,000		0.686	
GB076	Lead	11	mg/kg	1,000		0.35	
GB082	Lead	11	mg/kg	1,000		0.35	J
GBPS021719	Lead	11	mg/kg	1,000		0.36	
GBPS100204	Lead	11	mg/kg	1,000		0.33	
GBR1671820	Lead	11	mg/kg	1,000		0.36	
GBS0430709	Lead	11	mg/kg	1,000		0.33	
GBS0651416	Lead	11	mg/kg	1,000		0.72	
GBS1150507	Lead	11	mg/kg	1,000		0.34	
GBS1320507	Lead	11	mg/kg	1,000		0.36	
GBS1360709	Lead	11	mg/kg	1,000		0.35	J
GBS1371719	Lead	11	mg/kg	1,000		0.68	J
GBPS190204DUP	Lead	10.5	mg/kg	1,000		0.646	
GBPS061618	Lead	10	mg/kg	1,000		0.35	
GBPS241416	Lead	10	mg/kg	1,000		0.35	J
GBPS251012	Lead	10	mg/kg	1,000		0.35	J
GBS0440709	Lead	10	mg/kg	1,000		0.32	
GBS0841113	Lead	10	mg/kg	1,000		0.34	
GBS0980608	Lead	10	mg/kg	1,000		0.34	
GBS1450709	Lead	10	mg/kg	1,000		0.35	
GBS1571416	Lead	10	mg/kg	1,000		0.34	
GBPS030406	Lead	9.9	mg/kg	1,000		0.35	
GBS0870406	Lead	9.9	mg/kg	1,000		0.33	
GBPS121719	Lead	9.6	mg/kg	1,000		0.35	
GBS0840103	Lead	9.6	mg/kg	1,000		0.31	
GBPS101416	Lead	9.5	mg/kg	1,000		0.34	
GBPS283032	Lead	9.3	mg/kg	1,000		0.35	
GBS0590507DUP	Lead	9.22	mg/kg	1,000		0.322	
GBPS283436	Lead	9.2	mg/kg	1,000		0.36	
GBS0380709	Lead	9.2	mg/kg	1,000		0.33	
GB063	Lead	9.1	mg/kg	1,000		0.35	
GBS1521416	Lead	9.1	mg/kg	1,000		0.34	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS111416	Lead	9	mg/kg	1,000		0.34	
GBPS281012	Lead	9	mg/kg	1,000		0.34	
GBS0400709	Lead	9	mg/kg	1,000		0.69	
GBPS050408DUP	Lead	8.94	mg/kg	1,000		0.345	
GBS0590507	Lead	8.6	mg/kg	1,000		0.32	
GBS0450608DUP	Lead	8.57	mg/kg	1,000		0.67	
GBPS050408	Lead	8.5	mg/kg	1,000		0.35	
GBS0420305	Lead	8.5	mg/kg	1,000		0.65	
GBPS151416	Lead	8.4	mg/kg	1,000		0.35	
GBR1692426	Lead	8.4	mg/kg	1,000		0.66	
GBPS090204	Lead	8.3	mg/kg	1,000		0.32	
GBR1660810	Lead	8.3	mg/kg	1,000		0.33	
GBPS041416	Lead	8.2	mg/kg	1,000		0.34	
GBPS170204	Lead	8.1	mg/kg	1,000		0.32	
GBPS211416	Lead	8.1	mg/kg	1,000		0.35	
GBPS291416	Lead	8.1	mg/kg	1,000		0.35	
GBS0450608	Lead	8	mg/kg	1,000		0.67	
GBPS270204DUP	Lead	7.85	mg/kg	1,000		0.315	
GBS1031416	Lead	7.8	mg/kg	1,000		0.34	
GBPS02	Lead	7.7	mg/kg	1,000		0.31	
GBPS030911	Lead	7.7	mg/kg	1,000		0.34	
GBS1590204	Lead	7.7	mg/kg	1,000		0.32	
GBS1610608	Lead	7.7	mg/kg	1,000		0.33	
GBPS031416	Lead	7.6	mg/kg	1,000		0.34	
GBS0620507	Lead	7.6	mg/kg	1,000		0.35	
GBS1692527	Lead	7.6	mg/kg	1,000		0.67	J
GBS0840406	Lead	7.5	mg/kg	1,000		0.34	
GBS1240608	Lead	7.5	mg/kg	1,000		0.34	
GBS1330507	Lead	7.5	mg/kg	1,000		0.36	
GBPS040406	Lead	7.4	mg/kg	1,000		0.34	
GBPS161416	Lead	7.4	mg/kg	1,000		0.35	
GB096	Lead	7.3	mg/kg	1,000		0.32	
GBPS110204	Lead	7.3	mg/kg	1,000		0.33	
GBR1682628	Lead	7.3	mg/kg	1,000		1.7	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0650507	Lead	7.3	mg/kg	1,000		0.33	
GBPS160204	Lead	7.2	mg/kg	1,000		0.31	
GBS0391012	Lead	7.2	mg/kg	1,000		0.34	
GBPS04	Lead	7.1	mg/kg	1,000		0.32	
GBPS01	Lead	7	mg/kg	1,000		0.33	
GBPS270204	Lead	7	mg/kg	1,000		0.32	
GBPS091416	Lead	6.9	mg/kg	1,000		0.32	
GBPS131920	Lead	6.9	mg/kg	1,000		0.34	
GBS0871012	Lead	6.9	mg/kg	1,000		0.32	
GBS0982224	Lead	6.9	mg/kg	1,000		0.33	
GBS1440911	Lead	6.9	mg/kg	1,000		0.37	
GBPS071012	Lead	6.8	mg/kg	1,000		0.34	
GBPS181416	Lead	6.8	mg/kg	1,000		0.33	
GBPS282224	Lead	6.8	mg/kg	1,000		0.33	
GBS0470709	Lead	6.8	mg/kg	1,000		0.34	
GBS1171820	Lead	6.7	mg/kg	1,000		0.33	
GBS1282224	Lead	6.7	mg/kg	1,000		0.33	
GBS0982224DUP	Lead	6.67	mg/kg	1,000		0.33	
GBS1671820	Lead	6.6	mg/kg	1,000		0.34	J
GBPS060608	Lead	6.5	mg/kg	1,000		0.31	
GBPS171314	Lead	6.5	mg/kg	1,000		0.32	
GBPS222021	Lead	6.5	mg/kg	1,000		0.33	
GBPS271416	Lead	6.5	mg/kg	1,000		0.32	
GBS0720305	Lead	6.5	mg/kg	1,000		0.32	
GBPS051820	Lead	6.4	mg/kg	1,000		0.33	
GBPS150204	Lead	6.3	mg/kg	1,000		0.31	
GBPS261416	Lead	6.3	mg/kg	1,000		0.33	
GBPS040911	Lead	6.2	mg/kg	1,000		0.33	
GBPS201416	Lead	6.2	mg/kg	1,000		0.34	
GBS0730204	Lead	6.2	mg/kg	1,000		0.32	
GBS1151820	Lead	6.2	mg/kg	1,000		0.33	
GBPS071618	Lead	6.1	mg/kg	1,000		0.34	
GBPS081416	Lead	6.1	mg/kg	1,000		0.33	
GBS1620608DUP	Lead	6.01	mg/kg	1,000		0.318	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS080204	Lead	6	mg/kg	1,000		0.31	
GBS0370204	Lead	5.9	mg/kg	1,000		0.31	
GBS0741416	Lead	5.9	mg/kg	1,000		0.35	
GBS1301820	Lead	5.9	mg/kg	1,000		0.33	
GBS1620608	Lead	5.9	mg/kg	1,000		0.32	
GBPS051012	Lead	5.8	mg/kg	1,000		0.32	
GBS0490507	Lead	5.8	mg/kg	1,000		0.32	
GBS0740507	Lead	5.7	mg/kg	1,000		0.32	
GBPS210608	Lead	5.6	mg/kg	1,000		0.32	
GBS1311820	Lead	5.6	mg/kg	1,000		0.33	
GBS1061820	Lead	5.5	mg/kg	1,000		0.33	
GBS1292224	Lead	5.5	mg/kg	1,000		0.32	
GBPS061012	Lead	5.4	mg/kg	1,000		0.32	
GBS0360911	Lead	5.4	mg/kg	1,000		0.32	
GBS0480709	Lead	5.3	mg/kg	1,000		0.32	
GBS1581012DUP	Lead	5.27	mg/kg	1,000		0.315	
GBR1642022	Lead	5.1	mg/kg	1,000		0.33	
GBS1071820	Lead	5.1	mg/kg	1,000		0.32	
GBS1581012	Lead	5.1	mg/kg	1,000		0.32	
GBPS172123	Lead	5	mg/kg	1,000		0.34	
GBPS260204	Lead	5	mg/kg	1,000		0.31	
GBS0461012	Lead	5	mg/kg	1,000		0.32	
GBS0330204	Lead	4.9	mg/kg	1,000		0.31	
GBS1321820	Lead	4.9	mg/kg	1,000		0.32	
GBS1071820DUP	Lead	4.7	mg/kg	1,000		0.321	
GBS0711012	Lead	4.6	mg/kg	1,000		0.32	
GBS0981416	Lead	4.6	mg/kg	1,000		0.32	
GBPS191416	Lead	4.5	mg/kg	1,000		0.32	
GBPS061012DUP	Lead	4.32	mg/kg	1,000		0.32	
GBS0320204	Lead	4.2	mg/kg	1,000		0.32	
GBS0340103	Lead	4.2	mg/kg	1,000		0.31	
GBS0350103	Lead	3.4	mg/kg	1,000		0.31	
GBS1371719	Mercury	0.42	mg/kg	610		0.11	J
GBS1610204DUP	Mercury	0.293	mg/kg	610		0.214	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1392123	Mercury	0.23	mg/kg	610		0.11	
GBS0820608	Mercury	0.21	mg/kg	610		0.11	
GBS1441618	Mercury	0.19	mg/kg	610		0.12	
GBS1610204	Mercury	0.18	mg/kg	610		0.11	J
GBR1662022	Mercury	0.15	mg/kg	610		0.12	
GBS1570406	Mercury	0.15	mg/kg	610		0.11	J
GBS1662123	Mercury	0.14	mg/kg	610		0.12	
GBS1362022	Mercury	0.13	mg/kg	610		0.11	J
GBS0330204	Mercury	0.11	mg/kg	610		0.1	
GBS1451719	Mercury	0.092	mg/kg	610		0.11	B
GBS1642123DUP	Mercury	0.092	mg/kg	610		0.114	B
GBS1642123	Mercury	0.09	mg/kg	610		0.11	B
GBS1432022	Mercury	0.089	mg/kg	610		0.11	B
GBPS120204	Mercury	0.088	mg/kg	610		0.11	B
GBPS011921	Mercury	0.081	mg/kg	610		0.11	B
GBS1430709	Mercury	0.079	mg/kg	610		0.13	B
GBS1390709	Mercury	0.069	mg/kg	610		0.12	B
GBS0360911DUP	Mercury	0.0662	mg/kg	610		0.106	B
GBE0210203	Mercury	0.059	mg/kg	610		0.1	B
GBPS210204	Mercury	0.052	mg/kg	610		0.11	B
GBS1430911	Mercury	0.052	mg/kg	610		0.12	B
GBS1390911	Mercury	0.051	mg/kg	610		0.14	B
GBS1480406	Mercury	0.05	mg/kg	610		0.11	B
GBS1360911	Mercury	0.047	mg/kg	610		0.12	J
GBS1440911	Mercury	0.043	mg/kg	610		0.12	B
GBS1370911DUPDUP	Mercury	0.0383	mg/kg	610		0.121	B
GBR1681113DUP	Mercury	0.038	mg/kg	610		0.131	B
GBS1370911	Mercury	0.038	mg/kg	610		0.12	J
GBS1610608	Mercury	0.036	mg/kg	610		0.11	J
GBS1670911	Mercury	0.029	mg/kg	610		0.14	B
GBS1620608	Mercury	0.028	mg/kg	610		0.11	B
GBS1370709	Mercury	0.027	mg/kg	610		0.12	J
GBS1571416	Mercury	0.027	mg/kg	610		0.11	J
GBS1682325DUP	Mercury	0.0263	mg/kg	610		0.114	B

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1450911	Mercury	0.026	mg/kg	610		0.15	B
GBS1440709	Mercury	0.024	mg/kg	610		0.12	B
GB082	Mercury	0.023	mg/kg	610		0.12	J
GBS1360709	Mercury	0.021	mg/kg	610		0.12	J
GBPS190204DUP	Mercury	0.016	mg/kg	610		0.108	B
GBS0980810	Mercury	0.016	mg/kg	610		0.12	B
GBS1031416	Mercury	0.016	mg/kg	610		0.11	B
GBS1640911	Mercury	0.016	mg/kg	610		0.13	B
GBS1000507	Mercury	0.015	mg/kg	610		0.11	B
GBS0990507	Mercury	0.014	mg/kg	610		0.11	B
GBS1661012	Mercury	0.014	mg/kg	610		0.11	B
GBS0982224DUP	Mercury	0.0133	mg/kg	610		0.11	B
GBS0982224	Mercury	0.013	mg/kg	610		0.11	B
GBS0980608	Mercury	0.012	mg/kg	610		0.11	B
GBS0981416	Mercury	0.012	mg/kg	610		0.11	B
GBS1030406	Mercury	0.012	mg/kg	610		0.12	B
GBS1071820DUP	Mercury	0.0112	mg/kg	610		0.107	B
GB063	Mercury	0.011	mg/kg	610		0.12	B
GBS1010507	Mercury	0.011	mg/kg	610		0.11	B
GBS1671820	Mercury	0.011	mg/kg	610		0.11	B
GBS1450709	Mercury	0.0097	mg/kg	610		0.12	B
GBPS240506DUP	Mercury	0.00855	mg/kg	610		0.119	B
GBS1330507DUP	Mercury	0.00455	mg/kg	610		0.119	B
GBS0450608DUP	Mercury	0.00223	mg/kg	610		0.112	B
GBR1682628	Selenium	1.5	mg/kg	10,000		0.56	
GBPS240506DUP	Selenium	1.41	mg/kg	10,000		0.597	
GBS0601618	Selenium	1.4	mg/kg	10,000		1.2	
GBS1432022	Selenium	1.4	mg/kg	10,000		1.1	
GBPS241416	Selenium	1.3	mg/kg	10,000		0.59	
GBS1440709	Selenium	1.3	mg/kg	10,000		0.59	
GBS1481416	Selenium	1.3	mg/kg	10,000		1.1	
GBS0541416	Selenium	1.2	mg/kg	10,000		0.62	
GBPS011214	Selenium	1.1	mg/kg	10,000		1.2	B
GBPS240506	Selenium	1.1	mg/kg	10,000		0.6	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0560507	Selenium	1.1	mg/kg	10,000		0.76	
GBS0561416	Selenium	1.1	mg/kg	10,000		1.3	B
GBPS251012	Selenium	1	mg/kg	10,000		0.58	
GBS1480406	Selenium	1	mg/kg	10,000		0.55	
GBS0591416	Selenium	0.99	mg/kg	10,000		1.3	B
GBS1610204	Selenium	0.99	mg/kg	10,000		0.54	
GBS1590204	Selenium	0.96	mg/kg	10,000		0.53	
GBS0380709	Selenium	0.95	mg/kg	10,000		0.55	
GB096	Selenium	0.94	mg/kg	10,000		0.54	
GBS1360911	Selenium	0.94	mg/kg	10,000		0.6	
GBS1441618	Selenium	0.93	mg/kg	10,000		1.2	B
GBS1390911	Selenium	0.89	mg/kg	10,000		0.69	
GB082	Selenium	0.87	mg/kg	10,000		0.58	
GBPS151416	Selenium	0.86	mg/kg	10,000		0.58	
GBPS250507	Selenium	0.85	mg/kg	10,000		0.56	
GBS1610204DUP	Selenium	0.845	mg/kg	10,000		0.536	
GBS1060608	Selenium	0.84	mg/kg	10,000		0.65	
GBS1521416	Selenium	0.83	mg/kg	10,000		0.57	
GBS0450608	Selenium	0.82	mg/kg	10,000		1.1	B
GBS1430911	Selenium	0.77	mg/kg	10,000		0.58	
GBPS222021	Selenium	0.76	mg/kg	10,000		0.55	
GBS1000507	Selenium	0.76	mg/kg	10,000		0.56	
GBPS100204	Selenium	0.75	mg/kg	10,000		0.56	
GBS1610608	Selenium	0.75	mg/kg	10,000		0.55	
GBS0590507	Selenium	0.74	mg/kg	10,000		0.54	
GBS0440709	Selenium	0.73	mg/kg	10,000		0.54	
GBS1370709	Selenium	0.73	mg/kg	10,000		0.58	
GBPS02	Selenium	0.72	mg/kg	10,000		0.52	
GBPS160204	Selenium	0.72	mg/kg	10,000		0.52	
GBS0720305	Selenium	0.72	mg/kg	10,000		0.53	
GBPS191416	Selenium	0.71	mg/kg	10,000		0.53	
GBS0540507	Selenium	0.71	mg/kg	10,000		0.69	
GBS1451719	Selenium	0.69	mg/kg	10,000		0.57	
GBS1570406	Selenium	0.69	mg/kg	10,000		0.57	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS211416	Selenium	0.68	mg/kg	10,000		0.58	
GBPS180608	Selenium	0.67	mg/kg	10,000		0.55	
GBS0600507	Selenium	0.67	mg/kg	10,000		0.55	
GBS1430709	Selenium	0.66	mg/kg	10,000		0.63	
GBS1070608	Selenium	0.65	mg/kg	10,000		0.64	
GBS1571416	Selenium	0.64	mg/kg	10,000		0.57	
GBS1670911	Selenium	0.63	mg/kg	10,000		0.7	J
GBS1450709	Selenium	0.62	mg/kg	10,000		0.59	
GBPS201416	Selenium	0.59	mg/kg	10,000		0.56	
GBPS150204	Selenium	0.58	mg/kg	10,000		0.52	
GBPS061012	Selenium	0.57	mg/kg	10,000		0.53	
GBS1360709	Selenium	0.57	mg/kg	10,000		0.59	B
GBPS020610	Selenium	0.55	mg/kg	10,000		0.57	B
GBR1642022	Selenium	0.55	mg/kg	10,000		0.55	B
GBPS120204	Selenium	0.54	mg/kg	10,000		0.55	B
GBPS170204	Selenium	0.54	mg/kg	10,000		0.53	
GBPS210608	Selenium	0.54	mg/kg	10,000		0.53	
GBPS030406	Selenium	0.53	mg/kg	10,000		0.58	B
GBPS040406	Selenium	0.53	mg/kg	10,000		0.57	B
GBR1670709	Selenium	0.52	mg/kg	10,000		0.6	B
GBS0740204	Selenium	0.52	mg/kg	10,000		0.56	B
GBS1440911	Selenium	0.5	mg/kg	10,000		0.61	B
GBPS090204	Selenium	0.49	mg/kg	10,000		0.54	B
GBS0360911	Selenium	0.49	mg/kg	10,000		0.53	B
GBPS030911	Selenium	0.48	mg/kg	10,000		0.56	B
GBS1520406	Selenium	0.48	mg/kg	10,000		0.57	B
GB102	Selenium	0.47	mg/kg	10,000		0.62	J
GBPS131920	Selenium	0.47	mg/kg	10,000		0.56	B
GBS1390709	Selenium	0.47	mg/kg	10,000		0.58	B
GBPS180911	Selenium	0.45	mg/kg	10,000		0.68	B
GBPS110204	Selenium	0.43	mg/kg	10,000		0.55	B
GBPS200204	Selenium	0.43	mg/kg	10,000		0.53	B
GBPS011921	Selenium	0.42	mg/kg	10,000		0.57	B
GBPS120608	Selenium	0.42	mg/kg	10,000		0.54	B

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS070608	Selenium	0.41	mg/kg	10,000		0.57	B
GBPS283436	Selenium	0.41	mg/kg	10,000		0.6	B
GBPS061618	Selenium	0.4	mg/kg	10,000		0.58	B
GBS0711012	Selenium	0.4	mg/kg	10,000		0.53	B
GBPS050408	Selenium	0.39	mg/kg	10,000		0.58	B
GBPS283032	Selenium	0.39	mg/kg	10,000		0.59	B
GBPS171314	Selenium	0.37	mg/kg	10,000		0.54	B
GBPS210204	Selenium	0.34	mg/kg	10,000		0.55	B
GBPS071012	Selenium	0.32	mg/kg	10,000		0.57	B
GBPS050408DUP	Selenium	0.306	mg/kg	10,000		0.575	B
GBPS271416	Selenium	0.3	mg/kg	10,000		0.53	B
GBPS250507RR1	1,2,4-Trimethylbenzene	65,000	µg/kg	5,700	HIT	14,000	
GBPS250507	1,2,4-Trimethylbenzene	40,000	µg/kg	5,700	HIT	28	J
GBS1330507	1,2,4-Trimethylbenzene	24,000	µg/kg	5,700	HIT	740	
GB063RR2	1,2,4-Trimethylbenzene	15,000	µg/kg	5,700	HIT	1,400	
GBS1310608	1,2,4-Trimethylbenzene	12,000	µg/kg	5,700	HIT	700	
GBS1360911	1,2,4-Trimethylbenzene	9,300	µg/kg	5,700	HIT	600	
GBS1150507	1,2,4-Trimethylbenzene	9,000	µg/kg	5,700	HIT	56	J
GBS1150507RR2	1,2,4-Trimethylbenzene	6,400	µg/kg	5,700	HIT	1,400	
GBPS240506RR1	1,2,4-Trimethylbenzene	5,700	µg/kg	5,700	HIT	1,500	
GB063RR1	1,2,4-Trimethylbenzene	3,400	µg/kg	5,700		58	J
GBS1150507RR1	1,2,4-Trimethylbenzene	2,200	µg/kg	5,700		56	J
GBR1691416	1,2,4-Trimethylbenzene	930	µg/kg	5,700		32	
GBS0980810	1,2,4-Trimethylbenzene	800	µg/kg	5,700		30	
GBPS010609	1,2,4-Trimethylbenzene	780	µg/kg	5,700		59	
GBS1450911	1,2,4-Trimethylbenzene	710	µg/kg	5,700		76	
GB063	1,2,4-Trimethylbenzene	690	µg/kg	5,700		5.8	J
GBS1170507	1,2,4-Trimethylbenzene	690	µg/kg	5,700		29	
GBPS240506	1,2,4-Trimethylbenzene	650	µg/kg	5,700		6	J
GBPS280608	1,2,4-Trimethylbenzene	520	µg/kg	5,700		28	
GB102	1,2,4-Trimethylbenzene	300	µg/kg	5,700		6.2	J
GBS1290608	1,2,4-Trimethylbenzene	280	µg/kg	5,700		14	
GBPS010911	1,2,4-Trimethylbenzene	260	µg/kg	5,700		12	
GBS1360709	1,2,4-Trimethylbenzene	230	µg/kg	5,700		59	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBR1681113	1,2,4-Trimethylbenzene	140	µg/kg	5,700		13	
GB102RR1	1,2,4-Trimethylbenzene	130	µg/kg	5,700		6.2	J
GBS1691416	1,2,4-Trimethylbenzene	130	µg/kg	5,700		7	J
GBS1320507	1,2,4-Trimethylbenzene	120	µg/kg	5,700		6.1	
GBS1370709	1,2,4-Trimethylbenzene	110	µg/kg	5,700		58	
GBS1060608	1,2,4-Trimethylbenzene	50	µg/kg	5,700		6.5	
GBPS020610	1,2,4-Trimethylbenzene	44	µg/kg	5,700		11	
GBS1430911	1,2,4-Trimethylbenzene	32	µg/kg	5,700		5.8	
GBS1070608	1,2,4-Trimethylbenzene	31	µg/kg	5,700		6.4	
GBS0980608	1,2,4-Trimethylbenzene	18	µg/kg	5,700		5.6	J
GB076	1,2,4-Trimethylbenzene	11	µg/kg	5,700		5.8	
GBS1390911	1,2,4-Trimethylbenzene	8.5	µg/kg	5,700		6.9	
GB068	1,2,4-Trimethylbenzene	6.7	µg/kg	5,700		6.7	
GBS1280709	1,2,4-Trimethylbenzene	5.7	µg/kg	5,700		5.9	J
GBS1370911	1,2,4-Trimethylbenzene	5	µg/kg	5,700		6	J
GBPS281012	1,2,4-Trimethylbenzene	3.4	µg/kg	5,700		5.7	J
GBS1030406	1,2,4-Trimethylbenzene	2.7	µg/kg	5,700		6.2	J
GBS1300507	1,2,4-Trimethylbenzene	1.6	µg/kg	5,700		5.9	J
GBS0820608	1,2,4-Trimethylbenzene	1.4	µg/kg	5,700		5.4	J
GBPS250507RR1	1,3,5-Trimethylbenzene	31,000	µg/kg	70,000		14,000	
GBPS250507	1,3,5-Trimethylbenzene	24,000	µg/kg	70,000		28	J
GBS1330507	1,3,5-Trimethylbenzene	10,000	µg/kg	70,000		740	
GB063RR2	1,3,5-Trimethylbenzene	6,300	µg/kg	70,000		1,400	
GBS1310608	1,3,5-Trimethylbenzene	5,300	µg/kg	70,000		700	
GBS1150507	1,3,5-Trimethylbenzene	3,900	µg/kg	70,000		56	J
GBS1360911	1,3,5-Trimethylbenzene	2,900	µg/kg	70,000		600	
GBS1150507RR2	1,3,5-Trimethylbenzene	2,500	µg/kg	70,000		1,400	
GBPS240506RR1	1,3,5-Trimethylbenzene	1,800	µg/kg	70,000		1,500	
GB063RR1	1,3,5-Trimethylbenzene	1,600	µg/kg	70,000		58	
GBS1150507RR1	1,3,5-Trimethylbenzene	980	µg/kg	70,000		56	J
GBR1691416	1,3,5-Trimethylbenzene	520	µg/kg	70,000		32	
GB102	1,3,5-Trimethylbenzene	370	µg/kg	70,000		6.2	J
GBS0980810	1,3,5-Trimethylbenzene	350	µg/kg	70,000		30	
GB063	1,3,5-Trimethylbenzene	320	µg/kg	70,000		5.8	J

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1170507	1,3,5-Trimethylbenzene	300	µg/kg	70,000		29	
GBS1360709	1,3,5-Trimethylbenzene	280	µg/kg	70,000		59	
GBS1450911	1,3,5-Trimethylbenzene	280	µg/kg	70,000		76	
GBPS010609	1,3,5-Trimethylbenzene	220	µg/kg	70,000		59	
GBPS240506	1,3,5-Trimethylbenzene	220	µg/kg	70,000		6	J
GBPS280608	1,3,5-Trimethylbenzene	210	µg/kg	70,000		28	
GBS1370709	1,3,5-Trimethylbenzene	170	µg/kg	70,000		58	
GB102RR1	1,3,5-Trimethylbenzene	160	µg/kg	70,000		6.2	J
GBS1290608	1,3,5-Trimethylbenzene	110	µg/kg	70,000		14	
GBS1430911	1,3,5-Trimethylbenzene	92	µg/kg	70,000		5.8	
GBPS020610	1,3,5-Trimethylbenzene	78	µg/kg	70,000		11	
GBPS010911	1,3,5-Trimethylbenzene	72	µg/kg	70,000		12	
GBS1691416	1,3,5-Trimethylbenzene	68	µg/kg	70,000		7	J
GBR1681113	1,3,5-Trimethylbenzene	63	µg/kg	70,000		13	
GBS1060608	1,3,5-Trimethylbenzene	54	µg/kg	70,000		6.5	
GBS1320507	1,3,5-Trimethylbenzene	42	µg/kg	70,000		6.1	
GB082	1,3,5-Trimethylbenzene	25	µg/kg	70,000		58	J
GBS0980608	1,3,5-Trimethylbenzene	14	µg/kg	70,000		5.6	J
GBS1070608	1,3,5-Trimethylbenzene	12	µg/kg	70,000		6.4	
GB068	1,3,5-Trimethylbenzene	3.6	µg/kg	70,000		6.7	J
GB076	1,3,5-Trimethylbenzene	2.8	µg/kg	70,000		5.8	J
GBS1280709	1,3,5-Trimethylbenzene	2.3	µg/kg	70,000		5.9	J
GBS1370911	1,3,5-Trimethylbenzene	2.1	µg/kg	70,000		6	J
GBS1030406	1,3,5-Trimethylbenzene	1.8	µg/kg	70,000		6.2	J
GBS1390911	1,3,5-Trimethylbenzene	1.7	µg/kg	70,000		6.9	J
GBS1300507	1,3,5-Trimethylbenzene	1.2	µg/kg	70,000		5.9	J
GBR1681113	2-Butanone	23	µg/kg	2.8E+7		52	J
GBS1681214	2-Butanone	9.9	µg/kg	2.8E+7		24	J
GBS1070608	2-Methylnaphthalene	69,000	µg/kg	NA		8,600	J
GBS1450911	2-Methylnaphthalene	24,000	µg/kg	NA		2,500	
GBS1390709RR1	2-Methylnaphthalene	17,000	µg/kg	NA		1,600	J
GBPS240506	2-Methylnaphthalene	15,000	µg/kg	NA		1,600	
GBS1360911RR1RR1	2-Methylnaphthalene	12,000	µg/kg	NA		1,200	
GBS1150507	2-Methylnaphthalene	10,000	µg/kg	NA		1,500	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1390709	2-Methylnaphthalene	10,000	µg/kg	NA		390	J
GBS1360709RR1RR1	2-Methylnaphthalene	8,900	µg/kg	NA		780	J
GBS1430911RR1	2-Methylnaphthalene	8,500	µg/kg	NA		770	J
GBS1430911	2-Methylnaphthalene	7,200	µg/kg	NA		390	J
GBS1360911	2-Methylnaphthalene	6,900	µg/kg	NA		400	E
GBS1691416RR1	2-Methylnaphthalene	6,400	µg/kg	NA		930	J
GB068	2-Methylnaphthalene	6,300	µg/kg	NA		1,800	
GBS1060608	2-Methylnaphthalene	6,200	µg/kg	NA		1,700	
GBS1360709	2-Methylnaphthalene	5,800	µg/kg	NA		390	E
GB076	2-Methylnaphthalene	5,700	µg/kg	NA		780	
GBS1691416	2-Methylnaphthalene	5,700	µg/kg	NA		470	J
GBR1691416	2-Methylnaphthalene	5,300	µg/kg	NA		8,600	J
GBS1330507	2-Methylnaphthalene	5,000	µg/kg	NA		790	
GBS1440709	2-Methylnaphthalene	4,000	µg/kg	NA		390	
GB102	2-Methylnaphthalene	3,100	µg/kg	NA		410	J
GBPS010609	2-Methylnaphthalene	3,100	µg/kg	NA		390	
GBR1681113	2-Methylnaphthalene	3,000	µg/kg	NA		4,400	J
GBS1170507	2-Methylnaphthalene	2,900	µg/kg	NA		380	
GBS1290608	2-Methylnaphthalene	1,900	µg/kg	NA		950	
GBS0390204	2-Methylnaphthalene	1,700	µg/kg	NA		370	
GBPS020610	2-Methylnaphthalene	1,400	µg/kg	NA		380	
GBPS030406	2-Methylnaphthalene	1,400	µg/kg	NA		380	
GB082	2-Methylnaphthalene	1,300	µg/kg	NA		390	
GBS1300507	2-Methylnaphthalene	1,300	µg/kg	NA		390	
GBS1440911	2-Methylnaphthalene	1,300	µg/kg	NA		410	
GBS1450709	2-Methylnaphthalene	1,300	µg/kg	NA		390	
GBPS250507	2-Methylnaphthalene	1,100	µg/kg	NA		370	
GBS1370709	2-Methylnaphthalene	1,100	µg/kg	NA		390	
GBS1000507	2-Methylnaphthalene	730	µg/kg	NA		370	
GBPS010911	2-Methylnaphthalene	610	µg/kg	NA		390	
GBS1280709	2-Methylnaphthalene	610	µg/kg	NA		400	
GBS0980608	2-Methylnaphthalene	590	µg/kg	NA		380	
GB063	2-Methylnaphthalene	470	µg/kg	NA		380	
GBPS280608	2-Methylnaphthalene	310	µg/kg	NA		380	J

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0560507	2-Methylnaphthalene	230	µg/kg	NA		510	J
GBS1390911	2-Methylnaphthalene	180	µg/kg	NA		460	J
GBS1430709	2-Methylnaphthalene	160	µg/kg	NA		420	J
GBS0600507	2-Methylnaphthalene	150	µg/kg	NA		370	J
GBS0990507	2-Methylnaphthalene	150	µg/kg	NA		370	J
GBS1030406	2-Methylnaphthalene	150	µg/kg	NA		410	J
GBS1310608	2-Methylnaphthalene	130	µg/kg	NA		380	J
GBS1681214	2-Methylnaphthalene	130	µg/kg	NA		390	J
GBS1151820	2-Methylnaphthalene	110	µg/kg	NA		370	J
GBR1670709	2-Methylnaphthalene	100	µg/kg	NA		400	J
GBS0650507	2-Methylnaphthalene	78	µg/kg	NA		370	J
GBS0590507	2-Methylnaphthalene	63	µg/kg	NA		360	J
GBS1010507	2-Methylnaphthalene	59	µg/kg	NA		380	J
GBS1150507	4-Chlorotoluene	56	µg/kg	NA		56	J
GBS1691416RR1	Acenaphthene	790	µg/kg	3.8E+7		930	J
GB102	Acenaphthene	460	µg/kg	3.8E+7		410	J
GBS1150507	Acenaphthene	260	µg/kg	3.8E+7		1,500	J
GBS1691416	Acenaphthylene	470	µg/kg	NA		470	J
GBS0400709	Acetone	3,700	µg/kg	6.2E+6		23	J
GBS0400709RR1	Acetone	3,100	µg/kg	6.2E+6		230	
GBS0330204	Acetone	2,000	µg/kg	6.2E+6		21	J
GBPS171314RR1	Acetone	1,600	µg/kg	6.2E+6		43	
GBS0330204RR1	Acetone	1,200	µg/kg	6.2E+6		100	
GBPS280608	Acetone	980	µg/kg	6.2E+6		110	
GBS0440709	Acetone	690	µg/kg	6.2E+6		22	
GBS0340103	Acetone	610	µg/kg	6.2E+6		21	J
GBPS211416	Acetone	450	µg/kg	6.2E+6		23	
GBPS260204	Acetone	440	µg/kg	6.2E+6		21	
GB063RR1	Acetone	360	µg/kg	6.2E+6		230	J
GBS1320507	Acetone	330	µg/kg	6.2E+6		24	J
GBPS210204	Acetone	220	µg/kg	6.2E+6		22	
GBPS050408	Acetone	190	µg/kg	6.2E+6		23	
GBPS121719	Acetone	190	µg/kg	6.2E+6		23	
GBS0980810	Acetone	190	µg/kg	6.2E+6		120	J

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS041416	Acetone	180	µg/kg	6.2E+6		23	
GBPS151416	Acetone	170	µg/kg	6.2E+6		23	
GBPS061618	Acetone	160	µg/kg	6.2E+6		23	
GBPS291416	Acetone	160	µg/kg	6.2E+6		23	
GBS1450911	Acetone	160	µg/kg	6.2E+6		310	J
GBPS131920	Acetone	150	µg/kg	6.2E+6		22	
GB063	Acetone	130	µg/kg	6.2E+6		23	J
GBPS081416	Acetone	130	µg/kg	6.2E+6		22	B
GBPS150204	Acetone	130	µg/kg	6.2E+6		21	
GBR1691416	Acetone	130	µg/kg	6.2E+6		130	J
GBS0980608	Acetone	130	µg/kg	6.2E+6		23	J
GBPS071012	Acetone	110	µg/kg	6.2E+6		23	
GBPS241416	Acetone	100	µg/kg	6.2E+6		23	
GBPS120204	Acetone	99	µg/kg	6.2E+6		22	
GBPS071618	Acetone	97	µg/kg	6.2E+6		23	
GBPS101416	Acetone	85	µg/kg	6.2E+6		23	
GBPS240506	Acetone	80	µg/kg	6.2E+6		24	J
GBS1430709	Acetone	79	µg/kg	6.2E+6		25	J
GBS0370204	Acetone	77	µg/kg	6.2E+6		21	
GBS1681214	Acetone	74	µg/kg	6.2E+6		24	J
GBPS040911	Acetone	73	µg/kg	6.2E+6		22	
GBPS261416	Acetone	73	µg/kg	6.2E+6		22	
GBR1681113	Acetone	69	µg/kg	6.2E+6		52	
GBPS031416	Acetone	65	µg/kg	6.2E+6		23	
GBPS180911	Acetone	55	µg/kg	6.2E+6		27	J
GBPS160204	Acetone	52	µg/kg	6.2E+6		21	
GBS1300507	Acetone	50	µg/kg	6.2E+6		24	J
GBPS282224	Acetone	49	µg/kg	6.2E+6		22	
GBPS051012	Acetone	46	µg/kg	6.2E+6		21	
GBS0390204	Acetone	38	µg/kg	6.2E+6		22	J
GBR1671820	Acetone	36	µg/kg	6.2E+6		24	
GBS1060608	Acetone	35	µg/kg	6.2E+6		26	J
GBS1691416	Acetone	34	µg/kg	6.2E+6		28	J
GBPS01	Acetone	31	µg/kg	6.2E+6		22	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS161416	Acetone	30	µg/kg	6.2E+6		23	
GB044	Acetone	28	µg/kg	6.2E+6		22	
GBPS040406	Acetone	26	µg/kg	6.2E+6		23	
GBPS021719	Acetone	24	µg/kg	6.2E+6		24	
GBPS201416	Acetone	24	µg/kg	6.2E+6		22	
GB102	Acetone	23	µg/kg	6.2E+6		25	J
GBS1440709	Acetone	23	µg/kg	6.2E+6		23	J
GBS1390911	Acetone	22	µg/kg	6.2E+6		28	J
GB068	Acetone	21	µg/kg	6.2E+6		27	J
GBPS172123	Acetone	21	µg/kg	6.2E+6		22	J
GBR1662022	Acetone	19	µg/kg	6.2E+6		24	J
GBPS283032	Acetone	18	µg/kg	6.2E+6		24	J
GBPS182122	Acetone	17	µg/kg	6.2E+6		24	J
GBS1010507	Acetone	17	µg/kg	6.2E+6		23	J
GBPS181416	Acetone	16	µg/kg	6.2E+6		22	J
GBS1171820	Acetone	16	µg/kg	6.2E+6		22	J
GBPS03	Acetone	15	µg/kg	6.2E+6		22	J
GBS0420305	Acetone	15	µg/kg	6.2E+6		22	J
GBPS170204	Acetone	14	µg/kg	6.2E+6		21	J
GB102RR1	Acetone	13	µg/kg	6.2E+6		25	J
GBPS222021	Acetone	13	µg/kg	6.2E+6		22	J
GBR1642022	Acetone	13	µg/kg	6.2E+6		22	J
GBS0350103	Acetone	12	µg/kg	6.2E+6		21	J
GBS0360911	Acetone	12	µg/kg	6.2E+6		21	J
GBS0380709	Acetone	12	µg/kg	6.2E+6		22	J
GBS0981416	Acetone	12	µg/kg	6.2E+6		21	J
GBR1682628	Acetone	11	µg/kg	6.2E+6		22	J
GBS0430709	Acetone	11	µg/kg	6.2E+6		22	J
GBS1070608	Acetone	11	µg/kg	6.2E+6		26	J
GBS1450709	Acetone	11	µg/kg	6.2E+6		24	J
GBR1670709	Acetone	10	µg/kg	6.2E+6		24	J
GBS0840406	Acetone	10	µg/kg	6.2E+6		22	J
GBS1151820	Acetone	9.3	µg/kg	6.2E+6		22	J
GBS1330507	Benzene	420	µg/kg	1,500		740	J

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1310608	Benzene	150	µg/kg	1,500		700	J
GBS1150507	Benzene	50	µg/kg	1,500		56	J
GBPS250507	Benzene	23	µg/kg	1,500		28	J
GB063	Benzene	14	µg/kg	1,500		5.8	J
GBPS240506	Benzene	12	µg/kg	1,500		6	J
GBS1150507RR1	Benzene	10	µg/kg	1,500		56	J
GBS0980810	Benzene	8.9	µg/kg	1,500		30	J
GBPS010609	Benzene	5.3	µg/kg	1,500		59	J
GBS0390204	Benzene	0.87	µg/kg	1,500		5.5	J
GB102	Benzo(A)Anthracene	150	µg/kg	2,900		410	J
GBS0350103	Benzo(A)Anthracene	82	µg/kg	2,900		340	J
GBS0600507	Benzo(A)Anthracene	53	µg/kg	2,900		370	J
GBS0350103	Benzo(A)Pyrene	61	µg/kg	290		340	J
GBS0350103	Benzo(G,H,I)Perylene	340	µg/kg	NA		340	J
GBS0600507	Benzo(G,H,I)Perylene	140	µg/kg	NA		370	J
GBE0210203	DEHP[b]	380	µg/kg	180,000		360	
GBS1570406	DEHP[b]	240	µg/kg	180,000		380	J
GBPS280608	DEHP[b]	92	µg/kg	180,000		380	J
GBPS270204	DEHP[b]	67	µg/kg	180,000		350	J
GBS1150507	Carbon Disulfide	14	µg/kg	720,000		56	J
GBR1691416	Carbon Disulfide	5.5	µg/kg	720,000		32	J
GBPS240506	Carbon Disulfide	1.3	µg/kg	720,000		6	J
GBPS250507	Carbon Tetrachloride	6.3	µg/kg	530		28	J
GBPS283032	Carbon Tetrachloride	1.7	µg/kg	530		5.9	J
GBPS283436	Chloroform	1.1	µg/kg	520		6	J
GBS1691416RR1	Chrysene	280	µg/kg	290,000		930	J
GBS1691416	Chrysene	220	µg/kg	290,000		470	J
GBS0350103	Chrysene	130	µg/kg	290,000		340	J
GBS1330507	Chrysene	130	µg/kg	290,000		790	J
GBS1390709	Chrysene	110	µg/kg	290,000		390	J
GBS1170507	Chrysene	100	µg/kg	290,000		380	J
GBS0390204	Chrysene	85	µg/kg	290,000		370	J
GBS0620507	Chrysene	69	µg/kg	290,000		380	J
GBS1430911	Chrysene	65	µg/kg	290,000		390	J

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1300507	Chrysene	55	µg/kg	290,000		390	J
GBS1360911	Chrysene	55	µg/kg	290,000		400	J
GBS0390204	Dibenzofuran	230	µg/kg	5.1E+7		370	J
GBS1170507	Di-N-Butyl Phthalate	73	µg/kg	8.8E+7		380	J
GBS0390204	Di-N-Butyl Phthalate	71	µg/kg	8.8E+7		370	J
GBR1670709	Di-N-Butyl Phthalate	280	µg/kg	1.0E+7		400	J
GBPS250507RR1	Ethylbenzene	8,100	µg/kg	230,000		14,000	J
GBS1330507	Ethylbenzene	3,900	µg/kg	230,000		740	
GBS1310608	Ethylbenzene	2,400	µg/kg	230,000		700	
GB063RR2	Ethylbenzene	2,100	µg/kg	230,000		1,400	
GBPS250507	Ethylbenzene	1,900	µg/kg	230,000		28	J
GB063RR1	Ethylbenzene	1,100	µg/kg	230,000		58	
GBS1150507	Ethylbenzene	1,100	µg/kg	230,000		56	J
GBPS240506RR1	Ethylbenzene	850	µg/kg	230,000		1,500	J
GBS1360911	Ethylbenzene	340	µg/kg	230,000		600	J
GB063	Ethylbenzene	230	µg/kg	230,000		5.8	J
GBS0980810	Ethylbenzene	190	µg/kg	230,000		30	
GBPS240506	Ethylbenzene	160	µg/kg	230,000		6	J
GBS1150507RR1	Ethylbenzene	160	µg/kg	230,000		56	J
GBR1691416	Ethylbenzene	95	µg/kg	230,000		32	
GBPS280608	Ethylbenzene	72	µg/kg	230,000		28	
GBS1170507	Ethylbenzene	66	µg/kg	230,000		29	
GBS1450911	Ethylbenzene	31	µg/kg	230,000		76	J
GBR1681113	Ethylbenzene	19	µg/kg	230,000		13	
GBS1360709	Ethylbenzene	17	µg/kg	230,000		59	J
GBS1290608	Ethylbenzene	16	µg/kg	230,000		14	
GBS1320507	Ethylbenzene	15	µg/kg	230,000		6.1	
GBPS010609	Ethylbenzene	14	µg/kg	230,000		59	J
GBS1060608	Ethylbenzene	12	µg/kg	230,000		6.5	
GB102	Ethylbenzene	5.8	µg/kg	230,000		6.2	J
GBS1691416	Ethylbenzene	5.7	µg/kg	230,000		7	J
GBPS010911	Ethylbenzene	4.1	µg/kg	230,000		12	J
GBS0980608	Ethylbenzene	3.4	µg/kg	230,000		5.6	J
GB102RR1	Ethylbenzene	3.2	µg/kg	230,000		6.2	J

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1070608	Ethylbenzene	1.9	µg/kg	230,000		6.4	J
GBPS250507	Isopropylbenzene	6,600	µg/kg	520,000		28	J
GBPS250507RR1	Isopropylbenzene	5,500	µg/kg	520,000		14,000	J
GBS1330507	Isopropylbenzene	2,000	µg/kg	520,000		740	
GB063RR2	Isopropylbenzene	1,100	µg/kg	520,000		1,400	J
GBS1310608	Isopropylbenzene	1,100	µg/kg	520,000		700	
GBS1150507	Isopropylbenzene	810	µg/kg	520,000		56	J
GBPS240506RR1	Isopropylbenzene	460	µg/kg	520,000		1,500	J
GB063RR1	Isopropylbenzene	400	µg/kg	520,000		58	
GBS1360911	Isopropylbenzene	300	µg/kg	520,000		600	J
GBS1150507RR1	Isopropylbenzene	130	µg/kg	520,000		56	J
GB063	Isopropylbenzene	98	µg/kg	520,000		5.8	J
GBS0980810	Isopropylbenzene	78	µg/kg	520,000		30	
GBPS240506	Isopropylbenzene	68	µg/kg	520,000		6	J
GBS1170507	Isopropylbenzene	67	µg/kg	520,000		29	
GBR1691416	Isopropylbenzene	61	µg/kg	520,000		32	
GBPS280608	Isopropylbenzene	36	µg/kg	520,000		28	
GBS1360709	Isopropylbenzene	24	µg/kg	520,000		59	J
GBS1450911	Isopropylbenzene	20	µg/kg	520,000		76	J
GB102	Isopropylbenzene	19	µg/kg	520,000		6.2	J
GBS1370709	Isopropylbenzene	18	µg/kg	520,000		58	J
GBPS010609	Isopropylbenzene	15	µg/kg	520,000		59	J
GBR1681113	Isopropylbenzene	12	µg/kg	520,000		13	J
GBS1290608	Isopropylbenzene	12	µg/kg	520,000		14	J
GBS1060608	Isopropylbenzene	8.9	µg/kg	520,000		6.5	
GBS1320507	Isopropylbenzene	7.6	µg/kg	520,000		6.1	
GB102RR1	Isopropylbenzene	6.9	µg/kg	520,000		6.2	J
GBS1691416	Isopropylbenzene	6.7	µg/kg	520,000		7	J
GBPS010911	Isopropylbenzene	5.1	µg/kg	520,000		12	J
GBS0980608	Isopropylbenzene	2.4	µg/kg	520,000		5.6	J
GBS1430911	Isopropylbenzene	1.9	µg/kg	520,000		5.8	J
GBS1370911	Isopropylbenzene	1	µg/kg	520,000		6	J
GBPS250507RR1	M+P-Xylene[a]	65,000	µg/kg	210,000		14,000	
GBS1330507	M+P-Xylene[a]	27,000	µg/kg	210,000		740	

Table E.1-2
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS250507	M+P-Xylene[a]	22,000	µg/kg	210,000		28	J
GB063RR2	M+P-Xylene[a]	17,000	µg/kg	210,000		1,400	
GBS1310608	M+P-Xylene[a]	17,000	µg/kg	210,000		700	
GBS1150507	M+P-Xylene[a]	9,800	µg/kg	210,000		56	J
GB063RR1	M+P-Xylene[a]	7,000	µg/kg	210,000		58	J
GBS1150507RR2	M+P-Xylene[a]	3,800	µg/kg	210,000		1,400	
GBPS240506RR1	M+P-Xylene[a]	3,500	µg/kg	210,000		1,500	
GBS1150507RR1	M+P-Xylene[a]	2,000	µg/kg	210,000		56	J
GB063	M+P-Xylene[a]	1,300	µg/kg	210,000		5.8	J
GBS0980810	M+P-Xylene[a]	1,200	µg/kg	210,000		30	
GBS1360911	M+P-Xylene[a]	1,100	µg/kg	210,000		600	
GBPS280608	M+P-Xylene[a]	710	µg/kg	210,000		28	
GBPS240506	M+P-Xylene[a]	470	µg/kg	210,000		6	J
GBS1170507	M+P-Xylene[a]	400	µg/kg	210,000		29	
GBS1290608	M+P-Xylene[a]	170	µg/kg	210,000		14	
GBPS010609	M+P-Xylene[a]	140	µg/kg	210,000		59	
GBR1691416	M+P-Xylene[a]	140	µg/kg	210,000		32	
GBS1320507	M+P-Xylene[a]	130	µg/kg	210,000		6.1	
GBS1450911	M+P-Xylene[a]	87	µg/kg	210,000		76	
GBS1060608	M+P-Xylene[a]	82	µg/kg	210,000		6.5	
GBR1681113	M+P-Xylene[a]	60	µg/kg	210,000		13	
GBPS010911	M+P-Xylene[a]	44	µg/kg	210,000		12	
GB102	M+P-Xylene[a]	26	µg/kg	210,000		6.2	J
GBS0980608	M+P-Xylene[a]	23	µg/kg	210,000		5.6	J
GBS1070608	M+P-Xylene[a]	23	µg/kg	210,000		6.4	
GB102RR1	M+P-Xylene[a]	16	µg/kg	210,000		6.2	J
GBS1691416	M+P-Xylene[a]	16	µg/kg	210,000		7	J
GB068	M+P-Xylene[a]	8.2	µg/kg	210,000		6.7	
GBS1030406	M+P-Xylene[a]	7.4	µg/kg	210,000		6.2	
GBS1430911	M+P-Xylene[a]	5.9	µg/kg	210,000		5.8	
GBS1300507	M+P-Xylene[a]	4.3	µg/kg	210,000		5.9	J
GBS1280709	M+P-Xylene[a]	3.1	µg/kg	210,000		5.9	J
GB076	M+P-Xylene[a]	2	µg/kg	210,000		5.8	J
GBS0982224	M+P-Xylene[a]	1.5	µg/kg	210,000		5.5	J

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS250507RR1	O-Xylene[a]	20,000	µg/kg	210,000		14,000	
GBPS250507	O-Xylene[a]	16,000	µg/kg	210,000		28	J
GBS1330507	O-Xylene[a]	7,700	µg/kg	210,000		740	
GB063RR2	O-Xylene[a]	5,000	µg/kg	210,000		1,400	
GBS1310608	O-Xylene[a]	4,900	µg/kg	210,000		700	
GBS1150507	O-Xylene[a]	3,600	µg/kg	210,000		56	J
GB063RR1	O-Xylene[a]	2,300	µg/kg	210,000		58	
GBPS240506RR1	O-Xylene[a]	1,800	µg/kg	210,000		1,500	
GBS1150507RR2	O-Xylene[a]	1,400	µg/kg	210,000		1,400	J
GBS1150507RR1	O-Xylene[a]	800	µg/kg	210,000		56	J
GB063	O-Xylene[a]	440	µg/kg	210,000		5.8	J
GBS0980810	O-Xylene[a]	370	µg/kg	210,000		30	
GBPS240506	O-Xylene[a]	340	µg/kg	210,000		6	J
GBPS280608	O-Xylene[a]	210	µg/kg	210,000		28	
GBS1360911	O-Xylene[a]	140	µg/kg	210,000		600	J
GBS1170507	O-Xylene[a]	120	µg/kg	210,000		29	
GBS1450911	O-Xylene[a]	66	µg/kg	210,000		76	J
GBS1290608	O-Xylene[a]	65	µg/kg	210,000		14	
GBPS010609	O-Xylene[a]	60	µg/kg	210,000		59	
GBS1060608	O-Xylene[a]	53	µg/kg	210,000		6.5	
GBS1320507	O-Xylene[a]	42	µg/kg	210,000		6.1	
GBR1681113	O-Xylene[a]	18	µg/kg	210,000		13	
GBPS010911	O-Xylene[a]	16	µg/kg	210,000		12	
GBS1430911	O-Xylene[a]	13	µg/kg	210,000		5.8	
GBR1691416	O-Xylene[a]	9.5	µg/kg	210,000		32	J
GBS0980608	O-Xylene[a]	8.5	µg/kg	210,000		5.6	J
GBS1070608	O-Xylene[a]	7.7	µg/kg	210,000		6.4	
GB102	O-Xylene[a]	5.5	µg/kg	210,000		6.2	J
GBS1030406	O-Xylene[a]	3.8	µg/kg	210,000		6.2	J
GB068	O-Xylene[a]	3.4	µg/kg	210,000		6.7	J
GB102RR1	O-Xylene[a]	3.4	µg/kg	210,000		6.2	J
GBS1691416	O-Xylene[a]	2.7	µg/kg	210,000		7	J
GBS1300507	O-Xylene[a]	1.6	µg/kg	210,000		5.9	J
GBS1280709	O-Xylene[a]	1	µg/kg	210,000		5.9	J

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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GB076	O-Xylene[a]	0.93	µg/kg	210,000		5.8	J
GBPS071618	Methylene Chloride	110	µg/kg	21,000		5.6	B
GBPS080204	Methylene Chloride	88	µg/kg	21,000		5.2	B
GBPS121719	Methylene Chloride	70	µg/kg	21,000		5.8	B
GBPS111416	Methylene Chloride	66	µg/kg	21,000		5.7	B
GBPS241416	Methylene Chloride	62	µg/kg	21,000		5.9	J
GB102	Methylene Chloride	59	µg/kg	21,000		6.2	J
GBPS101416	Methylene Chloride	54	µg/kg	21,000		5.7	B
GBS1150507RR1	Methylene Chloride	50	µg/kg	21,000		56	J
GBPS251012	Methylene Chloride	44	µg/kg	21,000		5.8	J
GBS1150507	Methylene Chloride	40	µg/kg	21,000		56	J
GBPS280608	Methylene Chloride	31	µg/kg	21,000		28	J
GBS1620608	Methylene Chloride	25	µg/kg	21,000		5.3	
GBS1362022	Methylene Chloride	22	µg/kg	21,000		5.7	
GBS0741416	Methylene Chloride	16	µg/kg	21,000		5.8	
GBS0601618	Methylene Chloride	15	µg/kg	21,000		6.1	
GBS1370911	Methylene Chloride	15	µg/kg	21,000		6	
GBS0840406	Methylene Chloride	13	µg/kg	21,000		5.6	
GBS0841113	Methylene Chloride	13	µg/kg	21,000		5.7	
GBS0820608	Methylene Chloride	12	µg/kg	21,000		5.4	
GBS0730204	Methylene Chloride	11	µg/kg	21,000		5.3	
GBS0740204	Methylene Chloride	10	µg/kg	21,000		5.6	
GBS0871012	Methylene Chloride	10	µg/kg	21,000		5.3	
GBS0840103	Methylene Chloride	9.2	µg/kg	21,000		5.2	
GBPS180911	Methylene Chloride	2.6	µg/kg	21,000		6.8	J
GBS1070608	Naphthalene	33,000	µg/kg	190,000		8,600	J
GBPS250507RR1	Naphthalene	32,000	µg/kg	190,000		14,000	
GBS1330507	Naphthalene	15,000	µg/kg	190,000		740	
GB063RR2	Naphthalene	12,000	µg/kg	190,000		1,400	
GBS1310608	Naphthalene	10,000	µg/kg	190,000		700	
GBS1360911	Naphthalene	8,700	µg/kg	190,000		600	J
GBS1150507	Naphthalene	7,200	µg/kg	190,000		56	J
GBS1450911	Naphthalene	7,000	µg/kg	190,000		2,500	
GBPS240506	Naphthalene	6,600	µg/kg	190,000		1,600	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1390709RR1	Naphthalene	5,700	µg/kg	190,000		1,600	J
GBS1150507	Naphthalene	4,500	µg/kg	190,000		1,500	
GBS1390709	Naphthalene	4,500	µg/kg	190,000		390	J
GBS1150507RR2	Naphthalene	4,300	µg/kg	190,000		1,400	
GBS1360911RR1RR1	Naphthalene	4,300	µg/kg	190,000		1,200	
GBPS240506RR1	Naphthalene	3,400	µg/kg	190,000		1,500	
GBPS250507	Naphthalene	3,300	µg/kg	190,000		28	J
GBS1360911	Naphthalene	3,100	µg/kg	190,000		400	
GBS1430911	Naphthalene	2,800	µg/kg	190,000		390	J
GBS1430911RR1	Naphthalene	2,800	µg/kg	190,000		770	J
GBS1060608	Naphthalene	2,700	µg/kg	190,000		1,700	
GBS1330507	Naphthalene	2,700	µg/kg	190,000		790	
GB068	Naphthalene	2,500	µg/kg	190,000		1,800	
GB063RR1	Naphthalene	2,300	µg/kg	190,000		58	
GBS1360709RR1RR1	Naphthalene	2,200	µg/kg	190,000		780	J
GB076	Naphthalene	2,000	µg/kg	190,000		780	
GBS1360709	Naphthalene	1,700	µg/kg	190,000		390	
GBS1150507RR1	Naphthalene	1,400	µg/kg	190,000		56	J
GBPS010609	Naphthalene	1,200	µg/kg	190,000		59	
GBS1170507	Naphthalene	1,200	µg/kg	190,000		380	
GBS1450911	Naphthalene	1,200	µg/kg	190,000		76	
GBPS010609	Naphthalene	1,000	µg/kg	190,000		390	
GBS1440709	Naphthalene	1,000	µg/kg	190,000		390	
GBS0390204	Naphthalene	770	µg/kg	190,000		370	
GBS1290608	Naphthalene	750	µg/kg	190,000		950	J
GBPS240506	Naphthalene	730	µg/kg	190,000		6	J
GBS1691416	Naphthalene	700	µg/kg	190,000		470	J
GB063	Naphthalene	620	µg/kg	190,000		5.8	J
GBS1691416RR1	Naphthalene	580	µg/kg	190,000		930	J
GBS1370709	Naphthalene	540	µg/kg	190,000		58	J
GBS1360709	Naphthalene	530	µg/kg	190,000		59	J
GBS1170507	Naphthalene	490	µg/kg	190,000		29	
GBS1440911	Naphthalene	460	µg/kg	190,000		410	
GBS1300507	Naphthalene	450	µg/kg	190,000		390	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS030406	Naphthalene	440	µg/kg	190,000		380	
GBPS250507	Naphthalene	440	µg/kg	190,000		370	
GBS0980810	Naphthalene	420	µg/kg	190,000		30	
GBS1450709	Naphthalene	400	µg/kg	190,000		390	
GBS1370709	Naphthalene	390	µg/kg	190,000		390	
GB082	Naphthalene	370	µg/kg	190,000		390	J
GB102	Naphthalene	350	µg/kg	190,000		410	J
GBS1000507	Naphthalene	310	µg/kg	190,000		370	J
GBPS020610	Naphthalene	280	µg/kg	190,000		11	
GBPS020610	Naphthalene	280	µg/kg	190,000		380	J
GBPS010911	Naphthalene	260	µg/kg	190,000		12	
GBS1280709	Naphthalene	260	µg/kg	190,000		400	J
GBS0980608	Naphthalene	250	µg/kg	190,000		380	J
GBS1290608	Naphthalene	220	µg/kg	190,000		14	
GBR1691416	Naphthalene	200	µg/kg	190,000		32	
GBPS010911	Naphthalene	190	µg/kg	190,000		390	J
GB063	Naphthalene	180	µg/kg	190,000		380	J
GB082	Naphthalene	160	µg/kg	190,000		58	J
GBPS280608	Naphthalene	130	µg/kg	190,000		28	
GBPS280608	Naphthalene	130	µg/kg	190,000		380	J
GBS1390911	Naphthalene	120	µg/kg	190,000		460	J
GBR1681113	Naphthalene	97	µg/kg	190,000		13	
GBS1320507	Naphthalene	91	µg/kg	190,000		6.1	
GBS1430709	Naphthalene	74	µg/kg	190,000		420	J
GBS0990507	Naphthalene	71	µg/kg	190,000		370	J
GBR1670709	Naphthalene	68	µg/kg	190,000		400	J
GBS1151820	Naphthalene	63	µg/kg	190,000		370	J
GBS1430911	Naphthalene	58	µg/kg	190,000		5.8	
GBS1390911	Naphthalene	36	µg/kg	190,000		6.9	
GB102	Naphthalene	32	µg/kg	190,000		6.2	J
GBS1060608	Naphthalene	29	µg/kg	190,000		6.5	
GBS1691416	Naphthalene	25	µg/kg	190,000		7	J
GB076	Naphthalene	20	µg/kg	190,000		5.8	
GBS1070608	Naphthalene	13	µg/kg	190,000		6.4	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GB102RR1	Naphthalene	12	µg/kg	190,000		6.2	J
GBPS281012	Naphthalene	11	µg/kg	190,000		5.7	
GBS0980608	Naphthalene	5.7	µg/kg	190,000		5.6	J
GBS1370911	Naphthalene	5.3	µg/kg	190,000		6	J
GBPS030406	Naphthalene	4.4	µg/kg	190,000		5.8	J
GBS1280709	Naphthalene	4.2	µg/kg	190,000		5.9	J
GBS0981416	Naphthalene	2.5	µg/kg	190,000		5.3	J
GBS0390204	Naphthalene	2.3	µg/kg	190,000		5.5	J
GBPS250507	N-Butylbenzene	8,100	µg/kg	240,000		28	J
GBPS250507RR1	N-Butylbenzene	6,000	µg/kg	240,000		14,000	J
GBS1330507	N-Butylbenzene	2,000	µg/kg	240,000		740	
GB063RR2	N-Butylbenzene	1,200	µg/kg	240,000		1,400	J
GBS1360911	N-Butylbenzene	1,100	µg/kg	240,000		600	
GBS1310608	N-Butylbenzene	1,000	µg/kg	240,000		700	
GBPS240506RR1	N-Butylbenzene	610	µg/kg	240,000		1,500	J
GBS1150507	N-Butylbenzene	550	µg/kg	240,000		56	J
GBS1150507RR2	N-Butylbenzene	470	µg/kg	240,000		1,400	J
GBS1150507RR1	N-Butylbenzene	230	µg/kg	240,000		56	J
GB063RR1	N-Butylbenzene	210	µg/kg	240,000		58	
GBS1170507	N-Butylbenzene	63	µg/kg	240,000		29	
GBS1450911	N-Butylbenzene	61	µg/kg	240,000		76	J
GBR1691416	N-Butylbenzene	58	µg/kg	240,000		32	
GBS1370709	N-Butylbenzene	58	µg/kg	240,000		58	J
GBPS010609	N-Butylbenzene	57	µg/kg	240,000		59	J
GBS0980810	N-Butylbenzene	53	µg/kg	240,000		30	
GB063	N-Butylbenzene	43	µg/kg	240,000		5.8	J
GBPS280608	N-Butylbenzene	37	µg/kg	240,000		28	
GBS1360709	N-Butylbenzene	36	µg/kg	240,000		59	J
GBPS240506	N-Butylbenzene	35	µg/kg	240,000		6	J
GBS1290608	N-Butylbenzene	17	µg/kg	240,000		14	
GBPS010911	N-Butylbenzene	16	µg/kg	240,000		12	J
GBR1681113	N-Butylbenzene	15	µg/kg	240,000		13	
GB102	N-Butylbenzene	8	µg/kg	240,000		6.2	J
GBS1320507	N-Butylbenzene	6.4	µg/kg	240,000		6.1	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS1060608	N-Butylbenzene	5.8	µg/kg	240,000		6.5	J
GBS1691416	N-Butylbenzene	3.5	µg/kg	240,000		7	J
GB102RR1	N-Butylbenzene	3.4	µg/kg	240,000		6.2	J
GBS1430911	N-Butylbenzene	3	µg/kg	240,000		5.8	J
GBS1070608	N-Butylbenzene	1.8	µg/kg	240,000		6.4	J
GBS1370911	N-Butylbenzene	1.7	µg/kg	240,000		6	J
GBS0980608	N-Butylbenzene	1.3	µg/kg	240,000		5.6	J
GBR1691416	N-Nitrosodiphenylamine	2,300	µg/kg	500,000		8,600	J
GBR1681113	N-Nitrosodiphenylamine	1,100	µg/kg	500,000		4,400	J
GBPS250507RR1	N-Propylbenzene	10,000	µg/kg	240,000		14,000	J
GBPS250507	N-Propylbenzene	6,700	µg/kg	240,000		28	J
GBS1330507	N-Propylbenzene	3,400	µg/kg	240,000		740	
GB063RR2	N-Propylbenzene	1,900	µg/kg	240,000		1,400	
GBS1310608	N-Propylbenzene	1,700	µg/kg	240,000		700	
GBS1150507	N-Propylbenzene	960	µg/kg	240,000		56	J
GBPS240506RR1	N-Propylbenzene	880	µg/kg	240,000		1,500	J
GBS1360911	N-Propylbenzene	690	µg/kg	240,000		600	
GB063RR1	N-Propylbenzene	500	µg/kg	240,000		58	
GBS1150507RR2	N-Propylbenzene	420	µg/kg	240,000		1,400	J
GBS1150507RR1	N-Propylbenzene	170	µg/kg	240,000		56	J
GB063	N-Propylbenzene	120	µg/kg	240,000		5.8	J
GBPS240506	N-Propylbenzene	120	µg/kg	240,000		6	J
GBR1691416	N-Propylbenzene	110	µg/kg	240,000		32	
GBS0980810	N-Propylbenzene	110	µg/kg	240,000		30	
GBS1170507	N-Propylbenzene	88	µg/kg	240,000		29	
GBPS280608	N-Propylbenzene	75	µg/kg	240,000		28	
GBS1360709	N-Propylbenzene	62	µg/kg	240,000		59	
GBS1450911	N-Propylbenzene	46	µg/kg	240,000		76	J
GBS1370709	N-Propylbenzene	36	µg/kg	240,000		58	J
GBPS010609	N-Propylbenzene	35	µg/kg	240,000		59	J
GBS1290608	N-Propylbenzene	25	µg/kg	240,000		14	
GB102	N-Propylbenzene	20	µg/kg	240,000		6.2	J
GBR1681113	N-Propylbenzene	20	µg/kg	240,000		13	
GBS1320507	N-Propylbenzene	14	µg/kg	240,000		6.1	

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Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS010911	N-Propylbenzene	13	µg/kg	240,000		12	
GBS1060608	N-Propylbenzene	13	µg/kg	240,000		6.5	
GBS1691416	N-Propylbenzene	10	µg/kg	240,000		7	J
GB102RR1	N-Propylbenzene	7.6	µg/kg	240,000		6.2	J
GBPS020610	N-Propylbenzene	3.6	µg/kg	240,000		11	J
GBS1070608	N-Propylbenzene	2.6	µg/kg	240,000		6.4	J
GBS1430911	N-Propylbenzene	2.1	µg/kg	240,000		5.8	J
GBS0980608	N-Propylbenzene	2	µg/kg	240,000		5.6	J
GBS1070608	Phenanthrene	11,000	µg/kg	NA		8,600	J
GBS1691416RR1	Phenanthrene	6,700	µg/kg	NA		930	J
GBS1691416	Phenanthrene	5,700	µg/kg	NA		470	J
GBR1691416	Phenanthrene	4,200	µg/kg	NA		8,600	J
GB102	Phenanthrene	3,800	µg/kg	NA		410	J
GBS1450911	Phenanthrene	3,100	µg/kg	NA		2,500	
GBS1390709RR1	Phenanthrene	2,100	µg/kg	NA		1,600	J
GBS1060608	Phenanthrene	1,900	µg/kg	NA		1,700	
GBS1390709	Phenanthrene	1,900	µg/kg	NA		390	J
GB068	Phenanthrene	1,800	µg/kg	NA		1,800	J
GBS1150507	Phenanthrene	1,500	µg/kg	NA		1,500	J
GBS1360911RR1RR1	Phenanthrene	1,500	µg/kg	NA		1,200	
GBPS240506	Phenanthrene	1,300	µg/kg	NA		1,600	J
GB076	Phenanthrene	1,200	µg/kg	NA		780	
GBR1681113	Phenanthrene	1,200	µg/kg	NA		4,400	J
GBS1360709RR1RR1	Phenanthrene	1,100	µg/kg	NA		780	J
GBS1360911	Phenanthrene	1,100	µg/kg	NA		400	
GBS1440709	Phenanthrene	1,100	µg/kg	NA		390	
GBS1430911RR1	Phenanthrene	980	µg/kg	NA		770	J
GBS1430911	Phenanthrene	940	µg/kg	NA		390	J
GBS1360709	Phenanthrene	840	µg/kg	NA		390	
GBS1330507	Phenanthrene	820	µg/kg	NA		790	
GBS1170507	Phenanthrene	690	µg/kg	NA		380	
GBPS010609	Phenanthrene	660	µg/kg	NA		390	
GBPS030406	Phenanthrene	490	µg/kg	NA		380	
GB082	Phenanthrene	470	µg/kg	NA		390	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBS0390204	Phenanthrene	410	µg/kg	NA		370	
GBS1370709	Phenanthrene	340	µg/kg	NA		390	J
GBS1290608	Phenanthrene	330	µg/kg	NA		950	J
GBS1370911	Phenanthrene	310	µg/kg	NA		400	J
GBS1681214	Phenanthrene	300	µg/kg	NA		390	J
GBS1300507	Phenanthrene	240	µg/kg	NA		390	J
GBS1450709	Phenanthrene	220	µg/kg	NA		390	J
GBPS250507	Phenanthrene	210	µg/kg	NA		370	J
GBPS020610	Phenanthrene	200	µg/kg	NA		380	J
GBS1440911	Phenanthrene	180	µg/kg	NA		410	J
GBS1000507	Phenanthrene	170	µg/kg	NA		370	J
GBS0600507	Phenanthrene	130	µg/kg	NA		370	J
GBS0560507	Phenanthrene	120	µg/kg	NA		510	J
GBS0980608	Phenanthrene	120	µg/kg	NA		380	J
GB063	Phenanthrene	100	µg/kg	NA		380	J
GBS1280709	Phenanthrene	100	µg/kg	NA		400	J
GBPS280608	Phenanthrene	78	µg/kg	NA		380	J
GBS0620507	Phenanthrene	73	µg/kg	NA		380	J
GBR1670709	Phenanthrene	68	µg/kg	NA		400	J
GBS0990507	Phenanthrene	66	µg/kg	NA		370	J
GBS1430709	Phenanthrene	66	µg/kg	NA		420	J
GBS1310608	Phenanthrene	53	µg/kg	NA		380	J
GBPS250507	P-Isopropyltoluene	8,500	µg/kg	NA		28	J
GBPS250507RR1	P-Isopropyltoluene	5,000	µg/kg	NA		14,000	J
GBS1330507	P-Isopropyltoluene	1,800	µg/kg	NA		740	
GBS1360911	P-Isopropyltoluene	1,200	µg/kg	NA		600	
GB063RR2	P-Isopropyltoluene	1,000	µg/kg	NA		1,400	J
GBS1310608	P-Isopropyltoluene	870	µg/kg	NA		700	
GBS1150507	P-Isopropyltoluene	650	µg/kg	NA		56	J
GBS1150507RR2	P-Isopropyltoluene	540	µg/kg	NA		1,400	J
GBPS240506RR1	P-Isopropyltoluene	420	µg/kg	NA		1,500	J
GBS1150507RR1	P-Isopropyltoluene	220	µg/kg	NA		56	J
GB063RR1	P-Isopropyltoluene	210	µg/kg	NA		58	
GBPS010609	P-Isopropyltoluene	160	µg/kg	NA		59	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBR1691416	P-Isopropyltoluene	100	µg/kg	NA		32	
GBS1360709	P-Isopropyltoluene	100	µg/kg	NA		59	
GBS1450911	P-Isopropyltoluene	86	µg/kg	NA		76	
GBS1370709	P-Isopropyltoluene	81	µg/kg	NA		58	
GBS1170507	P-Isopropyltoluene	64	µg/kg	NA		29	
GBS0980810	P-Isopropyltoluene	53	µg/kg	NA		30	
GB063	P-Isopropyltoluene	41	µg/kg	NA		5.8	J
GB102	P-Isopropyltoluene	37	µg/kg	NA		6.2	J
GBPS020610	P-Isopropyltoluene	34	µg/kg	NA		11	
GBPS240506	P-Isopropyltoluene	32	µg/kg	NA		6	J
GBPS010911	P-Isopropyltoluene	31	µg/kg	NA		12	
GBPS280608	P-Isopropyltoluene	29	µg/kg	NA		28	
GB082	P-Isopropyltoluene	28	µg/kg	NA		58	J
GBR1681113	P-Isopropyltoluene	24	µg/kg	NA		13	
GBS1430911	P-Isopropyltoluene	21	µg/kg	NA		5.8	
GB102RR1	P-Isopropyltoluene	15	µg/kg	NA		6.2	J
GBS1290608	P-Isopropyltoluene	15	µg/kg	NA		14	
GBS1691416	P-Isopropyltoluene	9.2	µg/kg	NA		7	J
GBS1060608	P-Isopropyltoluene	6.2	µg/kg	NA		6.5	J
GBS1320507	P-Isopropyltoluene	5.4	µg/kg	NA		6.1	J
GBS0980608	P-Isopropyltoluene	1.9	µg/kg	NA		5.6	J
GBS1610204	P-Isopropyltoluene	1.9	µg/kg	NA		5.4	J
GBS1070608	P-Isopropyltoluene	1.6	µg/kg	NA		6.4	J
GB076	Pyrene	210	µg/kg	5.4E+7		780	J
GBS0600507	Pyrene	210	µg/kg	5.4E+7		370	J
GBS0350103	Pyrene	130	µg/kg	5.4E+7		340	J
GBPS250507RR1	Sec-Butylbenzene	5,800	µg/kg	220,000		14,000	J
GBPS250507	Sec-Butylbenzene	4,800	µg/kg	220,000		28	J
GBS1330507	Sec-Butylbenzene	1,600	µg/kg	220,000		740	
GB063RR2	Sec-Butylbenzene	900	µg/kg	220,000		1,400	J
GBS1310608	Sec-Butylbenzene	830	µg/kg	220,000		700	
GBS1360911	Sec-Butylbenzene	630	µg/kg	220,000		600	
GBS1150507	Sec-Butylbenzene	500	µg/kg	220,000		56	J
GBS1150507RR2	Sec-Butylbenzene	360	µg/kg	220,000		1,400	J

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GB063RR1	Sec-Butylbenzene	180	µg/kg	220,000		58	
GBS1150507RR1	Sec-Butylbenzene	170	µg/kg	220,000		56	J
GBR1691416	Sec-Butylbenzene	79	µg/kg	220,000		32	
GBS1170507	Sec-Butylbenzene	57	µg/kg	220,000		29	
GBS1360709	Sec-Butylbenzene	52	µg/kg	220,000		59	J
GBS1370709	Sec-Butylbenzene	47	µg/kg	220,000		58	J
GBS0980810	Sec-Butylbenzene	46	µg/kg	220,000		30	
GBPS010609	Sec-Butylbenzene	39	µg/kg	220,000		59	J
GB063	Sec-Butylbenzene	37	µg/kg	220,000		5.8	J
GBPS240506	Sec-Butylbenzene	36	µg/kg	220,000		6	J
GBS1450911	Sec-Butylbenzene	29	µg/kg	220,000		76	J
GB082	Sec-Butylbenzene	24	µg/kg	220,000		58	J
GB102	Sec-Butylbenzene	18	µg/kg	220,000		6.2	J
GBPS010911	Sec-Butylbenzene	13	µg/kg	220,000		12	
GBS1290608	Sec-Butylbenzene	12	µg/kg	220,000		14	J
GBR1681113	Sec-Butylbenzene	11	µg/kg	220,000		13	J
GBS1691416	Sec-Butylbenzene	7.9	µg/kg	220,000		7	J
GBPS020610	Sec-Butylbenzene	6.8	µg/kg	220,000		11	J
GB102RR1	Sec-Butylbenzene	6.6	µg/kg	220,000		6.2	J
GBS1060608	Sec-Butylbenzene	5.6	µg/kg	220,000		6.5	J
GBS1320507	Sec-Butylbenzene	5.4	µg/kg	220,000		6.1	J
GBS1370911	Sec-Butylbenzene	5.4	µg/kg	220,000		6	J
GBS1430911	Sec-Butylbenzene	5.1	µg/kg	220,000		5.8	J
GBS0980608	Sec-Butylbenzene	1.8	µg/kg	220,000		5.6	J
GB102	Styrene	6.2	µg/kg	1.7E+6		6.2	J
GBS1610204	Styrene	1.3	µg/kg	1.7E+6		5.4	J
GBR1691416	Tert-Butylbenzene	6.7	µg/kg	390,000		32	J
GB102	Tert-Butylbenzene	3.7	µg/kg	390,000		6.2	J
GBR1681113	Tert-Butylbenzene	2.7	µg/kg	390,000		13	J
GBS1430911	Tert-Butylbenzene	2.2	µg/kg	390,000		5.8	J
GB102RR1	Tert-Butylbenzene	1.4	µg/kg	390,000		6.2	J
GBS1330507	Toluene	11,000	µg/kg	520,000		740	
GBPS250507RR1	Toluene	7,300	µg/kg	520,000		14,000	J
GBS1310608	Toluene	7,100	µg/kg	520,000		700	

Table E.1-2
Results of Chemical Analysis of Soil Samples
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Sample No.	Parameter	Result	Units	PAL	Flag	Detect Limit	Qualifier
GBPS250507	Toluene	2,400	µg/kg	520,000		28	J
GB063RR2	Toluene	1,800	µg/kg	520,000		1,400	
GB063RR1	Toluene	1,600	µg/kg	520,000		58	
GB063	Toluene	670	µg/kg	520,000		5.8	J
GBS0980810	Toluene	390	µg/kg	520,000		30	
GBPS280608	Toluene	150	µg/kg	520,000		28	
GBS1150507	Toluene	110	µg/kg	520,000		56	J
GBPS240506	Toluene	55	µg/kg	520,000		6	J
GBS1150507RR1	Toluene	18	µg/kg	520,000		56	J
GBS1060608	Toluene	6.8	µg/kg	520,000		6.5	
GBS0980608	Toluene	6.2	µg/kg	520,000		5.6	J
GBS1290608	Toluene	4.6	µg/kg	520,000		14	J
GBS1030406	Toluene	4.2	µg/kg	520,000		6.2	J
GBS1320507	Toluene	4	µg/kg	520,000		6.1	J
GBS0350103	Toluene	3.6	µg/kg	520,000		5.2	J
GBE0210203	Toluene	3	µg/kg	520,000		5.3	J
GBS1300507	Toluene	2.6	µg/kg	520,000		5.9	J
GBS0400709	Toluene	2.4	µg/kg	520,000		5.7	J
GBS0390204	Toluene	2.2	µg/kg	520,000		5.5	J
GBS0440709	Toluene	1.8	µg/kg	520,000		5.4	J
GBS0420305	Toluene	1.6	µg/kg	520,000		5.5	J
GBS0450608	Toluene	1.6	µg/kg	520,000		5.6	J
GBS0330204	Toluene	1.4	µg/kg	520,000		5.2	J

DUP - Appearing after a sample number indicates the sample was analyzed by the laboratory as a laboratory duplicate
RR - Appearing after a sample number indicates the laboratory reran the analysis on the sample
mg/kg = Milligrams per kilogram
µg/kg = Micrograms per kilogram

J = Estimated value
B = For an organic constituent indicates the analyte was found in both sample and associated blank
B = For an inorganic constituent indicates the value reported is less than the IDL, but greater than or equal to the CRDL
E = For an organic constituent indicates the value reported is an estimate and the result is outside the linear range of the instrument
E = For an inorganic constituent indicates the value reported is an estimate due to interference
PAL = Preliminary Action Levels

Note: This table was sorted by analysis method, parameter, and then the result (high to low).

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GBP01	GBPS010609	2,100	12	J	3.1	3	
	GBPS010911	270	6		1.6	1	
	GBPS011214	5.9	6	U	0.59	1	U
	GBPS011921	27	6		0.57	1	U
GBP02	GBPS020610	300	6		0.041	1	J
	GBPS021719	5.9	6	U	0.59	1	U
GBP03	GBPS030406	720	6	J	0.58	1	U
	GBPS030911	5.6	6	U	0.56	1	U
	GBPS031416	5.6	6	U	0.56	1	U
GBP04	GBPS040406	5.7	6	U	0.57	1	U
	GBPS040911	5.5	6	U	0.55	1	U
	GBPS041416	5.6	6	U	0.56	1	UJ
GBP05	GBPS050408	5.8	6	U	0.58	1	U
	GBPS051012	5.3	5	U	0.53	1	U
	GBPS051820	5.5	6	U	0.55	1	U
	GBPS01 (Dup of above)	5.5	6	U	0.55	1	U
GBP06	GBPS060608	8.2	5		0.52	1	U
	GBPS061012	6.4	5	U	0.53	1	U
	GBPS061618	6.3	6	U	0.58	1	U
GBP07	GBPS070608	5.7	6	U	0.57	1	U
	GBPS071012	7.6	6	U	0.57	1	U
	GBPS071618	5.6	6	U	0.56	1	U
GBP08	GBPS080204	5.2	5	U	0.52	1	U
	GBPS081416	5.5	6	U	0.55	1	U
GBP09	GBPS090204	5.4	5	U	0.54	1	U
	GBPS091416	5.3	5	U	0.53	1	U
GBP10	GBPS100204	5.6	6	U	0.56	1	U
	GBPS101416	5.7	6	U	0.57	1	U
GBP11	GBPS110204	5.5	6	U	0.55	1	U
	GBPS111416	5.7	6	U	0.57	1	U
GBP12	GBPS120204	5.5	6	U	0.55	1	U
	GBPS120608	6.1	5	U	0.54	1	U
	GBPS121719	6.3	6	U	0.58	1	U

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GBP13	GBPS131920	5.6	6	U	0.56	1	U
GBP15	GBPS150204	5.2	5	U	0.52	1	U
	GBPS151416	5.8	6	U	0.58	1	U
GBP16	GBPS160204	5.2	5	U	0.52	1	UJ
	GBPS02 (Dup of above)	5.2	5	U	0.52	1	U
	GBPS161416	6.3	6	U	0.58	1	U
GBP17	GBPS170204	5.3	5	U	0.53	1	U
	GBPS171314	5.4	5	U	0.54	1	U
	GBPS172123	5.6	6	U	0.56	1	U
GBP18	GBPS180608	14	6	U	0.55	1	U
	GBPS180911	10	7		0.68	1	U
	GBPS181416	5.4	5	U	0.54	1	U
	GBPS182122	5.9	6	U	0.59	1	U
GBP19	GBPS190204	5.4	5	U	0.54	1	UJ
	GBPS191416	5.9	5	U	0.53	1	U
GBP20	GBPS200204	7.5	5	U	0.53	1	U
	GBPS201416	5.6	6	U	0.56	1	U
GBP21	GBPS210204	5.5	6	U	0.55	1	U
	GBPS210608	5.3	5	U	0.53	1	U
	GBPS211416	6.4	6	U	0.58	1	U
GBP22	GBPS220204	5.6	6	U	0.56	1	U
	GBPS221416	6.1	6	U	0.56	1	U
	GBPS03 (Dup of above)	6.8	6	U	0.56	1	U
	GBPS222021	5.6	6	U	0.55	1	U
GBP24	GBPS240506	2,600	60	J	6.2	1	J
	GBPS241416	9.9	6	UJ	0.59	1	U
GBP25	GBPS250507	250	6	J	340	56	
	GBPS251012	6.5	6	UJ	0.58	1	U
GBP26	GBPS260204	11	5	J	0.52	1	U
	GBPS261416	8.6	5	UJ	0.54	1	U
	GBPS04 (Dup of above)	5.4	5	U	0.54	1	U
GBP27	GBPS270204	5.3	5	U	0.53	1	U
	GBPS271416	5.3	5	U	0.53	1	U

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GBP28	GBPS280608	360	6		3,300	280	
	GBPS281012	10	6	U	0.57	1	U
	GBPS282224	5.6	6	U	0.56	1	U
	GBPS283032	5.9	6	U	0.59	1	U
	GBPS283436	6	6	U	0.6	1	U
GBP29	GBPS290103	5.5	6	U	0.55	1	U
	GBPS291416	5.8	6	U	0.58	1	U
Excavation E01	GBE0210203	27	5	M	0.53	1	UJ
GB032	GBS0320204	5.2	5	U	0.52	1	U
GB033	GBS0330204	5.2	5	U	0.52	1	U
GB034	GBS0340103	5.2	5	U	0.52	1	U
GB035	GBS0350103	5.2	5	U	0.52	1	UJ
GB036	GBS0360911	5.3	5	U	0.53	1	U
GB037	GBS0370204	5.2	5	U	0.52	1	U
GB038	GBS0380709	5.5	6	U	0.55	1	UJ
GB039	GBS0390204	50	6	M	0.55	1	UJ
	GBS0391012	5.7	6	U	0.56	1	U
GB040	GBS0400709	5.7	6	U	0.58	1	U
GB042	GBS0420305	5.4	5	U	0.55	1	U
GB043	GBS0430709	4.3	5	J	0.54	1	U
GB044	GBS0440709	5.1	5	J	0.54	1	U
	GB044 (Dup of above)	3.3	5	J	0.54	1	U
GB045	GBS0450608	5.6	6	U	0.55	1	UJ
GB046	GBS0461012	5.3	5	U	0.52	1	U
GB047	GBS0470709	5.6	6	U	0.56	1	U
GB048	GBS0480709	5.4	5	U	0.53	1	U
GB049	GBS0490507	5.4	5	U	0.54	1	U
GB054	GBS0540507	23	7	H	0.7	1	U
	GBS0540911	5.5	6	U	0.55	1	U
	GBS0541416	6.2	6	U	0.62	1	U
GB055	GBS0550507	71	8	H	0.99	1	U

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GB056	GBS0560507	97	8	H	0.77	1	U
	GBS0560810	5.4	5	U	0.54	1	U
	GBS0561416	6.3	6	U	0.63	1	U
GB057	GBS0570507	140	8	H	0.93	1	U
GB058	GBS0580507	14	6	H	0.59	1	U
	GB050 (Dup of above)	16	6	H	0.59	1	U
GB059	GBS0590507	180	5	H	0.53	1	UJ
	GBS0590810	5.4	5	U	0.54	1	U
	GBS0591416	6.3	6	U	0.64	1	U
GB060	GBS0600507	1,300	6	H	0.55	1	U
	GBS0600911	5.4	5	U	0.53	1	U
	GBS0601618	6.1	6	U	0.61	1	U
GB062	GBS0620507	400	6	H	0.67	1	H
	GBS0621012	5.4	5	U	0.038	1	J
	GBS0621416	6.2	6	U	0.63	1	U
GB063	GBS0630507	120	6	H	0.58	1	U
GB065	GBS0650507	180	6	H	0.55	1	U
	GBS0650911	5.4	5	U	0.53	1	U
	GBS0651416	6	6	U	0.6	1	U
GB071	GBS0711012	5.3	5	U	0.058	1	J
GB072	GBS0720305	5.3	5	U	0.53	1	U
GB073	GBS0730204	5.3	5	U	0.52	1	UJ
GB074	GBS0740204	5.6	6	U	0.57	1	U
	GBS0740304	5.6	6	U	This sample was not analyzed for gasoline		
	GBS0740507	5.3	5	U	0.53	1	UJ
	GBS0741416	5.8	6	U	0.57	1	U
GB082	GBS0820608[a]	49	5	M	0.53	1	U
	GBS0820608[a]	96	5	M	This sample was not analyzed for gasoline twice		
GB084	GBS0840103	17	5	M	0.52	1	U
	GBS0840406	5.6	6	U	0.56	1	U
	GBS0841113	5.7	6	U	0.57	1	U

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GB087	GBS0870406	5.5	6	U	0.56	1	UJ
	GBS0871012	5.3	5	U	0.54	1	U
GB098	GBS0980608	300	6	C	0.57	1	U
	GB063 (Dup of above)	130	6	C	0.84	1	H
	GBS0980810	6	6	U	1.1	1	H
	GBS0981416	3	5	J	0.018	1	J
	GBS0982224	5.5	6	U	0.033	1	J
GB099	GBS0990507	63	6	H,C	0.55	1	U
GB100	GBS1000507	160	6	H,C	0.56	1	U
GB101	GBS1010507	41	6	H,C	0.57	1	U
GB102	GBS1020406	53	6	H	0.56	1	UJ
GB103	GBS1030406	180	6	D,M	0.77	1	H
	GBS1030911	5.6	6	U	0.57	1	U
	GBS1031416	5.7	6	U	0.57	1	U
GB104	GBS1040507	9,600	69	J	1,200	140	J
GB105	GBS1050507	13,000	110	J	2,000	210	J
GB106	GBS1060608	3,700	32	C	0.35	1	J
	GB068 (Dup of above)	3,600	33	C	1,600	170	J
	GBS1060810	5.7	6	U	0.32	1	J
	GBS1061820	5.5	6	U	0.034	1	U
GB107	GBS1070608	26,000	130	J	0.85	1	H
	GBS1071214	43	6	C	0.23	1	J
	GBS1071820	5.3	5	U	0.019	1	J
GB108	GBS1080608	5.8	6	U	0.57	1	U
GB110	GBS1100608	5.2	5	U	0.52	1	UJ
GB112	GBS1120406	280	6	C	0.23	1	J
GB114	GBS1140204	110	5	H	0.53	1	U
GB115	GBS1150507	2,100	28	C	6.7	1	G
	GBS1151012	5.4	5	U	0.05	1	U
	GBS1151820	5.5	6	U	0.56	1	U
GB116	GBS1160406	5.4	5	U	0.54	1	U

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GB117	GBS1170507	880	6	C	170	29	J
	GBS1171012	5.5	6	U	0.55	1	U
	GBS1171820	5.5	6	U	0.027	1	J
GB118	GBS1180406	5.5	6	U	0.55	1	U
GB119	GBS1190406	5.3	5	U	0.52	1	UJ
GB120	GBS1200406	5.3	5	U	0.53	1	U
	GBS1200809	5.6	6	U	0.57	1	U
GB121	GBS1210708	5.6	6	U	0.57	1	U
GB122	GBS1220608	5.8	6	U	0.58	1	U
GB123	GBS1230608	5.8	6	U	0.59	1	U
GB124	GBS1240608	5.7	6	U	0.57	1	U
GB125	GBS1250608	5.6	6	U	0.56	1	U
GB126	GBS1260608	5.6	6	U	0.55	1	U
GB127	GBS1270608	5.8	6	U	0.59	1	U
GB128	GBS1280709	160	6	C	0.085	1	J
	GBS1281416	5.5	6	U	0.78	1	H
	GBS1282224	5.6	6	U	0.56	1	U
GB129	GBS1290608	600	7	C	0.5	1	J
	GB076 (Dup of above)	1,000	6	C	5.6	1	J
	GBS1291012	5.1	6	J	0.13	1	J
	GBS1292224	5.3	5	U	0.54	1	U
GB130	GBS1300507	460	6	C	510	60	J
	GBS1301012	9.1	6	C	0.098	1	J
	GBS1301820	5.6	6	U	0.55	1	U
GB131	GBS1310608	68	6	C	14	3	G
	GBS1311012	6.5	6	C	0.077	1	J
	GBS1311820	5.5	6	U	0.55	1	U
GB132	GBS1320507	6.1	6	U	0.6	1	U
	GBS1321012	11	6	C	0.027	1	J
	GBS1321820	5.3	5	U	0.53	1	U
GB133	GBS1330507[a]	1,900	12	C	380	58	J
	GBS1330507[a]	22,000	130	J	This sample was not analyzed twice for gasoline		

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GB134	GBS1340507	1,300	12	C	1.8	1	G
GB135	GBS1350507	5.2	5	U	0.52	1	U
GB136	GBS1360709	2,300	12	C	86	59	H
	GBS1360911	2,800	30	C	730	150	H
	GBS1361315	5.8	6	U	0.58	1	U
	GBS1362022	5.7	6	U	0.57	1	U
GB137	GBS1370709	1,600	12	C	130	29	H
	GB082 (Dup of above)	1,800	12	C	0.82	1	H
	GBS1370911	490	6	C	0.74	1	J
	GBS1371315	5.8	6	U	0.59	1	U
	GBS1371719	5.7	6	U	0.56	1	U
GB138	GBS1380911	5.8	6	U	0.57	1	U
GB139	GBS1390709	3,000	29	C	690	150	H
	GBS1390911	42	7	M	0.41	1	J
	GBS1391315	5.9	6	U	0.035	1	J
	GBS1392123	5.7	6	U	0.55	1	J
GB140	GBS1400709	1,200	6	C	0.066	1	J
	GBS1400911	720	6	C	14	1	J
	GBS1400911RR	Sample was not rerun for diesel			0.36	2	J
GB141	GBS1410608	500	6	C	81	31	H
	GBS1410810	26,000	310	J	320	150	H
GB142	GBS1420507	3,700	31	C	130	60	H
	GBS1420810	6,600	62	C	560	150	H
GB143	GBS1430709	940	6	C	0.12	1	J
	GBS1430911	1,100	6	C	0.44	1	J
	GBS1431214	5.8	6	U	0.13	1	J
	GB085 (Dup of above)	5.8	6	U	0.59	1	U
	GBS1432022	5.7	6	U	0.57	1	U
GB144	GBS1440709	7,600	59	J	2.5	1	H
	GBS1440911	540	6	C	0.22	1	J
	GBS1441214	5.7	6	U	0.059	1	J
	GBS1441618	5.8	6	U	0.58	1	U

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GB145	GBS1450709	2,000	12	C	0.83	1	H
	GBS1450911	960	8	C	67	38	H
	GBS1451214	5.7	6	U	0.58	1	U
	GBS1451719	5.7	6	U	0.13	1	J
GB146	GBS1460911	5.6	6	U	0.56	1	U
GB147	GBS1470406	7.4	6	M	0.021	1	U
GB148	GBS1480406	5.5	6	M	0.023	1	U
	GBS1480608	5.4	5	U	0.53	1	UJ
	GBS1481416	5.7	6	U	0.58	1	U
GB149	GBS1490406	21	5	M	0.55	1	UJ
GB150	GBS1500406	5.3	5	U	0.53	1	U
GB151	GBS1510406	5.4	5	U	0.54	1	UJ
GB152	GBS1520406	3.3	6	J	0.58	1	U
	GBS1520810	5.3	5	U	0.54	1	U
	GBS1521416	5.7	6	U	0.58	1	U
GB153	GBS1530406	9.1	8	M	0.82	1	U
GB154	GBS1540406	5.5	6	U	0.55	1	U
GB155	GBS1550406	5.4	5	U	0.54	1	U
GB157	GBS1570406	3.8	6	J	0.57	1	U
	GBS1570608	5.5	6	U	0.55	1	U
	GBS1571416	5.7	6	U	0.047	1	J
GB158	GBS1581012	5.3	5	U	0.52	1	UJ
GB159	GBS1590204	5.3	5	U	0.53	1	U
	GB096 (Dup of above)	5.4	5	U	0.019	1	U
GB161	GBS1610204	18	5	M	0.021	1	J
	GBS1610608	5.4	5	U	0.54	1	U
GB162	GBS1620608	5.3	5	U	0.047	1	J
GB164	GBS1640911	17	6	J	0.65	1	R
	GBS1641214	5.3	5	UJ	0.53	1	R
	GBS1642123	5.7	6	UJ	0.58	1	R
	GBR1640911	5.8	6	U	0.59	1	U
	GBR1641214	5.4	5	U	0.54	1	U
	GBR1642022	5.5	6	U	0.56	1	U

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GB165	GBS1650911	110	6	J	0.15	1	J
	GB097 (Dup of above)	25	6	J	0.61	1	R
	GBR1650911	15	6	M	0.11	1	J
GB166	GBS1661012	5.6	6	UJ	0.56	1	R
	GBS1661214	9.9	5	J	0.055	1	J
	GBS1662123	6	6	UJ	0.6	1	R
	GBR1660810	5.6	6	U	0.018	1	UJ
	GBR1661113	5.4	5	U	0.54	1	U
	GBR1662022	6	6	U	0.61	1	U
GB167	GBS1670911	15	7	J	0.71	1	R
	GBS1671214	5.3	5	UJ	0.53	1	R
	GBS1671820	5.7	6	UJ	0.57	1	R
	GBR1670709	83	6	D,M	0.78	1	H
	GBR1671113	5.4	5	U	0.096	1	J
	GBR1671820	5.9	6	U	0.59	1	U
GB168	GBS1681214	770	6	J	2.3	1	J
	GBS1681618	22	6	J	0.37	1	J
	GBS1682325	5.7	6	UJ	0.024	1	J
	GBR1681113	1,100	7	C	4.4	1	G
	GBR1681921	5.8	6	U	0.04	1	J
	GBR1682628	5.6	6	U	0.022	1	J
GB169	GBS1691416	7,900	70	J	170	3	J
	GB102 (Dup of above)	4,700	31	J	23	31	J
	GBS1691719	17	6	J	0.58	1	R
	GBS1692527	5.5	6	UJ	0.55	1	R
	GBR1691416	3,400	32	C	170	65	J
	GBR1691719	660	6	C	1.7	1	G
	GBR1692426	5.5	6	U	0.021	1	J
GB170	GBS1701012	1,200	6	J	0.64	1	J
	GBS1701315	24,000	150	J	440	76	J
	GBR1701012	490	6	C	3.7	1	G,H
	GBR1701315	2,100	12	C	280	61	J

Table E.1-3
Results of TPH (DRO and GRO) Analysis of Soil Samples
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Borehole	Sample Number	Diesel (mg/kg)			Gasoline (mg/kg)		
		Result	Detect Limit	Validation Qualifier	Result	Detect Limit	Validation Qualifier
GB171	GBS1711416	5.2	5	UJ	0.53	1	UJ
	GBR1711416	5.7	6	U	0.56	1	U
GB172	GBS1721416	5.5	6	UJ	0.55	1	R
	GBR1721416	5.4	5	U	0.55	1	U
GB173	GBS1731416	5.3	5	UJ	0.53	1	R
	GB109 (Dup of above)	5.5	6	U	0.55	1	U
	GBR1731416	5.7	6	U	0.022	1	U
GB174	GBS1741416	5.4	5	UJ	0.089	1	J
	GBR1741416	5.6	6	U	0.56	1	U
GB175	GBS1751012	440	9	J	0.46	1	J
	GBR1751214	12,000	80	J	420	200	G
GB176	GBS1761012	740	6	J	170	62	J
	GBR1761113	1,500	10	C	250	200	G

[a]Sample was analyzed on two occasions for diesel

RR = RR appearing after the sample number indicates the laboratory reran the analysis on the sample.
Dup = Duplicate sample
C = This flag indicates that a pattern resembling crude oil was detected in this sample.
D = This flag indicates that a pattern resembling diesel was detected in this sample.
G = This flag indicates that a pattern resembling gasoline was detected in this sample.
H = This flag indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
J = Estimated value
M = This flag indicates that a pattern resembling motor oil was detected in this sample.
U = Compound was analyzed for, but not detected.
R = The data are unusable; the analyte may or may not be present.

mg/kg = Milligrams per kilogram

Table E.1-4
Results of TCLP Analysis of Soil Samples
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Sample Number	Parameter	Result (mg/L)	RCRA Limit (mg/L)	Detect Limit (mg/L)	Validation Qualifier
GBPS060608	2-Butanone (MEK)	0.0073	200	0.020	J
GBPS070608	2-Butanone (MEK)	0.0067	200	0.020	J
GBPS110204	2-Butanone (MEK)	0.0064	200	0.020	J
GBS1490406	Arsenic	0.039	5.0	0.1	B
GBE0210203DUP	Arsenic	0.0361	5.0	0.1	B
GBE0210203	Arsenic	0.035	5.0	0.1	B
GBS1530406	Arsenic	0.03	5.0	0.1	B
GBR1751214	Arsenic	0.03	5.0	0.1	B
GBS1751012DUP	Arsenic	0.0261	5.0	0.1	B
GBS1020406DUP	Arsenic	0.0258	5.0	0.1	B
GBS1761012DUP	Arsenic	0.0225	5.0	0.1	B
GBS1400709	Arsenic	0.021	5.0	0.1	B
GBR1751214	Barium	2.6	100	1	
GBS1751012DUP	Barium	2.52	100	1	
GBS1751012	Barium	2.5	100	1	J
GBS1420810	Barium	2.3	100	1	
GBS1761012	Barium	2.2	100	1	J
GBS1400911	Barium	2.2	100	1	
GBS1761012DUP	Barium	2.15	100	1	
GBR1701315	Barium	2.1	100	1	
GBPS210204	Barium	2.1	100	1	
GBPS010609	Barium	2.1	100	1	
GBPS010609DUP	Barium	2.02	100	1	
GBS1040507	Barium	2	100	1	
GBS1410810	Barium	1.9	100	1	
GBS0390204	Barium	1.9	100	1	
GBPS010911	Barium	1.9	100	1	
GBS1410608	Barium	1.7	100	1	
GBR1701012	Barium	1.7	100	1	
GBS1490406	Barium	1.6	100	1	
GBS1400709	Barium	1.6	100	1	
GBS1050507	Barium	1.5	100	1	
GBS1330507DUP	Barium	1.44	100	1	

Table E.1-4
Results of TCLP Analysis of Soil Samples
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Sample Number	Parameter	Result (mg/L)	RCRA Limit (mg/L)	Detect Limit (mg/L)	Validation Qualifier
GBR1761113DUP	Barium	1.43	100	1	
GBS1701315	Barium	1.4	100	1	J
GBS1701012	Barium	1.4	100	1	J
GBS1470406	Barium	1.4	100	1	
GBS1330507	Barium	1.4	100	1	
GBR1761113	Barium	1.4	100	1	
GBPS120204	Barium	1.4	100	1	
GBPS020610	Barium	1.4	100	1	
GBE0210203	Barium	1.4	100	1	
GBE0210203DUP	Barium	1.37	100	1	
GBS1470406DUP	Barium	1.36	100	1	
GBR1650911	Barium	1.3	100	1	
GB097	Barium	1.3	100	1	J
GB097DUPDUP	Barium	1.25	100	1	
GBS1650911	Barium	1.2	100	1	J
GBS1420507	Barium	1.2	100	1	
GBS1340507	Barium	1.2	100	1	
GBS1120406	Barium	1.2	100	1	
GBS0391012	Barium	1.2	100	1	
GBS0380709	Barium	1.2	100	1	
GBPS070608	Barium	1.2	100	1	
GBPS180911	Barium	1.1	100	1	
GBPS100204	Barium	1.1	100	1	
GBS1200809DUP	Barium	1.01	100	1	
GBS1200809	Barium	1	100	1	
GBPS040406	Barium	1	100	1	
GBPS050408	Barium	0.97	100	1	B
GBS1020406DUP	Barium	0.953	100	1	B
GBS1020406	Barium	0.95	100	1	B
GBPS060608	Barium	0.93	100	1	B
GBPS110204	Barium	0.92	100	1	B
GBPS170204	Barium	0.9	100	1	B
GBPS030406	Barium	0.89	100	1	B

Table E.1-4
Results of TCLP Analysis of Soil Samples
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Sample Number	Parameter	Result (mg/L)	RCRA Limit (mg/L)	Detect Limit (mg/L)	Validation Qualifier
GBS1530406DUP	Barium	0.189	100	1	B
GBS1330507	Benzene	0.02	0.5	0.025	J
GBE0210203	Cadmium	0.007	1.0	0.05	B
GBS1020406DUP	Cadmium	0.0058	1.0	0.05	B
GBE0210203DUP	Cadmium	0.0048	1.0	0.05	B
GBS1200809DUP	Cadmium	0.0024	1.0	0.05	B
GBPS010609DUP	Cadmium	0.0021	1.0	0.05	B
GBR1761113DUP	Cadmium	0.0014	1.0	0.05	B
GBPS020610	Chloroform	0.00099	6.0	0.025	J
GBPS070608	Chloroform	0.00023	6.0	0.005	J
GBS1751012	Chromium	0.38	5.0	0.1	J
GBS1751012DUP	Chromium	0.73	5.0	0.1	
GBR1761113	Chromium	0.25	5.0	0.1	
GBR1761113DUP	Chromium	0.247	5.0	0.1	
GBS1701315	Chromium	0.17	5.0	0.1	J
GBR1751214	Chromium	0.1	5.0	0.1	
GBR1701315	Chromium	0.036	5.0	0.1	B
GBPS060608	Chromium	0.023	5.0	0.1	B
GBS1020406DUP	Chromium	0.0142	5.0	0.1	B
GBS1761012	Chromium	0.0084	5.0	0.1	J
GBS1761012DUP	Chromium	0.0076	5.0	0.1	B
GBPS010609DUP	Chromium	0.0075	5.0	0.1	B
GBS1200809DUP	Chromium	0.0063	5.0	0.1	B
GBE0210203	Chromium	0.0059	5.0	0.1	B
GB097DUPDUP	Chromium	0.0052	5.0	0.1	B
GBS1400911	Lead	0.78	5.0	0.03	
GBS1650911	Lead	0.13	5.0	0.03	J
GB097DUPDUP	Lead	0.122	5.0	0.03	
GB097	Lead	0.12	5.0	0.03	J
GBS1420507	Lead	0.085	5.0	0.03	
GBPS010911	Lead	0.07	5.0	0.03	
GBS1470406	Lead	0.062	5.0	0.03	
GBS1751012	Lead	0.059	5.0	0.03	J

Table E.1-4
Results of TCLP Analysis of Soil Samples
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Sample Number	Parameter	Result (mg/L)	RCRA Limit (mg/L)	Detect Limit (mg/L)	Validation Qualifier
GBS1470406DUP	Lead	0.0585	5.0	0.03	
GBS1040507	Lead	0.051	5.0	0.03	
GBS1751012DUP	Lead	0.0472	5.0	0.03	
GBR1650911	Lead	0.034	5.0	0.03	
GBS1410810	Lead	0.032	5.0	0.03	
GBPS010609	Lead	0.029	5.0	0.03	B
GBS1420810	Lead	0.025	5.0	0.03	B
GBPS010609DUP	Lead	0.0205	5.0	0.03	B
GBR1701315	Lead	0.019	5.0	0.03	B
GBS1120406	Lead	0.018	5.0	0.03	B
GBS1701315	Lead	0.017	5.0	0.03	J
GBS1490406	Lead	0.016	5.0	0.03	B
GBR1761113DUP	Mercury	0.000171	0.2	0.002	B
GBS1761012DUP	Mercury	0.000166	0.2	0.002	B
GBS1751012DUP	Mercury	0.000165	0.2	0.002	B
GBR1701315	Mercury	0.00016	0.2	0.002	B
GBR1701012	Mercury	0.00016	0.2	0.002	B
GBR1650911	Mercury	0.00012	0.2	0.002	B
GB097DUPDUP	Mercury	0.000115	0.2	0.002	B
GBE0210203	Selenium	0.045	1.0	0.05	B
GBS1340507	Selenium	0.042	1.0	0.05	B
GBS1330507	Selenium	0.038	1.0	0.05	B
GBE0210203	Silver	0.0071	5.0	0.1	B
GB097DUPDUP	Silver	0.005	5.0	0.1	B
GBS1470406	Silver	0.0045	5.0	0.1	B

mg/L = Milligrams per liter
B = Value less than the instrument detection limit, but greater than or equal to the contract-required detection limit
J = Estimated value

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB035	EPA8260	Water	Acetone	20	µg/L	20	R
GB038	EPA8260	Water	Acetone	20	µg/L	20	R
GB039	EPA8260	Water	Acetone	20	µg/L	20	R
GB039A	EPA8260	Water	Acetone	20	µg/L	20	R
GB040	EPA8260	Water	Acetone	20	µg/L	20	R
GB041	EPA8260	Water	Acetone	20	µg/L	20	R
GB043	EPA8260	Water	Acetone	20	µg/L	20	R
GB045	EPA8260	Water	Acetone	20	µg/L	20	R
GB046	EPA8260	Water	Acetone	20	µg/L	20	R
GB047	EPA8260	Water	Acetone	20	µg/L	20	R
GB049	EPA8260	Water	Acetone	20	µg/L	20	R
GB052	EPA8260	Water	Acetone	20	µg/L	20	R
GB054	EPA8260	Water	Acetone	20	µg/L	20	R
GB055	EPA8260	Water	Acetone	20	µg/L	20	R
GB056	EPA8260	Water	Acetone	20	µg/L	20	R
GB057	EPA8260	Water	Acetone	20	µg/L	20	R
GB058	EPA8260	Water	Acetone	20	µg/L	20	R
GB059	EPA8260	Water	Acetone	20	µg/L	20	R
GB060	EPA8260	Water	Acetone	20	µg/L	20	R
GB061	EPA8260	Water	Acetone	20	µg/L	20	R
GB063RR2	EPA8260	Soil	Acetone	5,800	µg/L	5,800	R
GB064	EPA8260	Water	Acetone	20	µg/L	20	R
GB065	EPA8260	Water	Acetone	20	µg/L	20	R
GB066	EPA8260	Water	Acetone	20	µg/L	20	R
GB067	EPA8260	Water	Acetone	20	µg/L	20	R
GB070	EPA8260	Water	Acetone	20	µg/L	20	R
GB071	EPA8260	Water	Acetone	20	µg/L	20	R
GB072	EPA8260	Water	Acetone	20	µg/L	20	R
GB073	EPA8260	Water	Acetone	20	µg/L	20	R
GB074	EPA8260	Water	Acetone	20	µg/L	20	R
GB076	EPA8260	Soil	Acetone	23	µg/kg	23	R
GB076	EPA8270	Soil	Benzo(A)Pyrene	780	µg/kg	780	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB076	EPA8270	Soil	Benzo(B)Fluoranthene	780	µg/kg	780	R
GB076	EPA8270	Soil	Benzo(G,H,I)Perylene	780	µg/kg	780	R
GB076	EPA8270	Soil	Benzo(K)Fluoranthene	780	µg/kg	780	R
GB076	EPA8270	Soil	Dibenzo(A,H)Anthracene	780	µg/kg	780	R
GB076	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	780	µg/kg	780	R
GB077	EPA8260	Water	Acetone	20	µg/L	20	R
GB078	EPA8260	Water	Acetone	20	µg/L	20	R
GB082	EPA8260	Soil	Acetone	230	µg/kg	230	R
GB083	EPA8260	Water	Acetone	20	µg/L	20	R
GB084	EPA8260	Water	Acetone	20	µg/L	20	R
GB086	EPA8260	Water	Acetone	20	µg/L	20	R
GB088	EPA8260	Water	Acetone	20	µg/L	20	R
GB089	EPA8260	Water	Acetone	20	µg/L	20	R
GB092	EPA8260	Water	Acetone	20	µg/L	20	R
GB093	EPA8260	Water	Acetone	20	µg/L	20	R
GB096	EPA8260	Soil	Acetone	21	µg/kg	21	R
GB105	EPA8260	Water	Acetone	20	µg/L	20	R
GB110	EPA8260	Water	Acetone	20	µg/L	20	R
GB111	EPA8260	Water	Acetone	20	µg/L	20	R
GBE0210203	EPA8270	Soil	Benzo(A)Pyrene	360	µg/kg	360	R
GBE0210203	EPA8270	Soil	Benzo(B)Fluoranthene	360	µg/kg	360	R
GBE0210203	EPA8270	Soil	Benzo(G,H,I)Perylene	360	µg/kg	360	R
GBE0210203	EPA8270	Soil	Benzo(K)Fluoranthene	360	µg/kg	360	R
GBE0210203	EPA8270	Soil	Dibenzo(A,H)Anthracene	360	µg/kg	360	R
GBE0210203	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	360	µg/kg	360	R
GBE033	EPA8260	Water	Acetone	20	µg/L	20	R
GBP025	EPA8270	Water	3-Nitroaniline	48	µg/L	48	R
GBP025	EPA8270	Water	Hexachlorocyclopentadiene	9.5	µg/L	9.5	R
GBP028	EPA8270	Water	3-Nitroaniline	48	µg/L	48	R
GBP030	EPA8270	Water	3-Nitroaniline	47	µg/L	47	R
GBPB010204	EPA8270	Soil	2,4-Dinitrophenol	1,800	µg/kg	1,800	R
GBPB010204	EPA8270	Soil	Benzoic Acid	1,800	µg/kg	1,800	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBPB010204	EPA8270	Soil	Hexachlorocyclopentadiene	350	µg/kg	350	R
GBPB010912	EPA8270	Soil	2,4-Dinitrophenol	1,800	µg/kg	1,800	R
GBPB010912	EPA8270	Soil	Benzoic Acid	1,800	µg/kg	1,800	R
GBPB010912	EPA8270	Soil	Hexachlorocyclopentadiene	360	µg/kg	360	R
GBPB030407	EPA8270	Soil	Benzoic Acid	1,800	µg/kg	1,800	R
GBPB030407	EPA8270	Soil	Hexachlorocyclopentadiene	360	µg/kg	360	R
GBPB031012	EPA8270	Soil	Benzoic Acid	1,900	µg/kg	1,900	R
GBPB031012	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPB031416	EPA8270	Soil	Benzoic Acid	1,900	µg/kg	1900	R
GBPB031416	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS01	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS010609	EPA8270	Soil	3-Nitroaniline	2,000	µg/kg	2,000	R
GBPS010911	EPA8270	Soil	3-Nitroaniline	2,000	µg/kg	2,000	R
GBPS020610	EPA8270	Soil	3-Nitroaniline	1,900	µg/kg	1,900	R
GBPS03	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS030911	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS031416	EPA8270	Soil	Hexachlorocyclopentadiene	380	µg/kg	380	R
GBPS040406	EPA8270	Soil	3-Nitroaniline	1,900	µg/kg	1,900	R
GBPS041416	EPA8270	Soil	Hexachlorocyclopentadiene	380	µg/kg	380	R
GBPS051012	EPA8270	Soil	Hexachlorocyclopentadiene	350	µg/kg	350	R
GBPS051820	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS060608	EPA8270	Soil	3-Nitroaniline	1,700	µg/kg	1,700	R
GBPS170204	EPA8270	Soil	3-Nitroaniline	1,800	µg/kg	1,800	R
GBPS180911	EPA8270	Soil	3-Nitroaniline	2,300	µg/kg	2,300	R
GBPS210608	EPA8270	Soil	Hexachlorocyclopentadiene	360	µg/kg	360	R
GBPS211416	EPA8270	Soil	Hexachlorocyclopentadiene	390	µg/kg	390	R
GBPS220204	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS221416	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS222021	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS240506	EPA6010	Soil	Antimony	0.6	mg/kg	2.4	R
GBPS240506	EPA8270	Soil	Hexachlorocyclopentadiene	1,600	µg/kg	1,600	R
GBPS241416	EPA6010	Soil	Antimony	2.3	mg/kg	2.3	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBPS241416	EPA8270	Soil	Benzoic Acid	2,000	µg/kg	2,000	R
GBPS241416	EPA8270	Soil	Hexachlorocyclopentadiene	390	µg/kg	390	R
GBPS250507	EPA8260	Soil	1,1,2,2-Tetrachloroethane	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	1,2,3-Trichlorobenzene	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	1,2,3-Trichloropropane	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	1,2,4-Trichlorobenzene	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	56	µg/kg	56	R
GBPS250507	EPA8260	Soil	1,2-Dichlorobenzene	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	1,3-Dichlorobenzene	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	1,4-Dichlorobenzene	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	2-Chlorotoluene	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	4-Chlorotoluene	28	µg/kg	28	R
GBPS250507	EPA6010	Soil	Antimony	2.2	mg/kg	2.2	R
GBPS250507	EPA8260	Soil	Bromobenzene	28	µg/kg	28	R
GBPS250507	EPA8260	Soil	Hexachlorobutadiene	28	µg/kg	28	R
GBPS250507	EPA8270	Soil	Hexachlorocyclopentadiene	370	µg/kg	370	R
GBPS250507	EPA8260	Soil	Tert-Butylbenzene	28	µg/kg	28	R
GBPS251012	EPA6010	Soil	Antimony	0.48	mg/kg	2.3	R
GBPS251012	EPA8270	Soil	Hexachlorocyclopentadiene	390	µg/kg	390	R
GBPS260204	EPA8270	Soil	2,4-Dinitrophenol	1,700	µg/kg	1,700	R
GBPS260204	EPA8270	Soil	Benzoic Acid	1700	µg/kg	1,700	R
GBPS260204	EPA8270	Soil	Hexachlorocyclopentadiene	350	µg/kg	350	R
GBPS261416	EPA8270	Soil	2,4-Dinitrophenol	1,800	µg/kg	1,800	R
GBPS261416	EPA8270	Soil	Benzoic Acid	1,800	µg/kg	1,800	R
GBPS261416	EPA8270	Soil	Hexachlorocyclopentadiene	360	µg/kg	360	R
GBPS283436	EPA8270	Soil	3-Nitroaniline	2,000	µg/kg	2,000	R
GBPS290103	EPA8270	Soil	3-Nitroaniline	1,800	µg/kg	1,800	R
GBPS291416	EPA8270	Soil	3-Nitroaniline	1,900	µg/kg	1,900	R
GBS0320204	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0380709	EPA8270	Soil	Benzo(A)Pyrene	370	µg/kg	370	R
GBS0380709	EPA8270	Soil	Benzo(B)Fluoranthene	370	µg/kg	370	R
GBS0380709	EPA8270	Soil	Benzo(G,H,I)Perylene	370	µg/kg	370	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS0380709	EPA8270	Soil	Benzo(K)Fluoranthene	370	µg/kg	370	R
GBS0380709	EPA8270	Soil	Dibenzo(A,H)Anthracene	370	µg/kg	370	R
GBS0380709	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	370	µg/kg	370	R
GBS0390204	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,2,3-Trichlorobenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,2,3-Trichloropropane	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,2,4-Trichlorobenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,2,4-Trimethylbenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	11	µg/kg	11	R
GBS0390204	EPA8260	Soil	1,2-Dichlorobenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,3,5-Trimethylbenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,3-Dichlorobenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	1,4-Dichlorobenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	2-Chlorotoluene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	4-Chlorotoluene	5.5	µg/kg	5.5	R
GBS0390204	EPA8270	Soil	Benzo(A)Pyrene	370	µg/kg	370	R
GBS0390204	EPA8270	Soil	Benzo(B)Fluoranthene	370	µg/kg	370	R
GBS0390204	EPA8270	Soil	Benzo(G,H,I)Perylene	370	µg/kg	370	R
GBS0390204	EPA8270	Soil	Benzo(K)Fluoranthene	370	µg/kg	370	R
GBS0390204	EPA8260	Soil	Bromobenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8270	Soil	Dibenzo(A,H)Anthracene	370	µg/kg	370	R
GBS0390204	EPA8260	Soil	Hexachlorobutadiene	5.5	µg/kg	5.5	R
GBS0390204	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	370	µg/kg	370	R
GBS0390204	EPA8260	Soil	Isopropylbenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	N-Butylbenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	N-Propylbenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	P-Isopropyltoluene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	Sec-Butylbenzene	5.5	µg/kg	5.5	R
GBS0390204	EPA8260	Soil	Tert-Butylbenzene	5.5	µg/kg	5.5	R
GBS0540507	EPA8260	Soil	Acetone	28	µg/kg	28	R
GBS0541416	EPA8260	Soil	Acetone	25	µg/kg	25	R
GBS0560507	EPA8260	Soil	Acetone	31	µg/kg	31	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS0561416	EPA8260	Soil	Acetone	25	µg/kg	25	R
GBS0590507	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0590507	EPA8270	Soil	Benzo(A)Pyrene	360	µg/kg	360	R
GBS0590507	EPA8270	Soil	Benzo(B)Fluoranthene	360	µg/kg	360	R
GBS0590507	EPA8270	Soil	Benzo(G,H,I)Perylene	360	µg/kg	360	R
GBS0590507	EPA8270	Soil	Benzo(K)Fluoranthene	360	µg/kg	360	R
GBS0590507	EPA8270	Soil	Dibenzo(A,H)Anthracene	360	µg/kg	360	R
GBS0590507	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	360	µg/kg	360	R
GBS0591416	EPA8260	Soil	Acetone	25	µg/kg	25	R
GBS0600507	EPA8270	Soil	3-Nitroaniline	1,800	µg/kg	1,800	R
GBS0600507	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS0600507	EPA8270	Soil	Benzo(A)Pyrene	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Benzo(B)Fluoranthene	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Benzo(K)Fluoranthene	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Bis(2-Ethylhexyl) Phthalate	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Butyl Benzyl Phthalate	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Chrysene	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Dibenzo(A,H)Anthracene	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Di-N-Octyl Phthalate	370	µg/kg	370	R
GBS0600507	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	370	µg/kg	370	R
GBS0601618	EPA8260	Soil	Acetone	24	µg/kg	24	R
GBS0620507	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS0621416	EPA8260	Soil	Acetone	25	µg/kg	25	R
GBS0650507	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS0650507	EPA8270	Soil	Benzo(A)Pyrene	370	µg/kg	370	R
GBS0650507	EPA8270	Soil	Benzo(B)Fluoranthene	370	µg/kg	370	R
GBS0650507	EPA8270	Soil	Benzo(G,H,I)Perylene	370	µg/kg	370	R
GBS0650507	EPA8270	Soil	Benzo(K)Fluoranthene	370	µg/kg	370	R
GBS0650507	EPA8270	Soil	Dibenzo(A,H)Anthracene	370	µg/kg	370	R
GBS0650507	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	370	µg/kg	370	R
GBS0651416	EPA8260	Soil	Acetone	24	µg/kg	24	R
GBS0711012	EPA8260	Soil	Acetone	21	µg/kg	21	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS0720305	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0730204	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0740204	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS0740507	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0741416	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS0820608	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0820608	EPA8270	Soil	Benzo(A)Pyrene	360	µg/kg	360	R
GBS0820608	EPA8270	Soil	Benzo(B)Fluoranthene	360	µg/kg	360	R
GBS0820608	EPA8270	Soil	Benzo(G,H,I)Perylene	360	µg/kg	360	R
GBS0820608	EPA8270	Soil	Benzo(K)Fluoranthene	360	µg/kg	360	R
GBS0820608	EPA8270	Soil	Dibenzo(A,H)Anthracene	360	µg/kg	360	R
GBS0820608	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	360	µg/kg	360	R
GBS0840103	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0841113	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS0870406	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS0871012	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS0982224	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS0990507	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1000507	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1030406	EPA8260	Soil	Acetone	25	µg/kg	25	R
GBS1031416	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1061820	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1071820	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS1150507	EPA8260	Soil	Acetone	230	µg/kg	230	R
GBS1150507 RR1	EPA8260	Soil	Acetone	230	µg/kg	230	R
GBS1150507 RR2	EPA8260	Soil	Acetone	5,600	µg/kg	5,600	R
GBS1170507	EPA8260	Soil	Acetone	110	µg/kg	110	R
GBS1240608	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1280709	EPA8260	Soil	Acetone	24	µg/kg	24	R
GBS1282224	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1290608	EPA8260	Soil	Acetone	57	µg/kg	57	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1292224	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS1300507	EPA8270	Soil	Benzo(A)Pyrene	390	µg/kg	390	R
GBS1300507	EPA8270	Soil	Benzo(B)Fluoranthene	390	µg/kg	390	R
GBS1300507	EPA8270	Soil	Benzo(G,H,I)Perylene	390	µg/kg	390	R
GBS1300507	EPA8270	Soil	Benzo(K)Fluoranthene	390	µg/kg	390	R
GBS1300507	EPA8270	Soil	Dibenzo(A,H)Anthracene	390	µg/kg	390	R
GBS1300507	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	390	µg/kg	390	R
GBS1301820	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1311820	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1321820	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS1330507	EPA8270	Soil	Benzo(A)Pyrene	790	µg/kg	790	R
GBS1330507	EPA8270	Soil	Benzo(B)Fluoranthene	790	µg/kg	790	R
GBS1330507	EPA8270	Soil	Benzo(G,H,I)Perylene	790	µg/kg	790	R
GBS1330507	EPA8270	Soil	Benzo(K)Fluoranthene	790	µg/kg	790	R
GBS1330507	EPA8270	Soil	Dibenzo(A,H)Anthracene	790	µg/kg	790	R
GBS1330507	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	790	µg/kg	790	R
GBS1360709	EPA8260	Soil	Acetone	230	µg/kg	230	R
GBS1360911	EPA8260	Soil	Acetone	2,400	µg/kg	2,400	R
GBS1362022	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1370911	EPA8260	Soil	Acetone	24	µg/kg	24	R
GBS1371719	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1390709	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1392123	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1430911	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1432022	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1440709	EPA8270	Soil	3,3'-Dichlorobenzidine	2,000	µg/kg	2,000	R
GBS1440709	EPA8270	Soil	Benzo(A)Anthracene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Benzo(A)Pyrene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Benzo(B)Fluoranthene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Benzo(G,H,I)Perylene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Benzo(K)Fluoranthene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Bis(2-Ethylhexyl)Phthalate	390	µg/kg	390	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1440709	EPA8270	Soil	Butyl Benzyl Phthalate	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Chrysene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Dibenzo(A,H)Anthracene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Di-N-Octyl Phthalate	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	390	µg/kg	390	R
GBS1440709	EPA8270	Soil	Pyrene	390	µg/kg	390	R
GBS1440911	EPA8260	Soil	Acetone	24	µg/kg	24	R
GBS1441618	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1451719	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1480406	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1481416	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1520406	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1521416	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1570406	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1571416	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1581012	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS1590204	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS1610204	EPA8260	Soil	Acetone	21	µg/kg	21	R
GBS1610608	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1620608	EPA8260	Soil	Acetone	21	µg/kg	21	R
SAMPLES PRESENTED BELOW WERE REJECTED AS THEY ARRIVED WARM TO THE LAB. THE SOIL SAMPLES WERE RECOLLECTED.							
GB0101	EPA8260	Water	1,1,1,2-Tetrachloroethane	5	µg/L	5	R
GB0101	EPA8260	Water	1,1,1-Trichloroethane	5	µg/L	5	R
GB0101	EPA8260	Water	1,1,2,2-Tetrachloroethane	5	µg/L	5	R
GB0101	EPA8260	Water	1,1,2-Trichloroethane	5	µg/L	5	R
GB0101	EPA8260	Water	1,1-Dichloroethane	5	µg/L	5	R
GB0101	EPA8260	Water	1,1-Dichloroethene	5	µg/L	5	R
GB0101	EPA8260	Water	1,1-Dichloropropene	5	µg/L	5	R
GB0101	EPA8260	Water	1,2,3-Trichlorobenzene	5	µg/L	5	R
GB0101	EPA8260	Water	1,2,3-Trichloropropane	5	µg/L	5	R

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Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB0101	EPA8260	Water	1,2,4-Trichlorobenzene	5	µg/L	5	R
GB0101	EPA8260	Water	1,2,4-Trimethylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	1,2-Dibromo-3-Chloropropane	10	µg/L	10	R
GB0101	EPA8260	Water	1,2-Dibromoethane	5	µg/L	5	R
GB0101	EPA8260	Water	1,2-Dichlorobenzene	5	µg/L	5	R
GB0101	EPA8260	Water	1,2-Dichloroethane	5	µg/L	5	R
GB0101	EPA8260	Water	1,2-Dichloropropane	5	µg/L	5	R
GB0101	EPA8260	Water	1,3,5-Trimethylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	1,3-Dichlorobenzene	5	µg/L	5	R
GB0101	EPA8260	Water	1,3-Dichloropropane	5	µg/L	5	R
GB0101	EPA8260	Water	1,4-Dichlorobenzene	5	µg/L	5	R
GB0101	EPA8260	Water	1-Chlorohexane	5	µg/L	5	R
GB0101	EPA8260	Water	2,2-Dichloropropane	5	µg/L	5	R
GB0101	EPA8260	Water	2-Butanone	20	µg/L	20	R
GB0101	EPA8260	Water	2-Chlorotoluene	5	µg/L	5	R
GB0101	EPA8260	Water	2-Hexanone	20	µg/L	20	R
GB0101	EPA8260	Water	4-Chlorotoluene	5	µg/L	5	R
GB0101	EPA8260	Water	4-Methyl-2-Pentanone	20	µg/L	20	R
GB0101	EPA8260	Water	Benzene	5	µg/L	5	R
GB0101	EPA8260	Water	Bromobenzene	5	µg/L	5	R
GB0101	EPA8260	Water	Bromochloromethane	5	µg/L	5	R
GB0101	EPA8260	Water	Bromoform	5	µg/L	5	R
GB0101	EPA8260	Water	Bromomethane	10	µg/L	10	R
GB0101	EPA8260	Water	Carbon Disulfide	5	µg/L	5	R
GB0101	EPA8260	Water	Carbon Tetrachloride	5	µg/L	5	R
GB0101	EPA8260	Water	Chlorobenzene	5	µg/L	5	R
GB0101	EPA8260	Water	Chloroethane	10	µg/L	10	R
GB0101	EPA8260	Water	Chloromethane	10	µg/L	10	R
GB0101	EPA8260	Water	Cis-1,2-Dichloroethene	5	µg/L	5	R
GB0101	EPA8260	Water	Cis-1,3-Dichloropropene	5	µg/L	5	R
GB0101	EPA8260	Water	Dibromochloromethane	5	µg/L	5	R
GB0101	EPA8260	Water	Dibromomethane	5	µg/L	5	R

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB0101	EPA8260	Water	Dichlorodifluoromethane	10	µg/L	10	R
GB0101	EPA8260	Water	Ethylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	Hexachlorobutadiene	5	µg/L	5	R
GB0101	EPA8260	Water	Iodomethane	5	µg/L	5	R
GB0101	EPA8260	Water	Isopropylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	M+P-Xylene	5	µg/L	5	R
GB0101	EPA8260	Water	Methyl Tertiary Butyl Ether	5	µg/L	5	R
GB0101	EPA8260	Water	Methylene Chloride	5	µg/L	5	R
GB0101	EPA8260	Water	Naphthalene	5	µg/L	5	R
GB0101	EPA8260	Water	N-Butylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	N-Propylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	O-Xylene	5	µg/L	5	R
GB0101	EPA8260	Water	P-Isopropyltoluene	5	µg/L	5	R
GB0101	EPA8260	Water	Sec-Butylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	Styrene	5	µg/L	5	R
GB0101	EPA8260	Water	Tert-Butylbenzene	5	µg/L	5	R
GB0101	EPA8260	Water	Tetrachloroethene	5	µg/L	5	R
GB0101	EPA8260	Water	Toluene	5	µg/L	5	R
GB0101	EPA8260	Water	Trans-1,2-Dichloroethene	5	µg/L	5	R
GB0101	EPA8260	Water	Trans-1,3-Dichloropropene	5	µg/L	5	R
GB0101	EPA8260	Water	Trichloroethene	5	µg/L	5	R
GB0101	EPA8260	Water	Trichlorofluoromethane	5	µg/L	5	R
GB0101	EPA8260	Water	Trichlorotrifluoroethane	5	µg/L	5	R
GB0101	EPA8260	Water	Vinyl Acetate	20	µg/L	20	R
GB0101	EPA8260	Water	Vinyl Chloride	10	µg/L	10	R
GB097	EPAG8015	Soil	Gasoline-Range Organics	0.61	mg/kg	0.61	R
GB098	EPA8260	Water	1,1,1,2-Tetrachloroethane	5	µg/L	5	R
GB098	EPA8260	Water	1,1,1-Trichloroethane	5	µg/L	5	R
GB098	EPA8260	Water	1,1,2,2-Tetrachloroethane	5	µg/L	5	R
GB098	EPA8260	Water	1,1,2-Trichloroethane	5	µg/L	5	R
GB098	EPA8260	Water	1,1-Dichloroethane	5	µg/L	5	R
GB098	EPA8260	Water	1,1-Dichloroethene	5	µg/L	5	R

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Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB098	EPA8260	Water	1,1-Dichloropopene	5	µg/L	5	R
GB098	EPA8260	Water	1,2,3-Trichlorobenzene	5	µg/L	5	R
GB098	EPA8260	Water	1,2,3-Trichloropropane	5	µg/L	5	R
GB098	EPA8260	Water	1,2,4-Trichlorobenzene	5	µg/L	5	R
GB098	EPA8260	Water	1,2,4-Trimethylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	1,2-Dibromo-3-Chloropropane	10	µg/L	10	R
GB098	EPA8260	Water	1,2-Dibromoethane	5	µg/L	5	R
GB098	EPA8260	Water	1,2-Dichlorobenzene	5	µg/L	5	R
GB098	EPA8260	Water	1,2-Dichloroethane	5	µg/L	5	R
GB098	EPA8260	Water	1,2-Dichloropropane	5	µg/L	5	R
GB098	EPA8260	Water	1,3,5-Trimethylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	1,3-Dichlorobenzene	5	µg/L	5	R
GB098	EPA8260	Water	1,3-Dichloropropane	5	µg/L	5	R
GB098	EPA8260	Water	1,4-Dichlorobenzene	5	µg/L	5	R
GB098	EPA8260	Water	1-Chlorohexane	5	µg/L	5	R
GB098	EPA8260	Water	2,2-Dichloropropane	5	µg/L	5	R
GB098	EPA8260	Water	2-Butanone	20	µg/L	20	R
GB098	EPA8260	Water	2-Chlorotoluene	5	µg/L	5	R
GB098	EPA8260	Water	2-Hexanone	20	µg/L	20	R
GB098	EPA8260	Water	4-Chlorotoluene	5	µg/L	5	R
GB098	EPA8260	Water	4-Methyl-2-Pentanone	20	µg/L	20	R
GB098	EPA8260	Water	Acetone	20	µg/L	20	R
GB098	EPA8260	Water	Benzene	5	µg/L	5	R
GB098	EPA8260	Water	Bromobenzene	5	µg/L	5	R
GB098	EPA8260	Water	Bromochloromethane	5	µg/L	5	R
GB098	EPA8260	Water	Bromodichloromethane	5	µg/L	5	R
GB098	EPA8260	Water	Bromoform	5	µg/L	5	R
GB098	EPA8260	Water	Bromomethane	10	µg/L	10	R
GB098	EPA8260	Water	Carbon Disulfide	5	µg/L	5	R
GB098	EPA8260	Water	Carbon Tetrachloride	5	µg/L	5	R
GB098	EPA8260	Water	Chlorobenzene	5	µg/L	5	R
GB098	EPA8260	Water	Chloroethane	10	µg/L	10	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB098	EPA8260	Water	Chloroform	5	µg/L	5	R
GB098	EPA8260	Water	Chloromethane	10	µg/L	10	R
GB098	EPA8260	Water	Cis-1,2-Dichloroethene	5	µg/L	5	R
GB098	EPA8260	Water	Cis-1,3-Dichloropropene	5	µg/L	5	R
GB098	EPA8260	Water	Dibromochloromethane	5	µg/L	5	R
GB098	EPA8260	Water	Dibromomethane	5	µg/L	5	R
GB098	EPA8260	Water	Dichlorodifluoromethane	10	µg/L	10	R
GB098	EPA8260	Water	Ethylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	Hexachlorobutadiene	5	µg/L	5	R
GB098	EPA8260	Water	Iodomethane	5	µg/L	5	R
GB098	EPA8260	Water	Isopropylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	M+P-Xylene	5	µg/L	5	R
GB098	EPA8260	Water	Methyl Tertiary Butyl Ether	5	µg/L	5	R
GB098	EPA8260	Water	Methylene Chloride	5	µg/L	5	R
GB098	EPA8260	Water	Naphthalene	5	µg/L	5	R
GB098	EPA8260	Water	N-Butylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	N-Propylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	O-Xylene	5	µg/L	5	R
GB098	EPA8260	Water	P-Isopropyltoluene	5	µg/L	5	R
GB098	EPA8260	Water	Sec-Butylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	Styrene	5	µg/L	5	R
GB098	EPA8260	Water	Tert-Butylbenzene	5	µg/L	5	R
GB098	EPA8260	Water	Tetrachloroethene	5	µg/L	5	R
GB098	EPA8260	Water	Toluene	5	µg/L	5	R
GB098	EPA8260	Water	Trans-1,2-Dichloroethene	5	µg/L	5	R
GB098	EPA8260	Water	Trans-1,3-Dichloropropene	5	µg/L	5	R
GB098	EPA8260	Water	Trichloroethene	5	µg/L	5	R
GB098	EPA8260	Water	Trichlorofluoromethane	5	µg/L	5	R
GB098	EPA8260	Water	Trichlorotrifluoroethane	5	µg/L	5	R
GB098	EPA8260	Water	Vinyl Acetate	20	µg/L	20	R
GB098	EPA8260	Water	Vinyl Chloride	10	µg/L	10	R
GB099	EPA8260	Water	1,1,1,2-Tetrachloroethane	5	µg/L	5	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB099	EPA8260	Water	1,1,1-Trichloroethane	5	µg/L	5	R
GB099	EPA8260	Water	1,1,2,2-Tetrachloroethane	5	µg/L	5	R
GB099	EPA8260	Water	1,1,2-Trichloroethane	5	µg/L	5	R
GB099	EPA8260	Water	1,1-Dichloroethane	5	µg/L	5	R
GB099	EPA8260	Water	1,1-Dichloroethene	5	µg/L	5	R
GB099	EPA8260	Water	1,1-Dichloropropene	5	µg/L	5	R
GB099	EPA8260	Water	1,2,3-Trichlorobenzene	5	µg/L	5	R
GB099	EPA8260	Water	1,2,3-Trichloropropane	5	µg/L	5	R
GB099	EPA8260	Water	1,2,4-Trichlorobenzene	5	µg/L	5	R
GB099	EPA8260	Water	1,2,4-Trimethylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	1,2-Dibromo-3-Chloropropane	10	µg/L	10	R
GB099	EPA8260	Water	1,2-Dibromoethane	5	µg/L	5	R
GB099	EPA8260	Water	1,2-Dichlorobenzene	5	µg/L	5	R
GB099	EPA8260	Water	1,2-Dichloroethane	5	µg/L	5	R
GB099	EPA8260	Water	1,2-Dichloropropane	5	µg/L	5	R
GB099	EPA8260	Water	1,3,5-Trimethylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	1,3-Dichlorobenzene	5	µg/L	5	R
GB099	EPA8260	Water	1,3-Dichloropropane	5	µg/L	5	R
GB099	EPA8260	Water	1,4-Dichlorobenzene	5	µg/L	5	R
GB099	EPA8260	Water	1-Chlorohexane	5	µg/L	5	R
GB099	EPA8260	Water	2,2-Dichloropropane	5	µg/L	5	R
GB099	EPA8260	Water	2-Butanone	20	µg/L	20	R
GB099	EPA8260	Water	2-Chlorotoluene	5	µg/L	5	R
GB099	EPA8260	Water	2-Hexanone	20	µg/L	20	R
GB099	EPA8260	Water	4-Chlorotoluene	5	µg/L	5	R
GB099	EPA8260	Water	4-Methyl-2-Pentanone	20	µg/L	20	R
GB099	EPA8260	Water	Acetone	20	µg/L	20	R
GB099	EPA8260	Water	Benzene	5	µg/L	5	R
GB099	EPA8260	Water	Bromobenzene	5	µg/L	5	R
GB099	EPA8260	Water	Bromochloromethane	5	µg/L	5	R
GB099	EPA8260	Water	Bromodichloromethane	5	µg/L	5	R
GB099	EPA8260	Water	Bromoform	5	µg/L	5	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB099	EPA8260	Water	Bromomethane	10	µg/L	10	R
GB099	EPA8260	Water	Carbon Disulfide	5	µg/L	5	R
GB099	EPA8260	Water	Carbon Tetrachloride	5	µg/L	5	R
GB099	EPA8260	Water	Chlorobenzene	5	µg/L	5	R
GB099	EPA8260	Water	Chloroethane	10	µg/L	10	R
GB099	EPA8260	Water	Chloroform	5	µg/L	5	R
GB099	EPA8260	Water	Chloromethane	10	µg/L	10	R
GB099	EPA8260	Water	Cis-1,2-Dichloroethene	5	µg/L	5	R
GB099	EPA8260	Water	Cis-1,3-Dichloropropene	5	µg/L	5	R
GB099	EPA8260	Water	Dibromochloromethane	5	µg/L	5	R
GB099	EPA8260	Water	Dibromomethane	5	µg/L	5	R
GB099	EPA8260	Water	Dichlorodifluoromethane	10	µg/L	10	R
GB099	EPA8260	Water	Ethylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	Hexachlorobutadiene	5	µg/L	5	R
GB099	EPA8260	Water	Iodomethane	5	µg/L	5	R
GB099	EPA8260	Water	Isopropylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	M+P-Xylene	5	µg/L	5	R
GB099	EPA8260	Water	Methyl Tertiary Butyl Ether	5	µg/L	5	R
GB099	EPA8260	Water	Methylene Chloride	5	µg/L	5	R
GB099	EPA8260	Water	Naphthalene	5	µg/L	5	R
GB099	EPA8260	Water	N-Butylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	N-Propylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	O-Xylene	5	µg/L	5	R
GB099	EPA8260	Water	P-Isopropyltoluene	5	µg/L	5	R
GB099	EPA8260	Water	Sec-Butylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	Styrene	5	µg/L	5	R
GB099	EPA8260	Water	Tert-Butylbenzene	5	µg/L	5	R
GB099	EPA8260	Water	Tetrachloroethene	5	µg/L	5	R
GB099	EPA8260	Water	Toluene	5	µg/L	5	R
GB099	EPA8260	Water	Trans-1,2-Dichloroethene	5	µg/L	5	R
GB099	EPA8260	Water	Trans-1,3-Dichloropropene	5	µg/L	5	R
GB099	EPA8260	Water	Trichloroethene	5	µg/L	5	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB099	EPA8260	Water	Trichlorofluoromethane	5	µg/L	5	R
GB099	EPA8260	Water	Trichlorotrifluoroethane	5	µg/L	5	R
GB099	EPA8260	Water	Vinyl Acetate	20	µg/L	20	R
GB099	EPA8260	Water	Vinyl Chloride	10	µg/L	10	R
GB100	EPA8260	Water	1,1,1,2-Tetrachloroethane	5	µg/L	5	R
GB100	EPA8260	Water	1,1,1-Trichloroethane	5	µg/L	5	R
GB100	EPA8260	Water	1,1,2,2-Tetrachloroethane	5	µg/L	5	R
GB100	EPA8260	Water	1,1,2-Trichloroethane	5	µg/L	5	R
GB100	EPA8260	Water	1,1-Dichloroethane	5	µg/L	5	R
GB100	EPA8260	Water	1,1-Dichloroethene	5	µg/L	5	R
GB100	EPA8260	Water	1,1-Dichloropropene	5	µg/L	5	R
GB100	EPA8260	Water	1,2,3-Trichlorobenzene	5	µg/L	5	R
GB100	EPA8260	Water	1,2,3-Trichloropropane	5	µg/L	5	R
GB100	EPA8260	Water	1,2,4-Trichlorobenzene	5	µg/L	5	R
GB100	EPA8260	Water	1,2,4-Trimethylbenzene	5	µg/L	5	R
GB100	EPA8260	Water	1,2-Dibromo-3-Chloropropane	10	µg/L	10	R
GB100	EPA8260	Water	1,2-Dibromoethane	5	µg/L	5	R
GB100	EPA8260	Water	1,2-Dichlorobenzene	5	µg/L	5	R
GB100	EPA8260	Water	1,2-Dichloroethane	5	µg/L	5	R
GB100	EPA8260	Water	1,2-Dichloropropane	5	µg/L	5	R
GB100	EPA8260	Water	1,3,5-Trimethylbenzene	5	µg/L	5	R
GB100	EPA8260	Water	1,3-Dichlorobenzene	5	µg/L	5	R
GB100	EPA8260	Water	1,3-Dichloropropane	5	µg/L	5	R
GB100	EPA8260	Water	1,4-Dichlorobenzene	5	µg/L	5	R
GB100	EPA8260	Water	1-Chlorohexane	5	µg/L	5	R
GB100	EPA8260	Water	2,2-Dichloropropane	5	µg/L	5	R
GB100	EPA8260	Water	2-Butanone	20	µg/L	20	R
GB100	EPA8260	Water	2-Chlorotoluene	5	µg/L	5	R
GB100	EPA8260	Water	2-Hexanone	20	µg/L	20	R
GB100	EPA8260	Water	4-Chlorotoluene	5	µg/L	5	R
GB100	EPA8260	Water	4-Methyl-2-Pentanone	20	µg/L	20	R
GB100	EPA8260	Water	Acetone	20	µg/L	20	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB100	EPA8260	Water	Benzene	5	µg/L	5	R
GB100	EPA8260	Water	Bromobenzene	5	µg/L	5	R
GB100	EPA8260	Water	Bromochloromethane	5	µg/L	5	R
GB100	EPA8260	Water	Bromodichloromethane	5	µg/L	5	R
GB100	EPA8260	Water	Bromoform	5	µg/L	5	R
GB100	EPA8260	Water	Bromomethane	10	µg/L	10	R
GB100	EPA8260	Water	Carbon Disulfide	5	µg/L	5	R
GB100	EPA8260	Water	Carbon Tetrachloride	5	µg/L	5	R
GB100	EPA8260	Water	Chlorobenzene	5	µg/L	5	R
GB100	EPA8260	Water	Chloroethane	10	µg/L	10	R
GB100	EPA8260	Water	Chloroform	5	µg/L	5	R
GB100	EPA8260	Water	Chloromethane	10	µg/L	10	R
GB100	EPA8260	Water	Cis-1,2-Dichloroethene	5	µg/L	5	R
GB100	EPA8260	Water	Cis-1,3-Dichloropropene	5	µg/L	5	R
GB100	EPA8260	Water	Dibromochloromethane	5	µg/L	5	R
GB100	EPA8260	Water	Dibromomethane	5	µg/L	5	R
GB100	EPA8260	Water	Dichlorodifluoromethane	10	µg/L	10	R
GB100	EPA8260	Water	Ethylbenzene	5	µg/L	5	R
GB100	EPA8260	Water	Hexachlorobutadiene	5	µg/L	5	R
GB100	EPA8260	Water	Iodomethane	5	µg/L	5	R
GB100	EPA8260	Water	Isopropylbenzene	5	µg/L	5	R
GB100	EPA8260	Water	M+P-Xylene	5	µg/L	5	R
GB100	EPA8260	Water	Methyl Tertiary Butyl Ether	5	µg/L	5	R
GB100	EPA8260	Water	Methylene Chloride	5	µg/L	5	R
GB100	EPA8260	Water	Naphthalene	5	µg/L	5	R
GB100	EPA8260	Water	N-Butylbenzene	5	µg/L	5	R
GB100	EPA8260	Water	N-Propylbenzene	5	µg/L	5	R
GB100	EPA8260	Water	O-Xylene	5	µg/L	5	R
GB100	EPA8260	Water	P-Isopropyltoluene	5	µg/L	5	R
GB100	EPA8260	Water	Sec-Butylbenzene	5	µg/L	5	R
GB100	EPA8260	Water	Styrene	5	µg/L	5	R
GB100	EPA8260	Water	Tert-Butylbenzene	5	µg/L	5	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB100	EPA8260	Water	Tetrachloroethene	5	µg/L	5	R
GB100	EPA8260	Water	Toluene	5	µg/L	5	R
GB100	EPA8260	Water	Trans-1,2-Dichloroethene	5	µg/L	5	R
GB100	EPA8260	Water	Trans-1,3-Dichloropropene	5	µg/L	5	R
GB100	EPA8260	Water	Trichloroethene	5	µg/L	5	R
GB100	EPA8260	Water	Trichlorofluoromethane	5	µg/L	5	R
GB100	EPA8260	Water	Trichlorotrifluoroethane	5	µg/L	5	R
GB100	EPA8260	Water	Vinyl Acetate	20	µg/L	20	R
GB100	EPA8260	Water	Vinyl Chloride	10	µg/L	10	R
GB102	EPA8260	Soil	1,1,1,2-Tetrachloroethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,1,1-Trichloroethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,1,2,2-Tetrachloroethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,1,2-Trichloroethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,1-Dichloroethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,1-Dichloroethene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,1-Dichloropropene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,2,3-Trichlorobenzene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,2,3-Trichloropropane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,2,4-Trichlorobenzene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	12	µg/kg	12	R
GB102	EPA8260	Soil	1,2-Dibromoethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,2-Dichlorobenzene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,2-Dichloroethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,2-Dichloropropane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,3-Dichlorobenzene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,3-Dichloropropane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1,4-Dichlorobenzene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	1-Chlorohexane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	2,2-Dichloropropane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	2-Butanone	25	µg/kg	25	R
GB102	EPA8260	Soil	2-Chlorotoluene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	2-Hexanone	25	µg/kg	25	R

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB102	EPA8270	Soil	3,3'-Dichlorobenzidine	2,100	µg/kg	2,100	R
GB102	EPA8260	Soil	4-Chlorotoluene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	4-Methyl-2-Pentanone	25	µg/kg	25	R
GB102	EPA8260	Soil	Benzene	6.2	µg/kg	6.2	R
GB102	EPA8270	Soil	Benzo(A)Pyrene	410	µg/kg	410	R
GB102	EPA8270	Soil	Benzo(B)Fluoranthene	410	µg/kg	410	R
GB102	EPA8270	Soil	Benzo(G,H,I)Perylene	410	µg/kg	410	R
GB102	EPA8270	Soil	Benzo(K)Fluoranthene	410	µg/kg	410	R
GB102	EPA8270	Soil	Bis(2-Ethylhexyl)Phthalate	410	µg/kg	410	R
GB102	EPA8260	Soil	Bromobenzene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Bromochloromethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Bromodichloromethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Bromoform	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Bromomethane	12	µg/kg	12	R
GB102	EPA8270	Soil	Butyl Benzyl Phthalate	410	µg/kg	410	R
GB102	EPA8260	Soil	Carbon Disulfide	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Carbon Tetrachloride	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Chlorobenzene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Chloroethane	12	µg/kg	12	R
GB102	EPA8260	Soil	Chloroform	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Chloromethane	12	µg/kg	12	R
GB102	EPA8270	Soil	Chrysene	410	µg/kg	410	R
GB102	EPA8260	Soil	Cis-1,2-Dichloroethene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Cis-1,3-Dichloropropene	6.2	µg/kg	6.2	R
GB102	EPA8270	Soil	Dibenzo(A,H)Anthracene	410	µg/kg	410	R
GB102	EPA8260	Soil	Dibromochloromethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Dibromomethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Dichlorodifluoromethane	12	µg/kg	12	R
GB102	EPA8270	Soil	Di-N-Octyl Phthalate	410	µg/kg	410	R
GB102	EPA8260	Soil	Hexachlorobutadiene	6.2	µg/kg	6.2	R
GB102	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	410	µg/kg	410	R
GB102	EPA8260	Soil	Iodomethane	6.2	µg/kg	6.2	R

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB102	EPA8260	Soil	Methyl Tertiary Butyl Ether	6.2	µg/kg	6.2	R
GB102	EPA8270	Soil	Pyrene	410	µg/kg	410	R
GB102	EPA8260	Soil	Styrene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Tetrachloroethene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Toluene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Trans-1,2-Dichloroethene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Trans-1,3-Dichloropropene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Trichloroethene	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Trichlorofluoromethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Trichlorotrifluoroethane	6.2	µg/kg	6.2	R
GB102	EPA8260	Soil	Vinyl Acetate	25	µg/kg	25	R
GB102	EPA8260	Soil	Vinyl Chloride	12	µg/kg	12	R
GB102RR1	EPA8260	Soil	1,1,1,2-Tetrachloroethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,1,1-Trichloroethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,1,2,2-Tetrachloroethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,1,2-Trichloroethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,1-Dichloroethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,1-Dichloroethene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,1-Dichloropropene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,2,3-Trichlorobenzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,2,3-Trichloropropane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,2,4-Trichlorobenzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	12	µg/kg	12	R
GB102RR1	EPA8260	Soil	1,2-Dibromoethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,2-Dichlorobenzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,2-Dichloroethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,2-Dichloropropane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,3-Dichlorobenzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,3-Dichloropropane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1,4-Dichlorobenzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	1-Chlorohexane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	2,2-Dichloropropane	6.2	µg/kg	6.2	R

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB102RR1	EPA8260	Soil	2-Butanone	25	µg/kg	25	R
GB102RR1	EPA8260	Soil	2-Chlorotoluene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	2-Hexanone	25	µg/kg	25	R
GB102RR1	EPA8260	Soil	4-Chlorotoluene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	4-Methyl-2-Pentanone	25	µg/kg	25	R
GB102RR1	EPA8260	Soil	Benzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Bromobenzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Bromochloromethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Bromodichloromethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Bromoform	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Bromomethane	12	µg/kg	12	R
GB102RR1	EPA8260	Soil	Carbon Disulfide	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Carbon Tetrachloride	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Chlorobenzene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Chloroethane	12	µg/kg	12	R
GB102RR1	EPA8260	Soil	Chloroform	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Chloromethane	12	µg/kg	12	R
GB102RR1	EPA8260	Soil	Cis-1,2-Dichloroethene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Cis-1,3-Dichloropropene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Dibromochloromethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Dibromomethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Dichlorodifluoromethane	12	µg/kg	12	R
GB102RR1	EPA8260	Soil	Hexachlorobutadiene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Iodomethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Methyl Tertiary Butyl Ether	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Styrene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Tetrachloroethene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Toluene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Trans-1,2-Dichloroethene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Trans-1,3-Dichloropropene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Trichloroethene	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Trichlorofluoromethane	6.2	µg/kg	6.2	R

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB102RR1	EPA8260	Soil	Trichlorotrifluoroethane	6.2	µg/kg	6.2	R
GB102RR1	EPA8260	Soil	Vinyl Acetate	25	µg/kg	25	R
GB102RR1	EPA8260	Soil	Vinyl Chloride	12	µg/kg	12	R
GB103	EPA8260	Soil	1,1,1,2-Tetrachloroethane	5	µg/L	5	R
GB103	EPA8260	Soil	1,1,1-Trichloroethane	5	µg/L	5	R
GB103	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5	µg/L	5	R
GB103	EPA8260	Soil	1,1,2-Trichloroethane	5	µg/L	5	R
GB103	EPA8260	Soil	1,1-Dichloroethane	5	µg/L	5	R
GB103	EPA8260	Soil	1,1-Dichloroethene	5	µg/L	5	R
GB103	EPA8260	Soil	1,1-Dichloropropene	5	µg/L	5	R
GB103	EPA8260	Soil	1,2,3-Trichlorobenzene	5	µg/L	5	R
GB103	EPA8260	Soil	1,2,3-Trichloropropane	5	µg/L	5	R
GB103	EPA8260	Soil	1,2,4-Trichlorobenzene	5	µg/L	5	R
GB103	EPA8260	Soil	1,2,4-Trimethylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	10	µg/L	10	R
GB103	EPA8260	Soil	1,2-Dibromoethane	5	µg/L	5	R
GB103	EPA8260	Soil	1,2-Dichlorobenzene	5	µg/L	5	R
GB103	EPA8260	Soil	1,2-Dichloroethane	5	µg/L	5	R
GB103	EPA8260	Soil	1,2-Dichloropropane	5	µg/L	5	R
GB103	EPA8260	Soil	1,3,5-Trimethylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	1,3-Dichlorobenzene	5	µg/L	5	R
GB103	EPA8260	Soil	1,3-Dichloropropane	5	µg/L	5	R
GB103	EPA8260	Soil	1,4-Dichlorobenzene	5	µg/L	5	R
GB103	EPA8260	Soil	1-Chlorohexane	5	µg/L	5	R
GB103	EPA8260	Soil	2,2-Dichloropropane	5	µg/L	5	R
GB103	EPA8260	Soil	2-Butanone	20	µg/L	20	R
GB103	EPA8260	Soil	2-Chlorotoluene	5	µg/L	5	R
GB103	EPA8260	Soil	2-Hexanone	20	µg/L	20	R
GB103	EPA8260	Soil	4-Chlorotoluene	5	µg/L	5	R
GB103	EPA8260	Soil	4-Methyl-2-Pentanone	20	µg/L	20	R
GB103	EPA8260	Soil	Benzene	5	µg/L	5	R
GB103	EPA8260	Soil	Bromobenzene	5	µg/L	5	R

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB103	EPA8260	Soil	Bromochloromethane	5	µg/L	5	R
GB103	EPA8260	Soil	Bromoform	5	µg/L	5	R
GB103	EPA8260	Soil	Bromomethane	10	µg/L	10	R
GB103	EPA8260	Soil	Carbon Disulfide	5	µg/L	5	R
GB103	EPA8260	Soil	Carbon Tetrachloride	5	µg/L	5	R
GB103	EPA8260	Soil	Chlorobenzene	5	µg/L	5	R
GB103	EPA8260	Soil	Chloroethane	10	µg/L	10	R
GB103	EPA8260	Soil	Chloromethane	10	µg/L	10	R
GB103	EPA8260	Soil	Cis-1,2-Dichloroethene	5	µg/L	5	R
GB103	EPA8260	Soil	Cis-1,3-Dichloropropene	5	µg/L	5	R
GB103	EPA8260	Soil	Dibromomethane	5	µg/L	5	R
GB103	EPA8260	Soil	Dichlorodifluoromethane	10	µg/L	10	R
GB103	EPA8260	Soil	Ethylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	Hexachlorobutadiene	5	µg/L	5	R
GB103	EPA8260	Soil	Iodomethane	5	µg/L	5	R
GB103	EPA8260	Soil	Isopropylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	M+P-Xylene	5	µg/L	5	R
GB103	EPA8260	Soil	Methyl Tertiary Butyl Ether	5	µg/L	5	R
GB103	EPA8260	Soil	Methylene Chloride	5	µg/L	5	R
GB103	EPA8260	Soil	Naphthalene	5	µg/L	5	R
GB103	EPA8260	Soil	N-Butylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	N-Propylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	O-Xylene	5	µg/L	5	R
GB103	EPA8260	Soil	P-Isopropyltoluene	5	µg/L	5	R
GB103	EPA8260	Soil	Sec-Butylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	Styrene	5	µg/L	5	R
GB103	EPA8260	Soil	Tert-Butylbenzene	5	µg/L	5	R
GB103	EPA8260	Soil	Tetrachloroethene	5	µg/L	5	R
GB103	EPA8260	Soil	Toluene	5	µg/L	5	R
GB103	EPA8260	Soil	Trans-1,2-Dichloroethene	5	µg/L	5	R
GB103	EPA8260	Soil	Trans-1,3-Dichloropropene	5	µg/L	5	R
GB103	EPA8260	Soil	Trichloroethene	5	µg/L	5	R

Table E.1-5
Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB103	EPA8260	Soil	Trichlorofluoromethane	5	µg/L	5	R
GB103	EPA8260	Soil	Trichlorotrifluoroethane	5	µg/L	5	R
GB103	EPA8260	Soil	Vinyl Acetate	20	µg/L	20	R
GB103	EPA8260	Soil	Vinyl Chloride	10	µg/L	10	R
GB104	EPA8260	Water	1,1,1,2-Tetrachloroethane	5	µg/L	5	R
GB104	EPA8260	Water	1,1,1-Trichloroethane	5	µg/L	5	R
GB104	EPA8260	Water	1,1,2,2-Tetrachloroethane	5	µg/L	5	R
GB104	EPA8260	Water	1,1,2-Trichloroethane	5	µg/L	5	R
GB104	EPA8260	Water	1,1-Dichloroethane	5	µg/L	5	R
GB104	EPA8260	Water	1,1-Dichloroethene	5	µg/L	5	R
GB104	EPA8260	Water	1,1-Dichloropropene	5	µg/L	5	R
GB104	EPA8260	Water	1,2,3-Trichlorobenzene	5	µg/L	5	R
GB104	EPA8260	Water	1,2,3-Trichloropropane	5	µg/L	5	R
GB104	EPA8260	Water	1,2,4-Trichlorobenzene	5	µg/L	5	R
GB104	EPA8260	Water	1,2,4-Trimethylbenzene	5	µg/L	5	R
GB104	EPA8260	Water	1,2-Dibromo-3-Chloropropane	10	µg/L	10	R
GB104	EPA8260	Water	1,2-Dibromoethane	5	µg/L	5	R
GB104	EPA8260	Water	1,2-Dichlorobenzene	5	µg/L	5	R
GB104	EPA8260	Water	1,2-Dichloroethane	5	µg/L	5	R
GB104	EPA8260	Water	1,2-Dichloropropane	5	µg/L	5	R
GB104	EPA8260	Water	1,3,5-Trimethylbenzene	5	µg/L	5	R
GB104	EPA8260	Water	1,3-Dichlorobenzene	5	µg/L	5	R
GB104	EPA8260	Water	1,3-Dichloropropane	5	µg/L	5	R
GB104	EPA8260	Water	1,4-Dichlorobenzene	5	µg/L	5	R
GB104	EPA8260	Water	1-Chlorohexane	5	µg/L	5	R
GB104	EPA8260	Water	2,2-Dichloropropane	5	µg/L	5	R
GB104	EPA8260	Water	2-Butanone	20	µg/L	20	R
GB104	EPA8260	Water	2-Chlorotoluene	5	µg/L	5	R
GB104	EPA8260	Water	2-Hexanone	20	µg/L	20	R
GB104	EPA8260	Water	4-Chlorotoluene	5	µg/L	5	R
GB104	EPA8260	Water	4-Methyl-2-Pentanone	20	µg/L	20	R
GB104	EPA8260	Water	Acetone	20	µg/L	20	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB104	EPA8260	Water	Benzene	5	µg/L	5	R
GB104	EPA8260	Water	Bromobenzene	5	µg/L	5	R
GB104	EPA8260	Water	Bromochloromethane	5	µg/L	5	R
GB104	EPA8260	Water	Bromodichloromethane	5	µg/L	5	R
GB104	EPA8260	Water	Bromoform	5	µg/L	5	R
GB104	EPA8260	Water	Bromomethane	10	µg/L	10	R
GB104	EPA8260	Water	Carbon Disulfide	5	µg/L	5	R
GB104	EPA8260	Water	Carbon Tetrachloride	5	µg/L	5	R
GB104	EPA8260	Water	Chlorobenzene	5	µg/L	5	R
GB104	EPA8260	Water	Chloroethane	10	µg/L	10	R
GB104	EPA8260	Water	Chloroform	5	µg/L	5	R
GB104	EPA8260	Water	Chloromethane	10	µg/L	10	R
GB104	EPA8260	Water	Cis-1,2-Dichloroethene	5	µg/L	5	R
GB104	EPA8260	Water	Cis-1,3-Dichloropropene	5	µg/L	5	R
GB104	EPA8260	Water	Dibromochloromethane	5	µg/L	5	R
GB104	EPA8260	Water	Dibromomethane	5	µg/L	5	R
GB104	EPA8260	Water	Dichlorodifluoromethane	10	µg/L	10	R
GB104	EPA8260	Water	Ethylbenzene	5	µg/L	5	R
GB104	EPA8260	Water	Hexachlorobutadiene	5	µg/L	5	R
GB104	EPA8260	Water	Iodomethane	5	µg/L	5	R
GB104	EPA8260	Water	Isopropylbenzene	5	µg/L	5	R
GB104	EPA8260	Water	M+P-Xylene	5	µg/L	5	R
GB104	EPA8260	Water	Methyl Tertiary Butyl Ether	5	µg/L	5	R
GB104	EPA8260	Water	Methylene Chloride	5	µg/L	5	R
GB104	EPA8260	Water	Naphthalene	5	µg/L	5	R
GB104	EPA8260	Water	N-Butylbenzene	5	µg/L	5	R
GB104	EPA8260	Water	N-Propylbenzene	5	µg/L	5	R
GB104	EPA8260	Water	O-Xylene	5	µg/L	5	R
GB104	EPA8260	Water	P-Isopropyltoluene	5	µg/L	5	R
GB104	EPA8260	Water	Sec-Butylbenzene	5	µg/L	5	R
GB104	EPA8260	Water	Styrene	5	µg/L	5	R
GB104	EPA8260	Water	Tert-Butylbenzene	5	µg/L	5	R

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Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GB104	EPA8260	Water	Tetrachloroethene	5	µg/L	5	R
GB104	EPA8260	Water	Toluene	5	µg/L	5	R
GB104	EPA8260	Water	Trans-1,2-Dichloroethene	5	µg/L	5	R
GB104	EPA8260	Water	Trans-1,3-Dichloropropene	5	µg/L	5	R
GB104	EPA8260	Water	Trichloroethene	5	µg/L	5	R
GB104	EPA8260	Water	Trichlorofluoromethane	5	µg/L	5	R
GB104	EPA8260	Water	Trichlorotrifluoroethane	5	µg/L	5	R
GB104	EPA8260	Water	Vinyl Acetate	20	µg/L	20	R
GB104	EPA8260	Water	Vinyl Chloride	10	µg/L	10	R
GBS1640911	EPA8260	Soil	1,1,1,2-Tetrachloroethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,1,1-Trichloroethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,1,2,2-Tetrachloroethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,1,2-Trichloroethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,1-Dichloroethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,1-Dichloroethene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,1-Dichloropropene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2,3-Trichlorobenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2,3-Trichloropropane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2,4-Trichlorobenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2,4-Trimethylbenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	13	µg/kg	13	R
GBS1640911	EPA8260	Soil	1,2-Dibromoethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2-Dichlorobenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2-Dichloroethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,2-Dichloropropane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,3,5-Trimethylbenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,3-Dichlorobenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,3-Dichloropropane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1,4-Dichlorobenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	1-Chlorohexane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	2,2-Dichloropropane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	2-Butanone	26	µg/kg	26	R

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Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1640911	EPA8260	Soil	2-Chlorotoluene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	2-Hexanone	26	µg/kg	26	R
GBS1640911	EPA8260	Soil	4-Chlorotoluene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	4-Methyl-2-Pentanone	26	µg/kg	26	R
GBS1640911	EPA8260	Soil	Acetone	26	µg/kg	26	R
GBS1640911	EPA8260	Soil	Benzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Bromobenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Bromochloromethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Bromodichloromethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Bromoform	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Bromomethane	13	µg/kg	13	R
GBS1640911	EPA8260	Soil	Carbon Disulfide	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Carbon Tetrachloride	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Chlorobenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Chloroethane	13	µg/kg	13	R
GBS1640911	EPA8260	Soil	Chloroform	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Chloromethane	13	µg/kg	13	R
GBS1640911	EPA8260	Soil	Cis-1,2-Dichloroethene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Cis-1,3-Dichloropropene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Dibromochloromethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Dibromomethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Dichlorodifluoromethane	13	µg/kg	13	R
GBS1640911	EPA8260	Soil	Ethylbenzene	6.4	µg/kg	6.4	R
GBS1640911	EPAG8015	Soil	Gasoline-Range Organics	0.65	mg/kg	0.65	R
GBS1640911	EPA8260	Soil	Hexachlorobutadiene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Iodomethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Isopropylbenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	M+P-Xylene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Methyl Tertiary Butyl Ether	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Naphthalene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	N-Butylbenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	N-Propylbenzene	6.4	µg/kg	6.4	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1640911	EPA8260	Soil	O-Xylene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	P-Isopropyltoluene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Sec-Butylbenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Styrene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Tert-Butylbenzene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Tetrachloroethene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Toluene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Trans-1,2-Dichloroethene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Trans-1,3-Dichloropropene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Trichloroethene	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Trichlorofluoromethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Trichlorotrifluoroethane	6.4	µg/kg	6.4	R
GBS1640911	EPA8260	Soil	Vinyl Acetate	26	µg/kg	26	R
GBS1640911	EPA8260	Soil	Vinyl Chloride	13	µg/kg	13	R
GBS1641214	EPAG8015	Soil	Gasoline-Range Organics	0.53	mg/kg	0.53	R
GBS1642123	EPA8260	Soil	1,1,1,2-Tetrachloroethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,1,1-Trichloroethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,1,2-Trichloroethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,1-Dichloroethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,1-Dichloroethene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,1-Dichloropropene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2,3-Trichlorobenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2,3-Trichloropropane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2,4-Trichlorobenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2,4-Trimethylbenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	11	µg/kg	11	R
GBS1642123	EPA8260	Soil	1,2-Dibromoethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2-Dichloroethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,2-Dichloropropane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,3,5-Trimethylbenzene	5.7	µg/kg	5.7	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1642123	EPA8260	Soil	1,3-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,3-Dichloropropane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1,4-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	1-Chlorohexane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	2,2-Dichloropropane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	2-Butanone	23	µg/kg	23	R
GBS1642123	EPA8260	Soil	2-Chlorotoluene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	2-Hexanone	23	µg/kg	23	R
GBS1642123	EPA8260	Soil	4-Chlorotoluene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	4-Methyl-2-Pentanone	23	µg/kg	23	R
GBS1642123	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1642123	EPA8260	Soil	Benzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Bromobenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Bromochloromethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Bromodichloromethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Bromoform	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Bromomethane	11	µg/kg	11	R
GBS1642123	EPA8260	Soil	Carbon Disulfide	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Carbon Tetrachloride	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Chlorobenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Chloroethane	11	µg/kg	11	R
GBS1642123	EPA8260	Soil	Chloroform	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Chloromethane	11	µg/kg	11	R
GBS1642123	EPA8260	Soil	Cis-1,2-Dichloroethene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Cis-1,3-Dichloropropene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Dibromochloromethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Dibromomethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Dichlorodifluoromethane	11	µg/kg	11	R
GBS1642123	EPA8260	Soil	Ethylbenzene	5.7	µg/kg	5.7	R
GBS1642123	EPAG8015	Soil	Gasoline-Range Organics	0.58	mg/kg	0.58	R
GBS1642123	EPA8260	Soil	Hexachlorobutadiene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Iodomethane	5.7	µg/kg	5.7	R

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Soil and Water Rejected Data
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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1642123	EPA8260	Soil	Isopropylbenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	M+P-Xylene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Methyl Tertiary Butyl Ether	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Naphthalene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	N-Butylbenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	N-Propylbenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	O-Xylene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	P-Isopropyltoluene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Sec-Butylbenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Styrene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Tert-Butylbenzene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Tetrachloroethene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Toluene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Trans-1,2-Dichloroethene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Trans-1,3-Dichloropropene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Trichloroethene	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Trichlorofluoromethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Trichlorotrifluoroethane	5.7	µg/kg	5.7	R
GBS1642123	EPA8260	Soil	Vinyl Acetate	23	µg/kg	23	R
GBS1642123	EPA8260	Soil	Vinyl Chloride	11	µg/kg	11	R
GBS1661012	EPA8260	Soil	1,1,1,2-Tetrachloroethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,1,1-Trichloroethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,1,2-Trichloroethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,1-Dichloroethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,1-Dichloroethene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,1-Dichloropropene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2,3-Trichlorobenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2,3-Trichloropropane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2,4-Trichlorobenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2,4-Trimethylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	11	µg/kg	11	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1661012	EPA8260	Soil	1,2-Dibromoethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2-Dichlorobenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2-Dichloroethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,2-Dichloropropane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,3,5-Trimethylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,3-Dichlorobenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,3-Dichloropropane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1,4-Dichlorobenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	1-Chlorohexane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	2,2-Dichloropropane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	2-Butanone	22	µg/kg	22	R
GBS1661012	EPA8260	Soil	2-Chlorotoluene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	2-Hexanone	22	µg/kg	22	R
GBS1661012	EPA8260	Soil	4-Chlorotoluene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	4-Methyl-2-Pentanone	22	µg/kg	22	R
GBS1661012	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1661012	EPA8260	Soil	Benzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Bromobenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Bromochloromethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Bromodichloromethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Bromoform	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Bromomethane	11	µg/kg	11	R
GBS1661012	EPA8260	Soil	Carbon Disulfide	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Carbon Tetrachloride	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Chlorobenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Chloroethane	11	µg/kg	11	R
GBS1661012	EPA8260	Soil	Chloroform	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Chloromethane	11	µg/kg	11	R
GBS1661012	EPA8260	Soil	Cis-1,2-Dichloroethene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Cis-1,3-Dichloropropene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Dibromochloromethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Dibromomethane	5.6	µg/kg	5.6	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1661012	EPA8260	Soil	Dichlorodifluoromethane	11	µg/kg	11	R
GBS1661012	EPA8260	Soil	Ethylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPAG8015	Soil	Gasoline-Range Organics	0.56	µg/kg	0.56	R
GBS1661012	EPA8260	Soil	Hexachlorobutadiene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Iodomethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Isopropylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	M+P-Xylene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Methyl Tertiary Butyl Ether	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Naphthalene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	N-Butylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	N-Propylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	O-Xylene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	P-Isopropyltoluene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Sec-Butylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Styrene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Tert-Butylbenzene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Tetrachloroethene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Toluene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Trans-1,2-Dichloroethene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Trans-1,3-Dichloropropene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Trichloroethene	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Trichlorofluoromethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Trichlorotrifluoroethane	5.6	µg/kg	5.6	R
GBS1661012	EPA8260	Soil	Vinyl Acetate	22	µg/kg	22	R
GBS1661012	EPA8260	Soil	Vinyl Chloride	11	µg/kg	11	R
GBS1662123	EPA8260	Soil	1,1,1,2-Tetrachloroethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,1,1-Trichloroethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,1,2,2-Tetrachloroethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,1,2-Trichloroethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,1-Dichloroethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,1-Dichloroethene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,1-Dichloropropene	6	µg/kg	6	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1662123	EPA8260	Soil	1,2,3-Trichlorobenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,2,3-Trichloropropane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,2,4-Trichlorobenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,2,4-Trimethylbenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	12	µg/kg	12	R
GBS1662123	EPA8260	Soil	1,2-Dibromoethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,2-Dichlorobenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,2-Dichloroethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,2-Dichloropropane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,3,5-Trimethylbenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,3-Dichlorobenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,3-Dichloropropane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1,4-Dichlorobenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	1-Chlorohexane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	2,2-Dichloropropane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	2-Butanone	24	µg/kg	24	R
GBS1662123	EPA8260	Soil	2-Chlorotoluene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	2-Hexanone	24	µg/kg	24	R
GBS1662123	EPA8260	Soil	4-Chlorotoluene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	4-Methyl-2-Pentanone	24	µg/kg	24	R
GBS1662123	EPA8260	Soil	Acetone	24	µg/kg	24	R
GBS1662123	EPA8260	Soil	Benzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Bromobenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Bromochloromethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Bromodichloromethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Bromoform	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Bromomethane	12	µg/kg	12	R
GBS1662123	EPA8260	Soil	Carbon Disulfide	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Carbon Tetrachloride	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Chlorobenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Chloroethane	12	µg/kg	12	R
GBS1662123	EPA8260	Soil	Chloroform	6	µg/kg	6	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1662123	EPA8260	Soil	Chloromethane	12	µg/kg	12	R
GBS1662123	EPA8260	Soil	Cis-1,2-Dichloroethene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Cis-1,3-Dichloropropene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Dibromochloromethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Dibromomethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Dichlorodifluoromethane	12	µg/kg	12	R
GBS1662123	EPA8260	Soil	Ethylbenzene	6	µg/kg	6	R
GBS1662123	EPAG8015	Soil	Gasoline-Range Organics	0.6	mg/kg	0.6	R
GBS1662123	EPA8260	Soil	Hexachlorobutadiene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Iodomethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Isopropylbenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	M+P-Xylene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Methyl Tertiary Butyl Ether	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Naphthalene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	N-Butylbenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	N-Propylbenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	O-Xylene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	P-Isopropyltoluene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Sec-Butylbenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Styrene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Tert-Butylbenzene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Tetrachloroethene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Toluene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Trans-1,2-Dichloroethene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Trans-1,3-Dichloropropene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Trichloroethene	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Trichlorofluoromethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Trichlorotrifluoroethane	6	µg/kg	6	R
GBS1662123	EPA8260	Soil	Vinyl Acetate	24	µg/kg	24	R
GBS1662123	EPA8260	Soil	Vinyl Chloride	12	µg/kg	12	R
GBS1670911	EPA8260	Soil	1,1,1,2-Tetrachloroethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,1,1-Trichloroethane	7	µg/kg	7	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1670911	EPA8260	Soil	1,1,2,2-Tetrachloroethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,1,2-Trichloroethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,1-Dichloroethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,1-Dichloroethene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,1-Dichloropropene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2,3-Trichlorobenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2,3-Trichloropropane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2,4-Trichlorobenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2,4-Trimethylbenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	14	µg/kg	14	R
GBS1670911	EPA8260	Soil	1,2-Dibromoethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2-Dichlorobenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2-Dichloroethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,2-Dichloropropane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,3,5-Trimethylbenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,3-Dichlorobenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,3-Dichloropropane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1,4-Dichlorobenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	1-Chlorohexane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	2,2-Dichloropropane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	2-Butanone	28	µg/kg	28	R
GBS1670911	EPA8260	Soil	2-Chlorotoluene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	2-Hexanone	28	µg/kg	28	R
GBS1670911	EPA8260	Soil	4-Chlorotoluene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	4-Methyl-2-Pentanone	28	µg/kg	28	R
GBS1670911	EPA8260	Soil	Acetone	28	µg/kg	28	R
GBS1670911	EPA8260	Soil	Benzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Bromobenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Bromochloromethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Bromodichloromethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Bromoform	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Bromomethane	14	µg/kg	14	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1670911	EPA8260	Soil	Carbon Disulfide	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Carbon Tetrachloride	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Chlorobenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Chloroethane	14	µg/kg	14	R
GBS1670911	EPA8260	Soil	Chloroform	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Chloromethane	14	µg/kg	14	R
GBS1670911	EPA8260	Soil	Cis-1,2-Dichloroethene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Cis-1,3-Dichloropropene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Dibromochloromethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Dibromomethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Dichlorodifluoromethane	14	µg/kg	14	R
GBS1670911	EPA8260	Soil	Ethylbenzene	7	µg/kg	7	R
GBS1670911	EPAG8015	Soil	Gasoline-Range Organics	0.71	mg/kg	0.71	R
GBS1670911	EPA8260	Soil	Hexachlorobutadiene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Iodomethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Isopropylbenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	M+P-Xylene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Methyl Tertiary Butyl Ether	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Naphthalene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	N-Butylbenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	N-Propylbenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	O-Xylene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	P-Isopropyltoluene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Sec-Butylbenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Styrene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Tert-Butylbenzene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Tetrachloroethene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Toluene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Trans-1,2-Dichloroethene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Trans-1,3-Dichloropropene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Trichloroethene	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Trichlorofluoromethane	7	µg/kg	7	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1670911	EPA8260	Soil	Trichlorotrifluoroethane	7	µg/kg	7	R
GBS1670911	EPA8260	Soil	Vinyl Acetate	28	µg/kg	28	R
GBS1670911	EPA8260	Soil	Vinyl Chloride	14	µg/kg	14	R
GBS1671214	EPAG8015	Soil	Gasoline-Range Organics	0.53	mg/kg	0.53	R
GBS1671820	EPA8260	Soil	1,1,1,2-Tetrachloroethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,1,1-Trichloroethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,1,2-Trichloroethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,1-Dichloroethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,1-Dichloroethene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,1-Dichloropropene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2,3-Trichlorobenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2,3-Trichloropropane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2,4-Trichlorobenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2,4-Trimethylbenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	11	µg/kg	11	R
GBS1671820	EPA8260	Soil	1,2-Dibromoethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2-Dichloroethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,2-Dichloropropane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,3,5-Trimethylbenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,3-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,3-Dichloropropane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1,4-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	1-Chlorohexane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	2,2-Dichloropropane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	2-Butanone	23	µg/kg	23	R
GBS1671820	EPA8260	Soil	2-Chlorotoluene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	2-Hexanone	23	µg/kg	23	R
GBS1671820	EPA8260	Soil	4-Chlorotoluene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	4-Methyl-2-Pentanone	23	µg/kg	23	R
GBS1671820	EPA8260	Soil	Acetone	23	µg/kg	23	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1671820	EPA8260	Soil	Benzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Bromobenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Bromochloromethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Bromodichloromethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Bromoform	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Bromomethane	11	µg/kg	11	R
GBS1671820	EPA8260	Soil	Carbon Disulfide	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Carbon Tetrachloride	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Chlorobenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Chloroethane	11	µg/kg	11	R
GBS1671820	EPA8260	Soil	Chloroform	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Chloromethane	11	µg/kg	11	R
GBS1671820	EPA8260	Soil	Cis-1,2-Dichloroethene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Cis-1,3-Dichloropropene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Dibromochloromethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Dibromomethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Dichlorodifluoromethane	11	µg/kg	11	R
GBS1671820	EPA8260	Soil	Ethylbenzene	5.7	µg/kg	5.7	R
GBS1671820	EPAG8015	Soil	Gasoline-Range Organics	0.57	mg/kg	0.57	R
GBS1671820	EPA8260	Soil	Hexachlorobutadiene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Iodomethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Isopropylbenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	M+P-Xylene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Methyl Tertiary Butyl Ether	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Naphthalene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	N-Butylbenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	N-Propylbenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	O-Xylene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	P-Isopropyltoluene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Sec-Butylbenzene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Styrene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Tert-Butylbenzene	5.7	µg/kg	5.7	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1671820	EPA8260	Soil	Tetrachloroethene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Toluene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Trans-1,2-Dichloroethene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Trans-1,3-Dichloropropene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Trichloroethene	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Trichlorofluoromethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Trichlorotrifluoroethane	5.7	µg/kg	5.7	R
GBS1671820	EPA8260	Soil	Vinyl Acetate	23	µg/kg	23	R
GBS1671820	EPA8260	Soil	Vinyl Chloride	11	µg/kg	11	R
GBS1681214	EPA8260	Soil	1,1,1,2-Tetrachloroethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,1,1-Trichloroethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,1,2-Trichloroethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,1-Dichloroethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,1-Dichloroethene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,1-Dichloropropene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2,3-Trichlorobenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2,3-Trichloropropane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2,4-Trichlorobenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2,4-Trimethylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	12	µg/kg	12	R
GBS1681214	EPA8260	Soil	1,2-Dibromoethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2-Dichlorobenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2-Dichloroethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,2-Dichloropropane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,3,5-Trimethylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,3-Dichlorobenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,3-Dichloropropane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1,4-Dichlorobenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	1-Chlorohexane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	2,2-Dichloropropane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	2-Chlorotoluene	5.9	µg/kg	5.9	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1681214	EPA8260	Soil	2-Hexanone	24	µg/kg	24	R
GBS1681214	EPA8260	Soil	4-Chlorotoluene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	4-Methyl-2-Pentanone	24	µg/kg	24	R
GBS1681214	EPA8260	Soil	Benzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8270	Soil	Benzo(A)Pyrene	390	µg/kg	390	R
GBS1681214	EPA8270	Soil	Benzo(B)Fluoranthene	390	µg/kg	390	R
GBS1681214	EPA8270	Soil	Benzo(G,H,I)Perylene	390	µg/kg	390	R
GBS1681214	EPA8270	Soil	Benzo(K)Fluoranthene	390	µg/kg	390	R
GBS1681214	EPA8260	Soil	Bromobenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Bromochloromethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Bromodichloromethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Bromoform	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Bromomethane	12	µg/kg	12	R
GBS1681214	EPA8260	Soil	Carbon Disulfide	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Carbon Tetrachloride	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Chlorobenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Chloroethane	12	µg/kg	12	R
GBS1681214	EPA8260	Soil	Chloroform	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Chloromethane	12	µg/kg	12	R
GBS1681214	EPA8260	Soil	Cis-1,2-Dichloroethene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Cis-1,3-Dichloropropene	5.9	µg/kg	5.9	R
GBS1681214	EPA8270	Soil	Dibenzo(A,H)Anthracene	390	µg/kg	390	R
GBS1681214	EPA8260	Soil	Dibromochloromethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Dibromomethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Dichlorodifluoromethane	12	µg/kg	12	R
GBS1681214	EPA8260	Soil	Ethylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Hexachlorobutadiene	5.9	µg/kg	5.9	R
GBS1681214	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	390	µg/kg	390	R
GBS1681214	EPA8260	Soil	Iodomethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Isopropylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	M+P-Xylene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Methyl Tertiary Butyl Ether	5.9	µg/kg	5.9	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1681214	EPA8260	Soil	Naphthalene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	N-Butylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	N-Propylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	O-Xylene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	P-Isopropyltoluene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Sec-Butylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Styrene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Tert-Butylbenzene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Tetrachloroethene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Toluene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Trans-1,2-Dichloroethene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Trans-1,3-Dichloropropene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Trichloroethene	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Trichlorofluoromethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Trichlorotrifluoroethane	5.9	µg/kg	5.9	R
GBS1681214	EPA8260	Soil	Vinyl Acetate	24	µg/kg	24	R
GBS1681214	EPA8260	Soil	Vinyl Chloride	12	µg/kg	12	R
GBS1682325	EPA8260	Soil	1,1,1,2-Tetrachloroethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,1,1-Trichloroethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,1,2-Trichloroethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,1-Dichloroethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,1-Dichloroethene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,1-Dichloropropene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,2,3-Trichlorobenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,2,3-Trichloropropane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,2,4-Trichlorobenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,2,4-Trimethylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	11	µg/kg	11	R
GBS1682325	EPA8260	Soil	1,2-Dibromoethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,2-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,2-Dichloroethane	5.7	µg/kg	5.7	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1682325	EPA8260	Soil	1,2-Dichloropropane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,3,5-Trimethylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,3-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,3-Dichloropropane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1,4-Dichlorobenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	1-Chlorohexane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	2,2-Dichloropropane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	2-Butanone	23	µg/kg	23	R
GBS1682325	EPA8260	Soil	2-Chlorotoluene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	2-Hexanone	23	µg/kg	23	R
GBS1682325	EPA8260	Soil	4-Chlorotoluene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	4-Methyl-2-Pentanone	23	µg/kg	23	R
GBS1682325	EPA8260	Soil	Acetone	23	µg/kg	23	R
GBS1682325	EPA8260	Soil	Benzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Bromobenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Bromochloromethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Bromodichloromethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Bromoform	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Bromomethane	11	µg/kg	11	R
GBS1682325	EPA8260	Soil	Carbon Disulfide	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Carbon Tetrachloride	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Chlorobenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Chloroethane	11	µg/kg	11	R
GBS1682325	EPA8260	Soil	Chloroform	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Chloromethane	11	µg/kg	11	R
GBS1682325	EPA8260	Soil	Cis-1,2-Dichloroethene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Cis-1,3-Dichloropropene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Dibromochloromethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Dibromomethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Dichlorodifluoromethane	11	µg/kg	11	R
GBS1682325	EPA8260	Soil	Ethylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Hexachlorobutadiene	5.7	µg/kg	5.7	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1682325	EPA8260	Soil	Iodomethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Isopropylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	M+P-Xylene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Methyl Tertiary Butyl Ether	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Naphthalene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	N-Butylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	N-Propylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	O-Xylene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	P-Isopropyltoluene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Sec-Butylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Styrene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Tert-Butylbenzene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Tetrachloroethene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Toluene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Trans-1,2-Dichloroethene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Trans-1,3-Dichloropropene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Trichloroethene	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Trichlorofluoromethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Trichlorotrifluoroethane	5.7	µg/kg	5.7	R
GBS1682325	EPA8260	Soil	Vinyl Acetate	23	µg/kg	23	R
GBS1682325	EPA8260	Soil	Vinyl Chloride	11	µg/kg	11	R
GBS1691416	EPA8260	Soil	1,1,1,2-Tetrachloroethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,1,1-Trichloroethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,1,2,2-Tetrachloroethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,1,2-Trichloroethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,1-Dichloroethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,1-Dichloroethene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,1-Dichloropropene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,2,3-Trichlorobenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,2,3-Trichloropropane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,2,4-Trichlorobenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	14	µg/kg	14	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1691416	EPA8260	Soil	1,2-Dibromoethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,2-Dichlorobenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,2-Dichloroethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,2-Dichloropropane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,3-Dichlorobenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,3-Dichloropropane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1,4-Dichlorobenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	1-Chlorohexane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	2,2-Dichloropropane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	2-Butanone	28	µg/kg	28	R
GBS1691416	EPA8260	Soil	2-Chlorotoluene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	2-Hexanone	28	µg/kg	28	R
GBS1691416	EPA8270	Soil	3,3'-Dichlorobenzidine	2,300	µg/kg	2,300	R
GBS1691416	EPA8260	Soil	4-Chlorotoluene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	4-Methyl-2-Pentanone	28	µg/kg	28	R
GBS1691416	EPA8260	Soil	Benzene	7	µg/kg	7	R
GBS1691416	EPA8270	Soil	Benzo(A)Anthracene	470	µg/kg	470	R
GBS1691416	EPA8270	Soil	Benzo(A)Pyrene	470	µg/kg	470	R
GBS1691416	EPA8270	Soil	Benzo(B)Fluoranthene	470	µg/kg	470	R
GBS1691416	EPA8270	Soil	Benzo(G,H,I)Perylene	470	µg/kg	470	R
GBS1691416	EPA8270	Soil	Benzo(K)Fluoranthene	470	µg/kg	470	R
GBS1691416	EPA8270	Soil	Bis(2-Ethylhexyl)Phthalate	470	µg/kg	470	R
GBS1691416	EPA8260	Soil	Bromobenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Bromochloromethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Bromodichloromethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Bromoform	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Bromomethane	14	µg/kg	14	R
GBS1691416	EPA8270	Soil	Butyl Benzyl Phthalate	470	µg/kg	470	R
GBS1691416	EPA8260	Soil	Carbon Disulfide	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Carbon Tetrachloride	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Chlorobenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Chloroethane	14	µg/kg	14	R

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Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1691416	EPA8260	Soil	Chloroform	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Chloromethane	14	µg/kg	14	R
GBS1691416	EPA8260	Soil	Cis-1,2-Dichloroethene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Cis-1,3-Dichloropropene	7	µg/kg	7	R
GBS1691416	EPA8270	Soil	Dibenzo(A,H)Anthracene	470	µg/kg	470	R
GBS1691416	EPA8270	Soil	Dibenzofuran	470	µg/kg	470	R
GBS1691416	EPA8260	Soil	Dibromochloromethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Dibromomethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Dichlorodifluoromethane	14	µg/kg	14	R
GBS1691416	EPA8270	Soil	Di-N-Octyl Phthalate	470	µg/kg	470	R
GBS1691416	EPA8260	Soil	Hexachlorobutadiene	7	µg/kg	7	R
GBS1691416	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	470	µg/kg	470	R
GBS1691416	EPA8260	Soil	Iodomethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Methyl Tertiary Butyl Ether	7	µg/kg	7	R
GBS1691416	EPA8270	Soil	Pyrene	470	µg/kg	470	R
GBS1691416	EPA8260	Soil	Styrene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Tert-Butylbenzene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Tetrachloroethene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Toluene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Trans-1,2-Dichloroethene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Trans-1,3-Dichloropropene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Trichloroethene	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Trichlorofluoromethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Trichlorotrifluoroethane	7	µg/kg	7	R
GBS1691416	EPA8260	Soil	Vinyl Acetate	28	µg/kg	28	R
GBS1691416	EPA8260	Soil	Vinyl Chloride	14	µg/kg	14	R
GBS1691416 RR1	EPA8270	Soil	Benzo(A)Pyrene	930	µg/kg	930	R
GBS1691416 RR1	EPA8270	Soil	Benzo(B)Fluoranthene	930	µg/kg	930	R
GBS1691416 RR1	EPA8270	Soil	Benzo(G,H,I)Perylene	930	µg/kg	930	R

Table E.1-5
Soil and Water Rejected Data
(Page 46 of 48)

Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1691416 RR1	EPA8270	Soil	Benzo(K)Fluoranthene	930	µg/kg	930	R
GBS1691416 RR1	EPA8270	Soil	Dibenzo(A,H)Anthracene	930	µg/kg	930	R
GBS1691416 RR1	EPA8270	Soil	Indeno(1,2,3-CD)Pyrene	930	µg/kg	930	R
GBS1691719	EPAG8015	Soil	Gasoline-Range Organics	0.58	mg/kg	0.58	R
GBS1692527	EPA8260	Soil	1,1,1,2-Tetrachloroethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,1,1-Trichloroethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,1,2,2-Tetrachloroethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,1,2-Trichloroethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,1-Dichloroethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,1-Dichloroethene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,1-Dichloropropene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2,3-Trichlorobenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2,3-Trichloropropane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2,4-Trichlorobenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2,4-Trimethylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2-Dibromo-3-Chloropropane	11	µg/kg	11	R
GBS1692527	EPA8260	Soil	1,2-Dibromoethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2-Dichlorobenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2-Dichloroethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,2-Dichloropropane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,3,5-Trimethylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,3-Dichlorobenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,3-Dichloropropane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1,4-Dichlorobenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	1-Chlorohexane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	2,2-Dichloropropane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	2-Butanone	22	µg/kg	22	R
GBS1692527	EPA8260	Soil	2-Chlorotoluene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	2-Hexanone	22	µg/kg	22	R
GBS1692527	EPA8260	Soil	4-Chlorotoluene	5.5	µg/kg	5.5	R

Table E.1-5
Soil and Water Rejected Data
(Page 47 of 48)

Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1692527	EPA8260	Soil	4-Methyl-2-Pentanone	22	µg/kg	22	R
GBS1692527	EPA8260	Soil	Acetone	22	µg/kg	22	R
GBS1692527	EPA8260	Soil	Benzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Bromobenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Bromochloromethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Bromodichloromethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Bromoform	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Bromomethane	11	µg/kg	11	R
GBS1692527	EPA8260	Soil	Carbon Disulfide	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Carbon Tetrachloride	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Chlorobenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Chloroethane	11	µg/kg	11	R
GBS1692527	EPA8260	Soil	Chloroform	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Chloromethane	11	µg/kg	11	R
GBS1692527	EPA8260	Soil	Cis-1,2-Dichloroethene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Cis-1,3-Dichloropropene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Dibromochloromethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Dibromomethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Dichlorodifluoromethane	11	µg/kg	11	R
GBS1692527	EPA8260	Soil	Ethylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPAG8015	Soil	Gasoline-Range Organics	0.55	mg/kg	0.55	R
GBS1692527	EPA8260	Soil	Hexachlorobutadiene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Iodomethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Isopropylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	M+P-Xylene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Methyl Tertiary Butyl Ether	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Naphthalene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	N-Butylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	N-Propylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	O-Xylene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	P-Isopropyltoluene	5.5	µg/kg	5.5	R

Table E.1-5
Soil and Water Rejected Data
(Page 48 of 48)

Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Detection Limit	Qualifier
GBS1692527	EPA8260	Soil	Sec-Butylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Styrene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Tert-Butylbenzene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Tetrachloroethene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Toluene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Trans-1,2-Dichloroethene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Trans-1,3-Dichloropropene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Trichloroethene	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Trichlorofluoromethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Trichlorotrifluoroethane	5.5	µg/kg	5.5	R
GBS1692527	EPA8260	Soil	Vinyl Acetate	22	µg/kg	22	R
GBS1692527	EPA8260	Soil	Vinyl Chloride	11	µg/kg	11	R
GBS1721416	EPAG8015	Soil	Gasoline-Range Organics	0.55	mg/kg	0.55	R
GBS1731416	EPAG8015	Soil	Gasoline-Range Organics	0.53	mg/kg	0.53	R

Note: GB097 through GB104 and GBS164 through GBS173 was rejected as the samples arrived warm to the lab.
Note: This table was sorted by analysis method, parameter, and sample number.

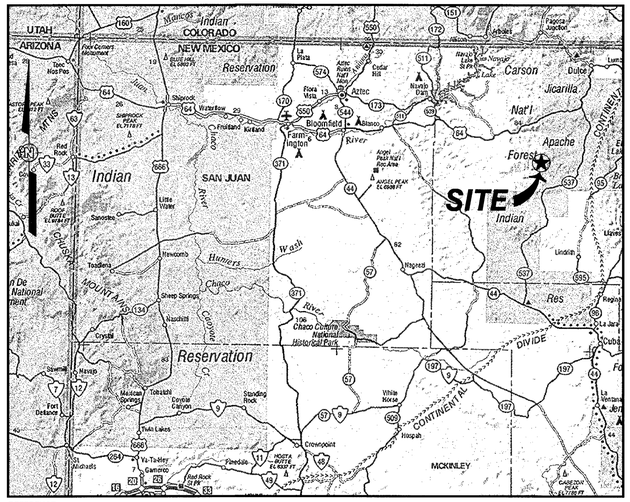
mg/kg = Milligrams per kilogram
µg/kg = Micrograms per kilogram
µg/L = Micrograms per liter
R = Rejected data
RR = Appearing after a sample number indicates the laboratory reran the analysis on the sample

Plates

PLATE 1
Gasbuggy Site
Rio Arriba County, New Mexico

09-APR-2004 | h:\GasBuggy\CAIR\GBplate1.dgn

OFFICE Pittsburgh, PA | DRAWING NUMBER 840225-T2



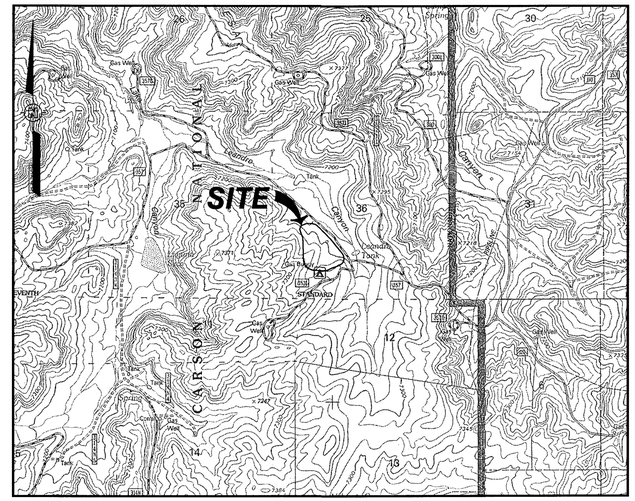
REFERENCE:
MAP TAKEN FROM AAA STATE SERIES ROADWAY MAP TITLED: ARIZONA/NEW MEXICO, DATED: 12/02-3/04.

SITE VICINITY MAP

SCALE
0 4 8 MILES

INDEX OF DRAWINGS

SHAW DRAWING NUMBER	SHEET REFERENCE NUMBER	DESCRIPTION
840225-T2	T-1	TITLE SHEET
840225-D13	C-1	EXISTING SITE CONDITIONS
840225-D12	C-2	SITE LAYOUT
840225-D11	C-3	EXCAVATION PLANS
840225-D10	C-4	EXCAVATION CROSS SECTIONS
840225-D14	C-5	CONFIRMATORY SAMPLE LOCATIONS
840225-D15	C-6	FINAL GRADING PLAN
840225-D4	C-7	MISCELLANEOUS DETAILS



REFERENCE:
TOPOGRAPHIC MAP TAKEN FROM U.S.G.S. LEANDRO CANYON QUADRANGLE, 7.5 MINUTE SERIES TOPOGRAPHIC MAP, DATED: 1995, SCALE: 1"=2000'.

SITE LOCATION MAP

SCALE
0 2000 4000 FEET

MUD PIT CLOSURE PLANS

GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO
RIO ARRIBA COUNTY, NEW MEXICO

PREPARED FOR

NNSA National Nuclear Security Administration

NATIONAL NUCLEAR SECURITY ADMINISTRATION NEVADA SITE OFFICE

VERIFY SCALE 0 1"

XREF Files: IMAGE Files: New_NNSA_Logo.tif SITELOCMAP.tif SITEVICMAP.tif
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Plot Date/Time: Sep 10, 2003 - 8:10am
Plotted By: greg.jones

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION/ISSUE
0	9/10/03	GSJ	TJC	DCS	SUBMISSION TO NM VRP
A	5/01/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw Environmental, Inc.

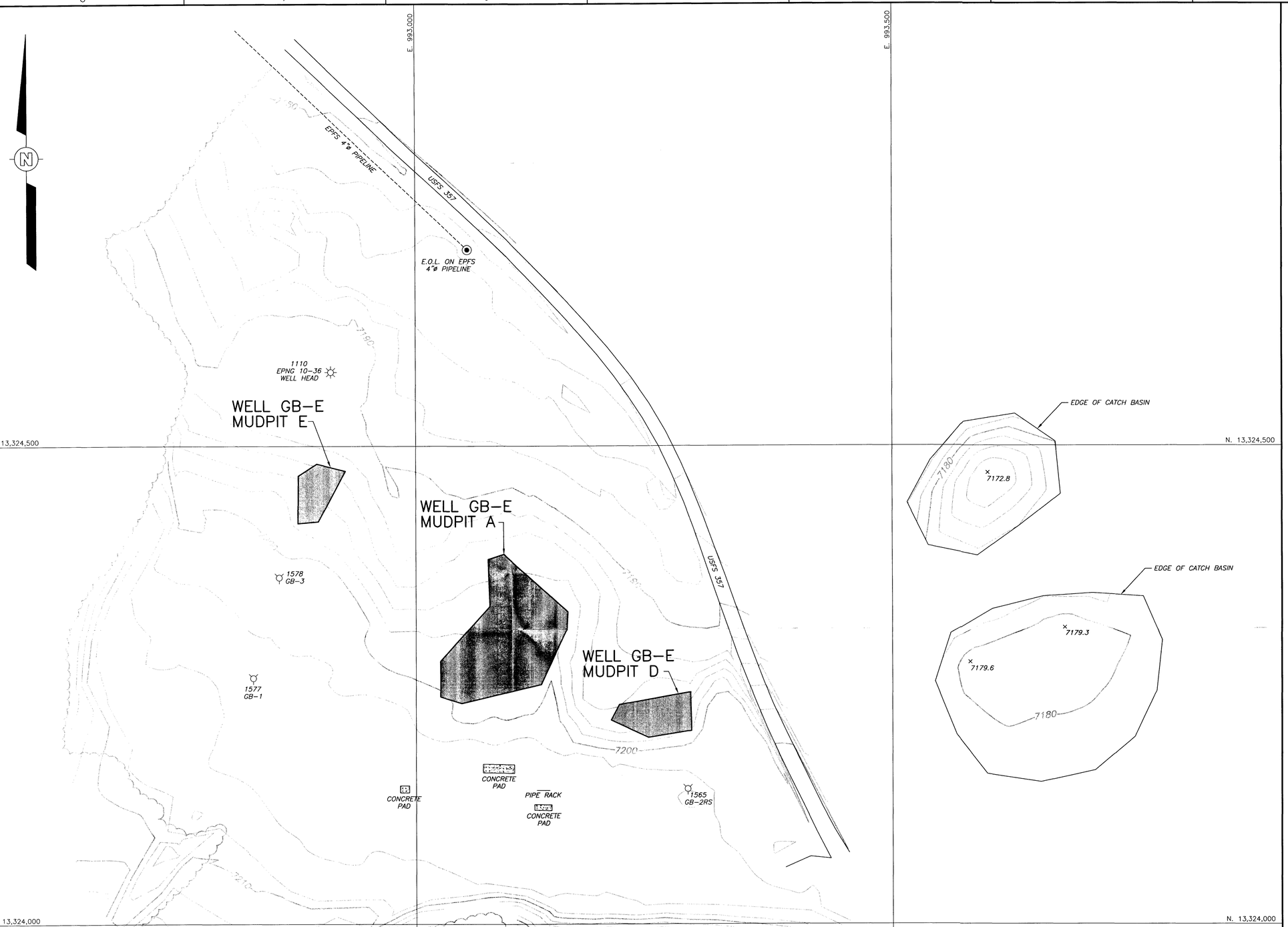
NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

TITLE SHEET
GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO AND WELL GB-D AREA
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–	–	CHECKED BY	J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY	D. Stahl	5 Sept 03

SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
AS SHOWN	840225-T2	T-1	0

OFFICE Pittsburgh, PA | DRAWING NUMBER 840225-D13



LEGEND:

- APPROXIMATE LIMITS OF DRILLING MUD TO BE EXCAVATED
- 7220 GROUND SURFACE CONTOUR (CONTOUR INTERVAL = 2 FEET)
- VEGETATION
- WELL HEAD
- WELL MARKER
- PIPELINE E.O.L.
- 12"ø CMP

REFERENCE:

TOPOGRAPHIC, STRUCTURAL, AND SAMPLE LOCATIONS TAKEN FROM THE TOPOGRAPHIC SURVEY DRAWING PROVIDED BY: DAGGETT ENTERPRISES, INC., FARMINGTON, NEW MEXICO, TITLED: "A TOPOGRAPHIC SURVEY FOR IT CORPORATION LAS VEGAS, GASBUGGY SITE INVESTIGATION, SURFACE GROUND ZERO AREA, RIO ARRIBA COUNTY, NEW MEXICO", CADFILE: SHW001T01, DATED: 9/24/02, SCALE: 1"=50'.

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VERIFY SCALE 1"

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Plotted: Thursday, May 29, 2003 - 10:48am
Plotted By: greg.jones

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A	5/01/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw™ Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

EXISTING SITE CONDITIONS
GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–	–	CHECKED BY	J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY	D. Stahl	5 Sept 03
SCALE: AS SHOWN	DRAWING NO. 840225-D13		SHEET NO. C-1		REVISION NO. 0

OFFICE: Pittsburgh, PA | DRAWING NUMBER: 840225-D12

E. 993,000

E. 993,500

N. 13,324,500

N. 13,324,000

7180

7200

7220

EPFS 4"ø PIPELINE

USFS 357

E.O.L. ON EPFS 4"ø PIPELINE

TEMPORARY ACCESS ROAD SEE DETAIL 2 C-7

APPROXIMATE LIMITS OF OVERBURDEN EXCAVATION

1110 EPNG 10-36 WELL HEAD

WELL GB-E MUDPIT E

TEMPORARY SEDIMENTATION POND

TEMPORARY OVERBURDEN STOCKPILE AREA

SEE DETAIL 6 C-7

TEMPORARY DRILLING MUD STOCKPILE AREA SEE DETAIL 5 C-7

WELL GB-E MUDPIT A

CLEAN WATER POLY TANK (5,000 GAL.)

1578 GB-3

FRAC TANKS (500 BBL)

1577 GB-1

LAYDOWN AREA

EQUIPMENT DECONTAMINATION PAD SEE DETAIL 1 C-7

TEMPORARY DRILLING MUD STOCKPILE AREA SEE DETAIL 5 C-7

WELL GB-E MUDPIT D

TRUCK DECONTAMINATION PAD SEE DETAIL 1 C-7

CONCRETE PAD

APPROXIMATE LIMITS OF OVERBURDEN EXCAVATION

PIPE RACK

CONCRETE PAD

1565 GB-2RS

APPROXIMATE LIMITS OF OVERBURDEN EXCAVATION

TRUCK SCALE

SITE OFFICE TRAILERS

STABILIZED CONSTRUCTION EXIT SEE DETAIL 4 C-7

EDGE OF CATCH BASIN

7172.8

7180

EDGE OF CATCH BASIN

7179.3

7179.6

7180

VERIFY SCALE 0 1"

SCALE 0 50 100 150 FEET

LEGEND:

- APPROXIMATE LIMITS OF DRILLING MUD TO BE EXCAVATED
- CULVERT
- TEMPORARY CONSTRUCTION FENCE
- SILT FENCE
- GROUND SURFACE CONTOUR (CONTOUR INTERVAL = 2 FEET)
- VEGETATION
- WELL HEAD
- WELL MARKER
- PIPELINE E.O.L.
- 12"ø CMP

REFERENCE:

TOPOGRAPHIC, STRUCTURAL, AND SAMPLE LOCATIONS TAKEN FROM THE TOPOGRAPHIC SURVEY DRAWING PROVIDED BY: DAGGETT ENTERPRISES, INC., FARMINGTON, NEW MEXICO, TITLED: "A TOPOGRAPHIC SURVEY FOR IT CORPORATION LAS VEGAS, GASBUGGY SITE INVESTIGATION, SURFACE GROUND ZERO AREA, RIO ARRIBA COUNTY, NEW MEXICO", CADFILE: SHW001T01, DATED: 9/24/02, SCALE: 1"=50'.

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION/ISSUE
0	9/1/03	GSJ	TJC	DCS	SUBMISSION TO NM VRP
A	5/01/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

SITE LAYOUT
GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–		–	CHECKED BY	J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY	D. Stahl	5 Sept 03

SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
AS SHOWN	840225-D12	C-2	0

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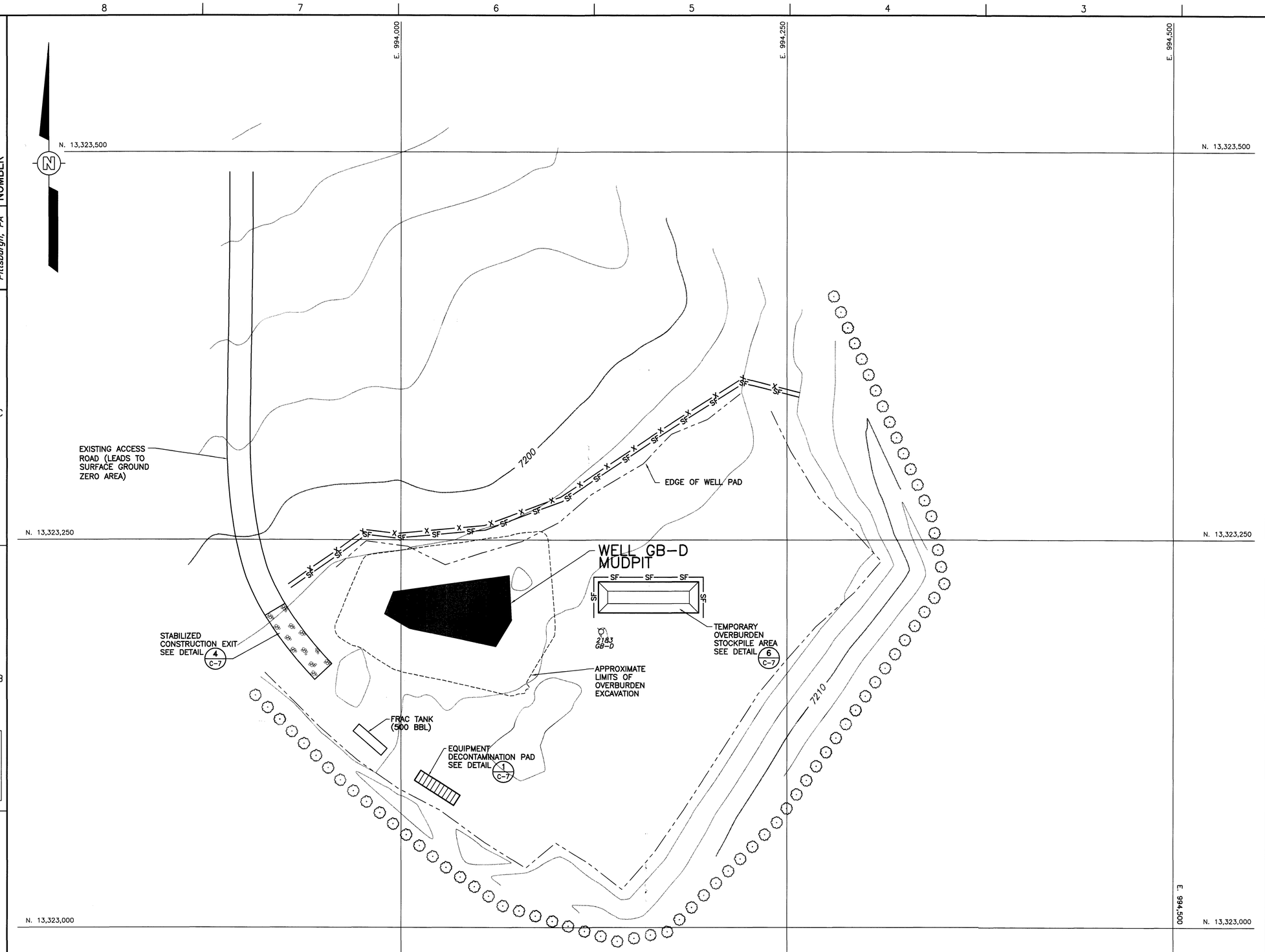
Plotted By: greg.jones

OFFICE: Pittsburgh, PA | DRAWING NUMBER: 840225-D16



LEGEND:

- APPROXIMATE LIMITS OF DRILLING MUD TO BE EXCAVATED
- CULVERT
- —X— TEMPORARY CONSTRUCTION FENCE
- —SF— SILT FENCE
- —7220— GROUND SURFACE CONTOUR (CONTOUR INTERVAL = 2 FEET)
- VEGETATION
- WELL HEAD
- WELL MARKER
- PIPELINE E.O.L.
- 12"ø CMP

REFERENCE:

TOPOGRAPHIC, STRUCTURAL, AND SAMPLE LOCATIONS TAKEN FROM THE TOPOGRAPHIC SURVEY DRAWING PROVIDED BY: DAGGETT ENTERPRISES, INC., FARMINGTON, NEW MEXICO, TITLED: "A TOPOGRAPHIC SURVEY FOR IT CORPORATION LAS VEGAS, GASBUGGY SITE INVESTIGATION, SURFACE GROUND ZERO AREA, RIO ARRIBA COUNTY, NEW MEXICO", CADFILE: SHW001T01, DATED: 9/24/02, SCALE: 1"=50'.

SCALE
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VERIFY SCALE
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REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION/ISSUE
0	9/12/03	GSJ	TJC	DCS	DRAFT DESIGN
A	5/01/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw™ Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

SITE LAYOUT
GASBUGGY SITE INVESTIGATION
WELL GB-D AREA
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–	–	CHECKED BY	J. Coburn	9 Sept 03
DRAWN BY	G. S. Jones	4 Sept 03	APPROVED BY	D. Stahl	18 Sept 03

SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
AS SHOWN	840225-D16	C-2	0

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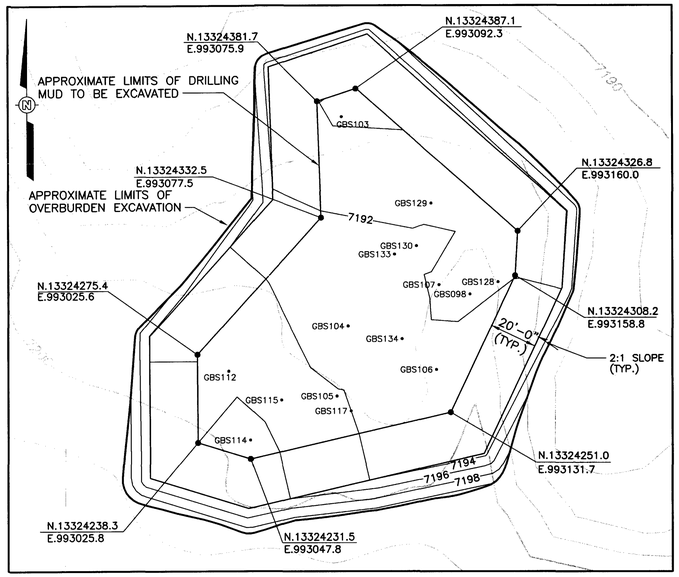
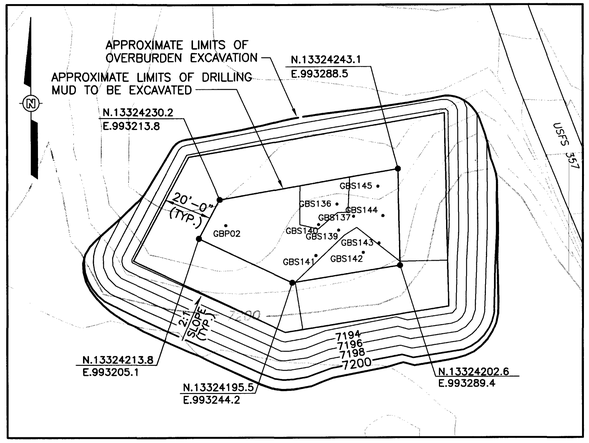
Plotted By: gsjones

OFFICE Pittsburgh, PA | DRAWING NUMBER 840225-D11



WELL GB-E MUDPIT A OVERBURDEN EXCAVATION PLAN

SCALE 0 30 60 FEET



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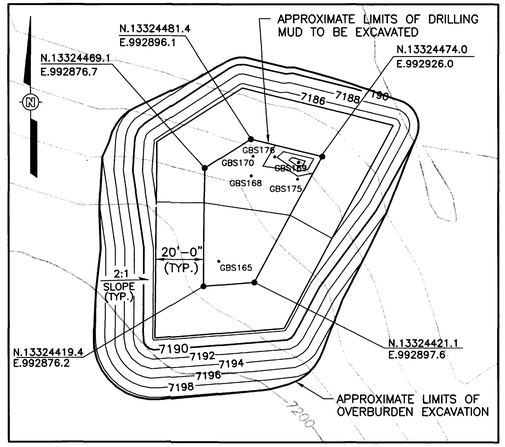

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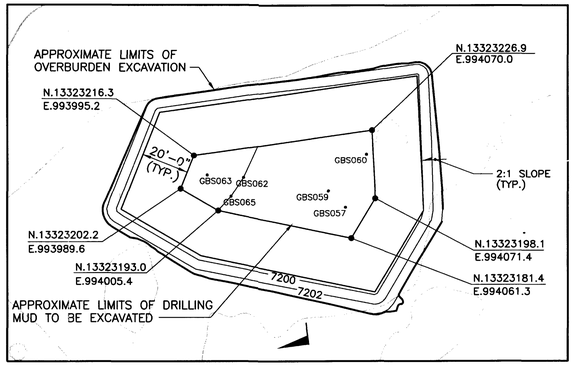

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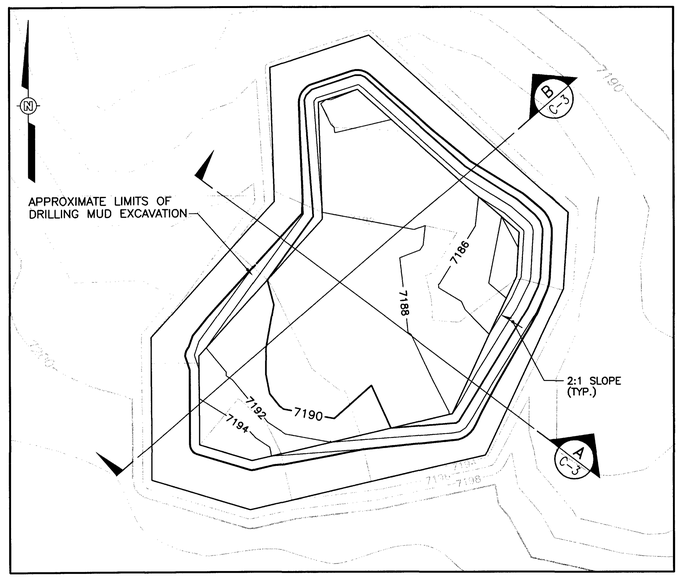

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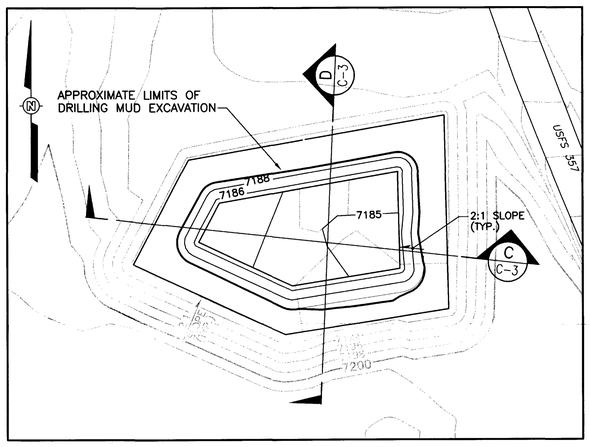
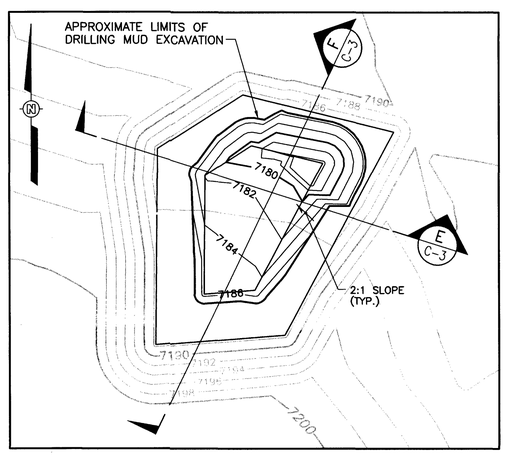
SCALE 0 30 60 FEET



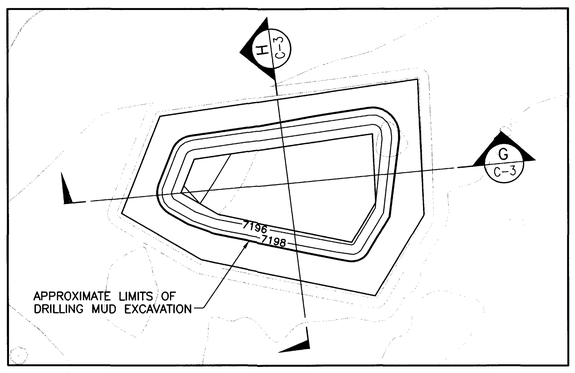
WELL GB-E MUDPIT D DRILLING MUD EXCAVATION PLAN

SCALE 0 30 60 FEET



WELL GB-E MUDPIT E DRILLING MUD EXCAVATION PLAN

SCALE 0 30 60 FEET



WELL GB-D MUDPIT DRILLING MUD EXCAVATION PLAN

SCALE 0 30 60 FEET

LEGEND:

—7220— GROUND SURFACE CONTOUR (CONTOUR INTERVAL = 2 FEET)

WELL MARKER

GBS144 SOIL BORING LOCATION

SECTION IDENTIFICATION (A / C-?)

SHEET WHERE SECTION APPEARS

(–) INDICATES SAME SHEET

SECTION

VOLUME TABLE	
WELL GB-D MUDPIT	
AMOUNT OF OVERBURDEN TO BE EXCAVATED = 1,340.9cy	
AMOUNT OF DRILLING MUD TO BE EXCAVATED = 608.9cy	
WELL GB-E MUDPIT A	
AMOUNT OF OVERBURDEN TO BE EXCAVATED = 4,153.9cy	
AMOUNT OF DRILLING MUD TO BE EXCAVATED = 2,369.4cy	
WELL GB-E MUDPIT D	
AMOUNT OF OVERBURDEN TO BE EXCAVATED = 3,349.8cy	
AMOUNT OF DRILLING MUD TO BE EXCAVATED = 672.3cy	
WELL GB-E MUDPIT E	
AMOUNT OF OVERBURDEN TO BE EXCAVATED = 3,817.7cy	
AMOUNT OF DRILLING MUD TO BE EXCAVATED = 519.3cy	
TOTALS	
AMOUNT OF OVERBURDEN TO BE EXCAVATED = 12,662.3cy	
AMOUNT OF DRILLING MUD TO BE EXCAVATED = 4,169.9cy	

REFERENCE:

TOPOGRAPHIC, STRUCTURAL, AND SAMPLE LOCATIONS TAKEN FROM THE TOPOGRAPHIC SURVEY DRAWING PROVIDED BY: DAGGETT ENTERPRISES, INC., FARMINGTON, NEW MEXICO, TITLED: "A TOPOGRAPHIC SURVEY FOR IT CORPORATION LAS VEGAS, GASBUGGY SITE INVESTIGATION, SURFACE GROUND ZERO AREA, RIO ARRIBA COUNTY, NEW MEXICO", CADFILE: SHW001T01, DATED: 9/24/02, SCALE: 1"=50'.

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION/ISSUE
0	9/10/03	GSJ	TJC	DCS	SUBMISSION TO NM VRP
A	5/1/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw™ Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

EXCAVATION PLANS
GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO AND WELL GB-D AREA
RIO ARRIBA COUNTY, NEW MEXICO

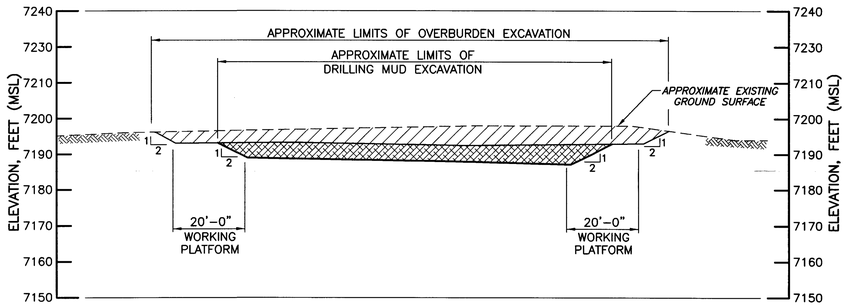
DESIGNED BY	–	–	CHECKED BY	T. J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY	D. C. Stahl	5 Sept 03
SCALE: AS SHOWN	DRAWING NO. 840225-D11		SHEET NO. C-3		REVISION NO. 0

XREF Files:
IMAGE Files:
File: O:\Project\Department of Energy\Department of Energy\840225\840225D11.dwg
Plot Date/Time: Aug 29, 2003 - 8:25am
Plotted By: gregjones

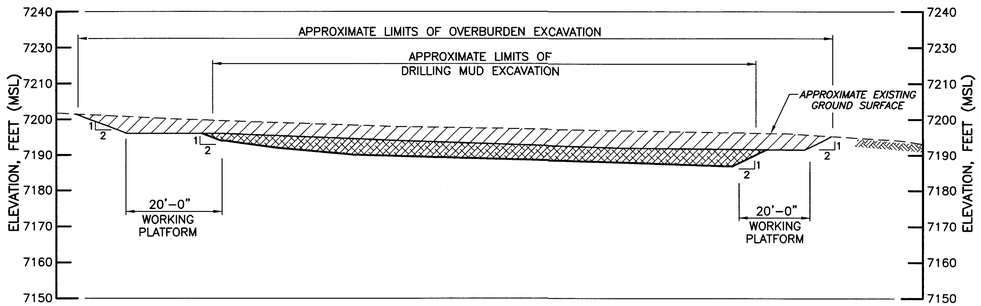
VERIFY SCALE 0 1"

DRAWING NUMBER 840225-D10

OFFICE Pittsburgh, PA



WELL GB-E MUDPIT A
SECTION A C-2



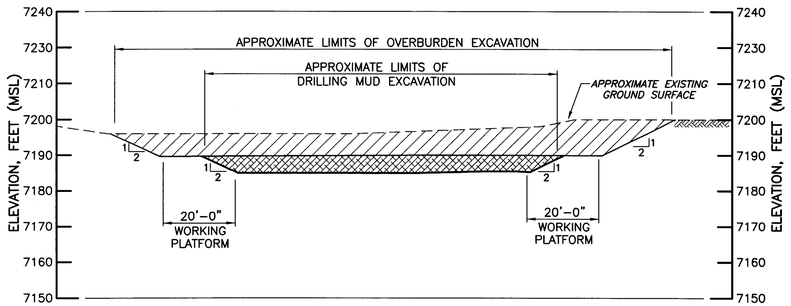
WELL GB-E MUDPIT A
SECTION B C-2

LEGEND:

SECTION IDENTIFICATION
A
C-2
SHEET WHERE SECTION APPEARS

(-) INDICATES SAME SHEET

SECTION



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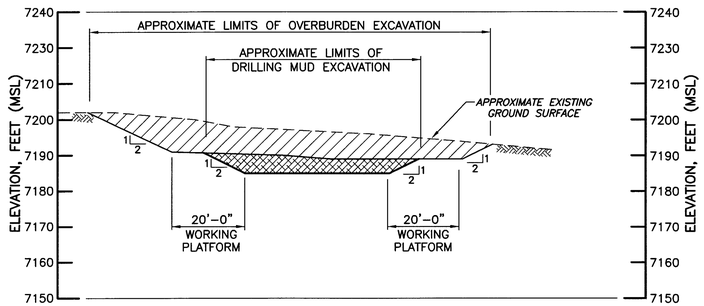
SECTION C C-2



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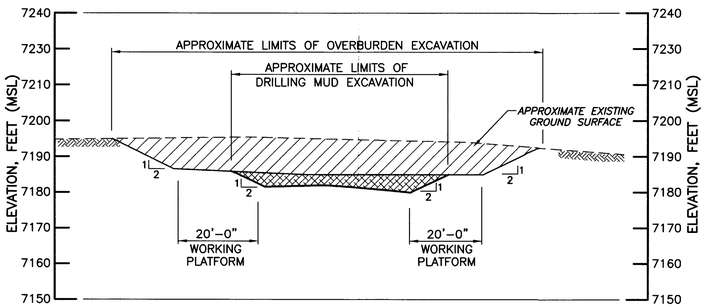
SECTION D C-2



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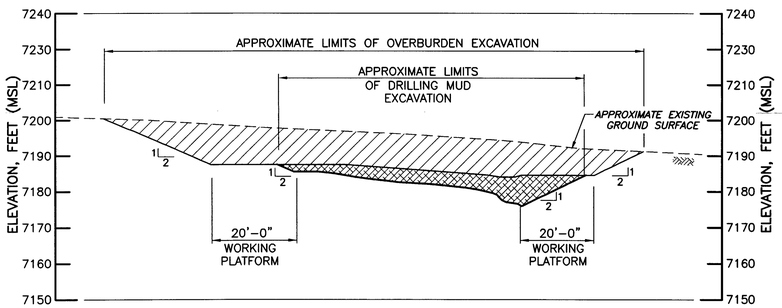
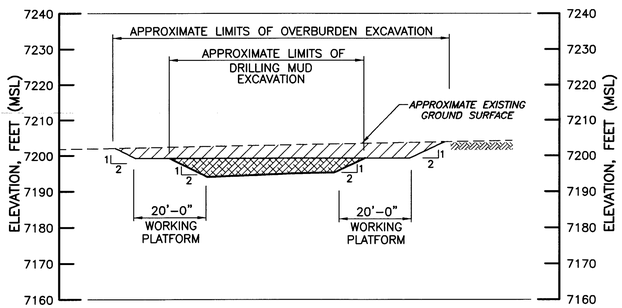
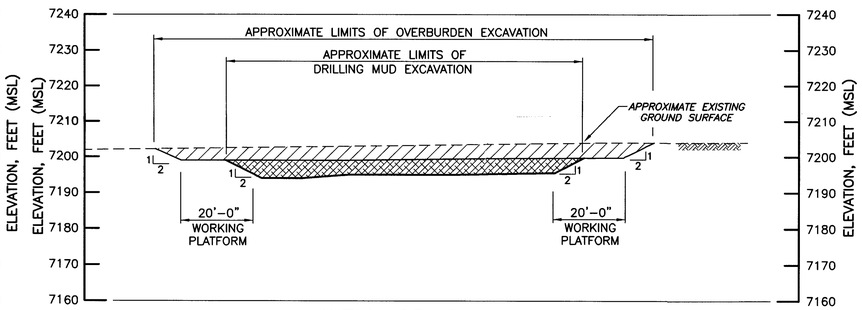
SECTION E C-2



WELL GB-E MUDPIT E
SECTION F C-2



WELL GB-D MUDPIT
SECTION H C-2



WELL GB-D MUDPIT
SECTION G C-2

SCALE
0 20 40 60 FEET

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION/ISSUE
0	9/10/03	GSJ	TJC	DCS	SUBMISSION TO NM VRP
A	5/1/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw™ Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

EXCAVATION CROSS SECTIONS

GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO AND WELL GB-D AREA
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–	–	CHECKED BY	T. J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY	D. C. Stahl	5 Sept 03

SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
AS SHOWN	840225-D10	C-4	0

VERIFY SCALE 0 1"

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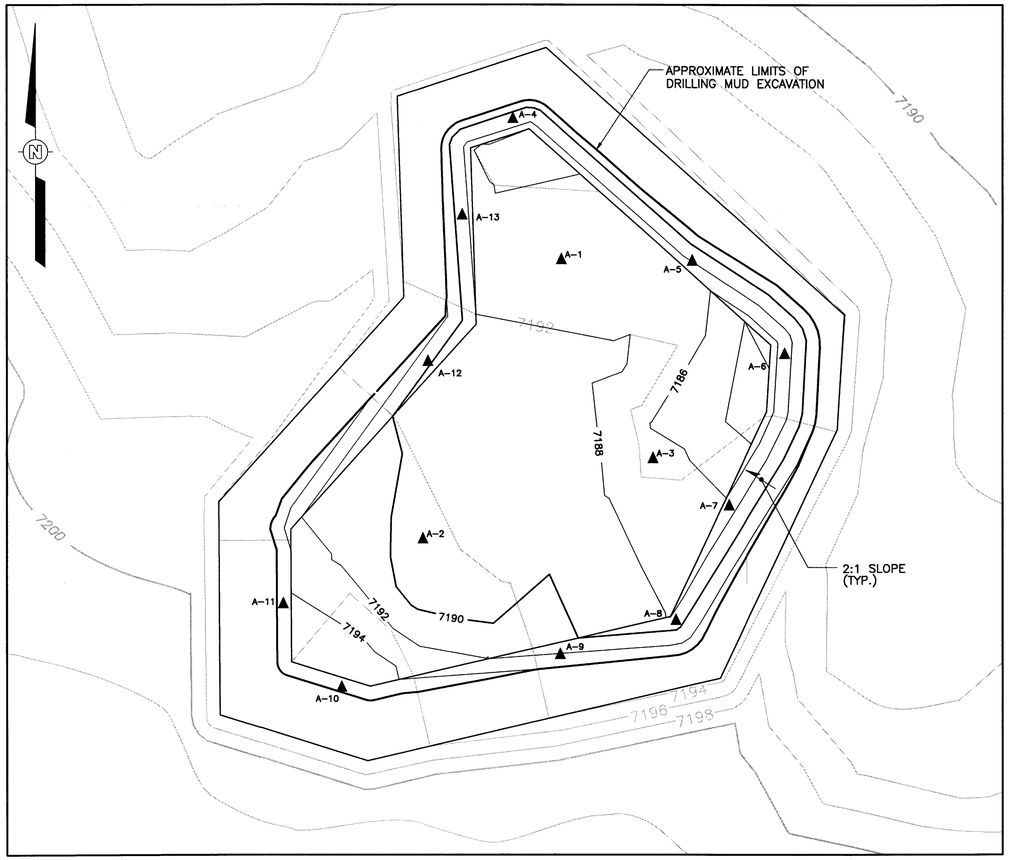
Plot Date/Time: Aug 29, 2003 - 8:07am
Plotted By: greg.jones

OFFICE: Pittsburgh, PA | DRAWING NUMBER: 840225-D14



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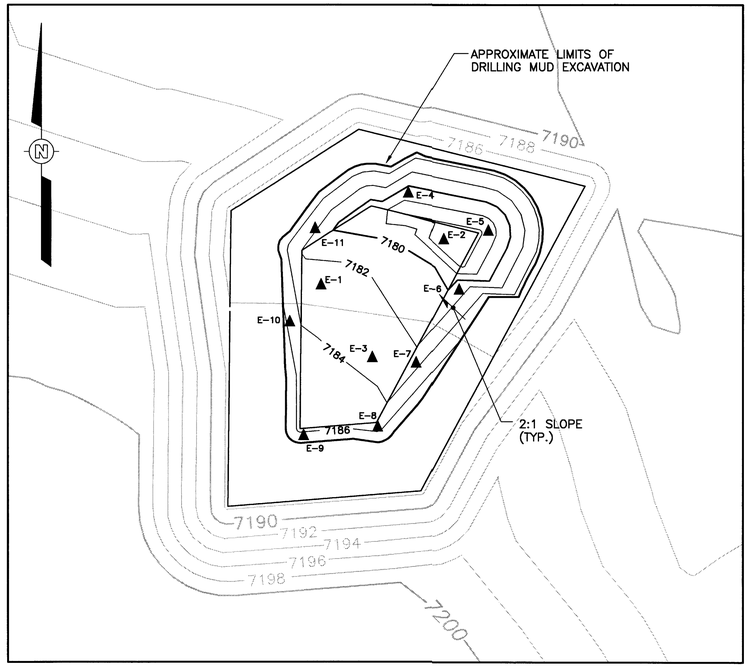
SCALE 0 20 40 FEET



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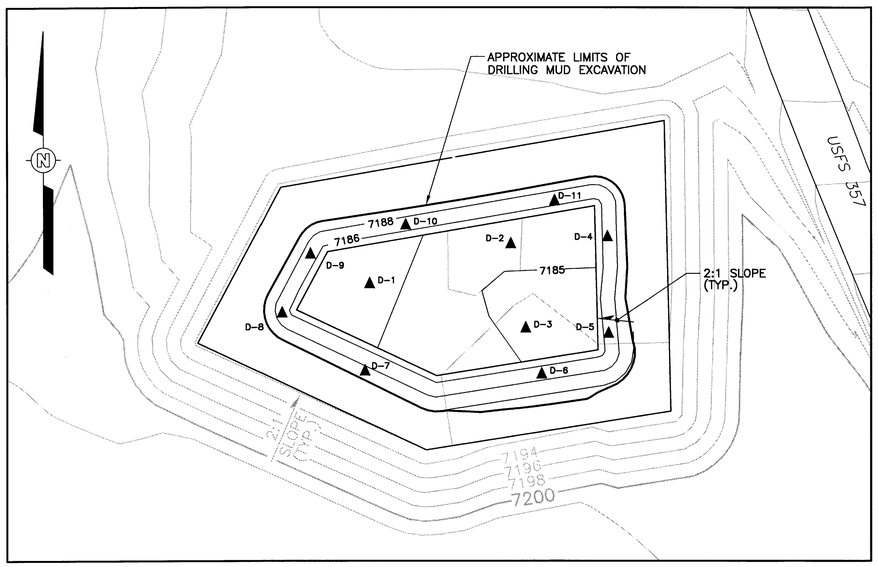
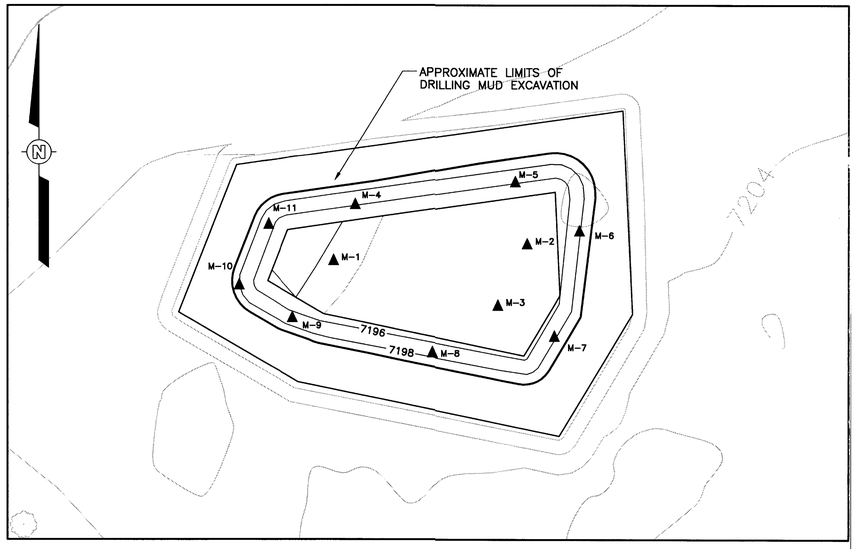


WELL GB-E MUDPIT D

SCALE 0 20 40 FEET



WELL GB-D MUDPIT

SCALE 0 20 40 FEET

LEGEND:

—7220— GROUND SURFACE CONTOUR (CONTOUR INTERVAL = 2 FEET)

WELL MARKER

REFERENCE:

TOPOGRAPHIC, STRUCTURAL, AND SAMPLE LOCATIONS TAKEN FROM THE TOPOGRAPHIC SURVEY DRAWING PROVIDED BY: DAGGETT ENTERPRISES, INC., FARMINGTON, NEW MEXICO, TITLED: "A TOPOGRAPHIC SURVEY FOR IT CORPORATION LAS VEGAS, GASBUGGY SITE INVESTIGATION, SURFACE GROUND ZERO AREA, RIO ARRIBA COUNTY, NEW MEXICO", CADFILE: SHW001T01, DATED: 9/24/02, SCALE: 1"=50'.

CONFIRMATORY SOIL SAMPLE LOCATIONS

Well GB-E Mudpit A

Sample	Northing	Easting	Description
A-1	13324350.3	993101.2	BOTTOM
A-2	13324272.7	993062.5	BOTTOM
A-3	13324294.6	993126.8	BOTTOM
A-4	13324389.8	993087.6	NORTH SIDE WALL
A-5	13324350.0	993137.8	NORTH SIDE WALL
A-6	13324324.0	993163.8	EAST SIDE WALL
A-7	13324281.9	993147.9	EAST SIDE WALL
A-8	13324249.9	993133.2	EAST SIDE WALL
A-9	13324240.4	993100.9	SOUTH SIDE WALL
A-10	13324230.9	993039.4	SOUTH SIDE WALL
A-11	13324254.2	993023.6	WEST SIDE WALL
A-12	13324321.7	993064.0	WEST SIEE WALL
A-13	13324362.7	993073.5	WEST SIDE WALL

CONFIRMATORY SOIL SAMPLE LOCATIONS

Well GB-E Mudpit D

Sample	Northing	Easting	Description
D-1	13324220.9	993225.4	BOTTOM
D-2	13324232.2	993264.8	BOTTOM
D-3	13324208.5	993269.1	BOTTOM
D-4	13324234.0	993291.9	EAST SIDE WALL
D-5	13324207.2	993292.2	EAST SIDE WALL
D-6	13324195.7	993273.5	SOUTH SIDE WALL
D-7	13324196.5	993224.1	SOUTH SIDE WALL
D-8	13324212.6	993201.0	WEST SIDE WALL
D-9	13324229.2	993208.9	WEST SIDE WALL
D-10	13324237.4	993235.4	NORTH SIDE WALL
D-11	13324244.2	993276.9	NORTH SIDE WALL

CONFIRMATORY SOIL SAMPLE LOCATIONS

Well GB-E Mudpit E

Sample	Northing	Easting	Description
E-1	13324459.5	992882.3	BOTTOM
E-2	13324472.1	992916.5	BOTTOM
E-3	13324439.0	992896.7	BOTTOM
E-4	13324484.7	992906.6	NORTH SIDE WALL
E-5	13324474.1	992928.9	NORTH SIDE WALL
E-6	13324457.9	992921.0	EAST SIDE WALL
E-7	13324437.6	992909.1	EAST SIDE WALL
E-8	13324419.9	992898.3	SOUTH SIDE WALL
E-9	13324417.2	992877.6	SOUTH SIDE WALL
E-10	13324448.9	992873.5	WEST SIDE WALL
E-11	13324475.0	992880.7	WEST SIDE WALL

CONFIRMATORY SOIL SAMPLE LOCATIONS

Well GB-D Mudpit

Sample	Northing	Easting	Description
M-1	13323207.4	994008.1	BOTTOM
M-2	13323211.6	994062.3	BOTTOM
M-3	13323194.8	994054.0	BOTTOM
M-4	13323222.6	994014.2	NORTH SIDE WALL
M-5	13323229.3	994058.8	NORTH SIDE WALL
M-6	13323215.6	994076.7	EAST SIDE WALL
M-7	13323186.5	994069.8	EAST SIDE WALL
M-8	13323182.0	994035.6	SOUTH SIDE WALL
M-9	13323191.6	993996.6	SOUTH SIDE WALL
M-10	13323200.7	993981.7	WEST SIDE WALL
M-11	13323217.2	993989.9	WEST SIDE WALL

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION/ISSUE
0	9/10/03	GSJ	TJC	DCS	SUBMISSION TO NM VRP
A	5/1/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw™ Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

CONFIRMATORY SAMPLE LOCATIONS
GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO AND WELL GB-D AREA
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–	–	CHECKED BY	T. J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY	D. C. Stahl	5 Sept 03

SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
AS SHOWN	840225-D14	C-5	0

VERIFY SCALE 0 1"

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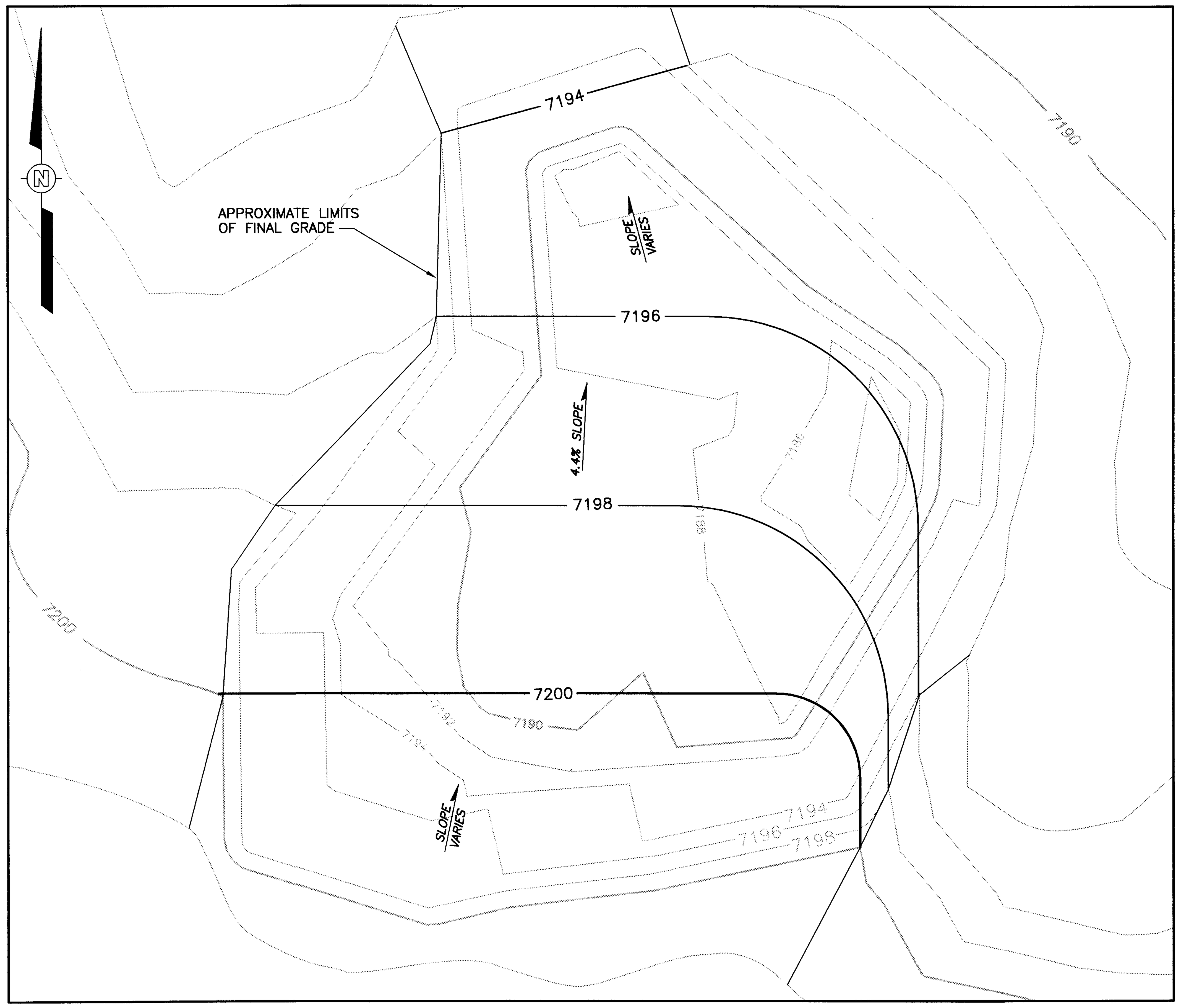
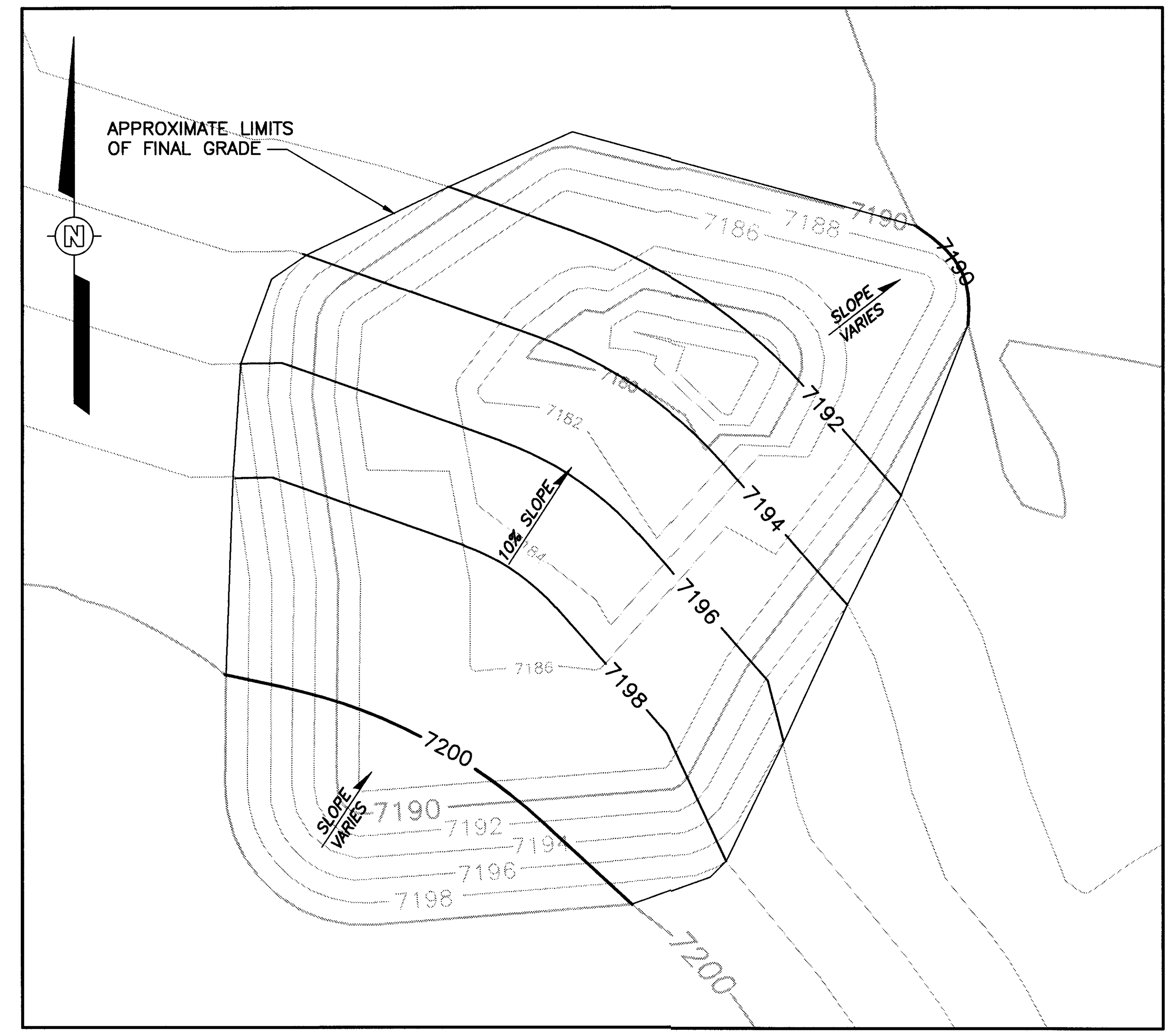
Plot Date/Time: Sep 08, 2003 - 1:36pm
Plotted By: greg.jones

OFFICE	DRAWING NUMBER
Pittsburgh, PA	840225-D15



WELL GB-E MUDPIT A

SCALE 0 20 40 FEET



WELL GB-E MUDPIT E

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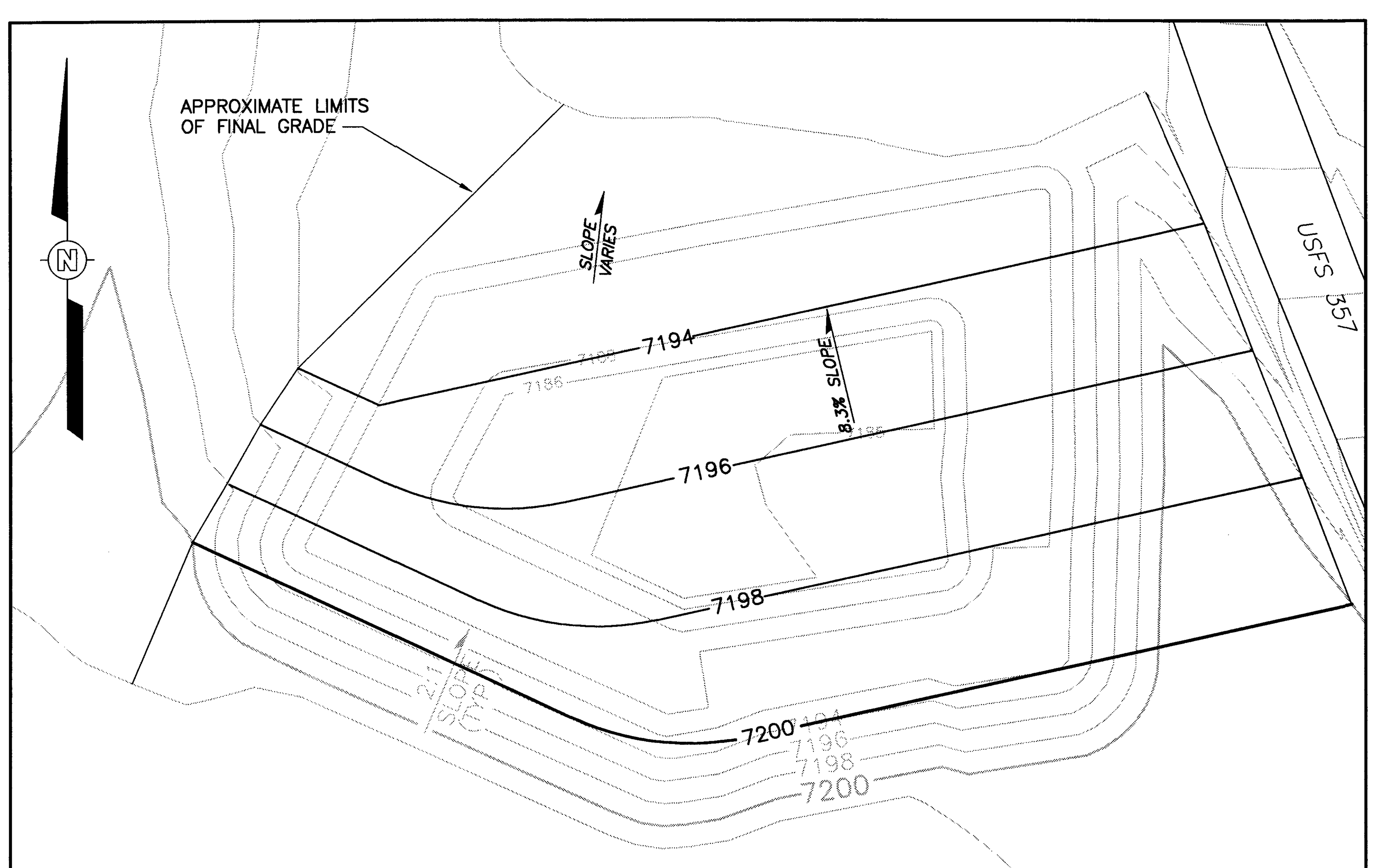

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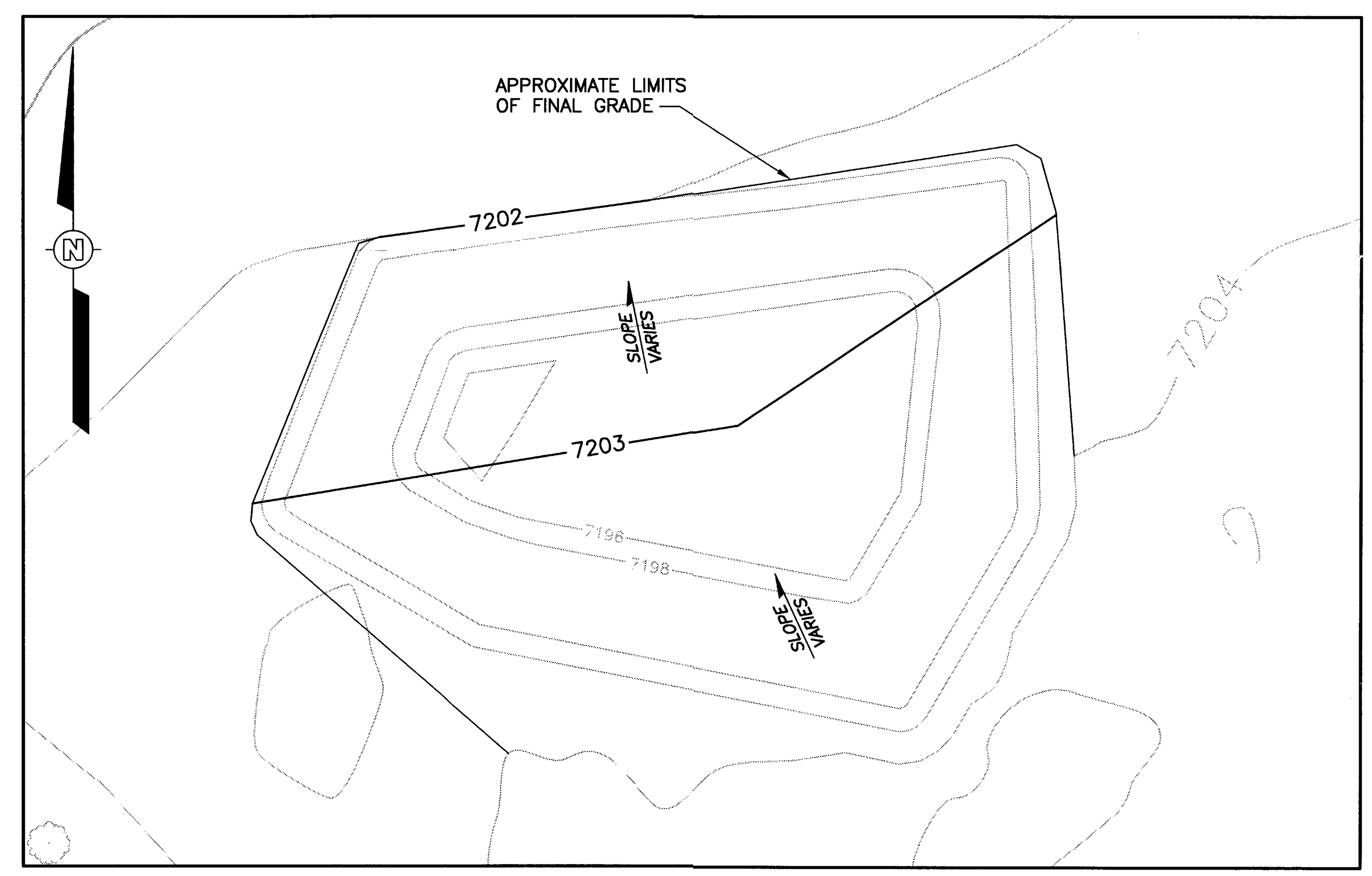

WELL GB-D MUDPIT

SCALE 0 20 40 FEET

LEGEND:

—7220— GROUND SURFACE CONTOUR (CONTOUR INTERVAL = 2 FEET)

WELL MARKER

REFERENCE:

TOPOGRAPHIC, STRUCTURAL, AND SAMPLE LOCATIONS TAKEN FROM THE TOPOGRAPHIC SURVEY DRAWING PROVIDED BY: DAGGETT ENTERPRISES, INC., FARMINGTON, NEW MEXICO, TITLED: "A TOPOGRAPHIC SURVEY FOR IT CORPORATION LAS VEGAS, GASBUGGY SITE INVESTIGATION, SURFACE GROUND ZERO AREA, RIO ARRIBA COUNTY, NEW MEXICO", CADFILE: SHW001T01, DATED: 9/24/02, SCALE: 1"=50'.

REV	DATE	BY	CHK'D	APPR'VD	DESCRIPTION/ISSUE
0	9/10/03	GSJ	TJC	DCS	SUBMISSION TO NM VRP
A	5/1/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

FINAL GRADING PLAN
GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO AND WELL GB-D AREA
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–	–	CHECKED BY T. J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY D. C. Stahl	5 Sept 03
SCALE: AS SHOWN	DRAWING NO. 840225-D15		SHEET NO. C-6	REVISION NO. 0

VERIFY SCALE 0 1"

XREF Files: IMAGE Files:
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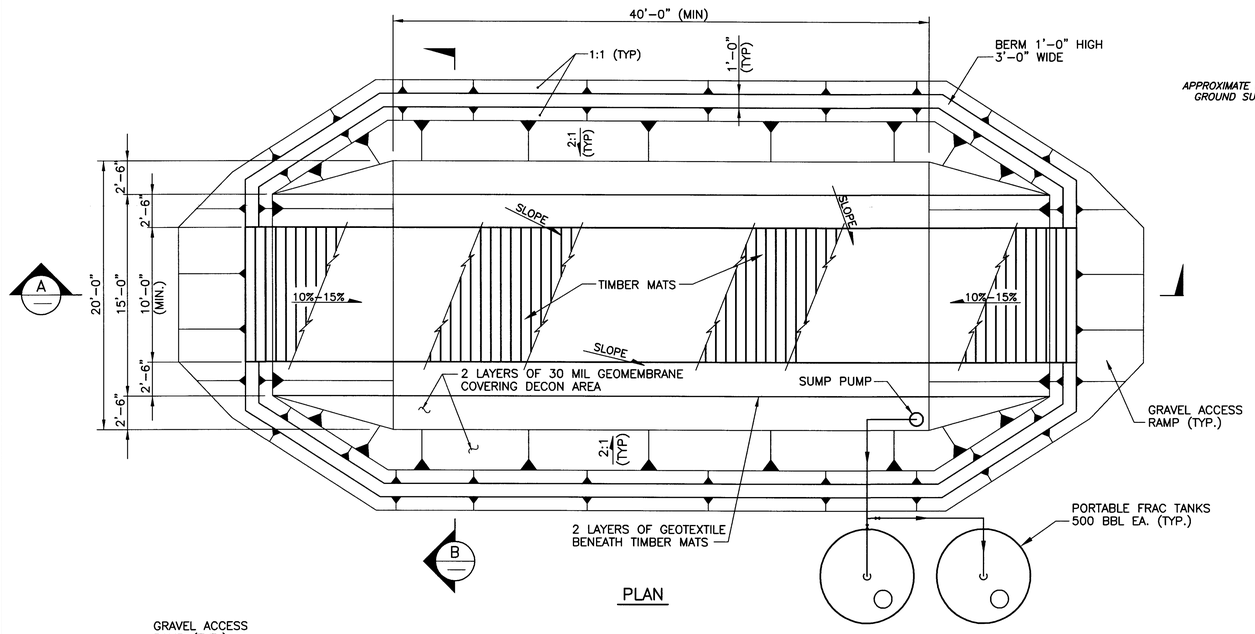
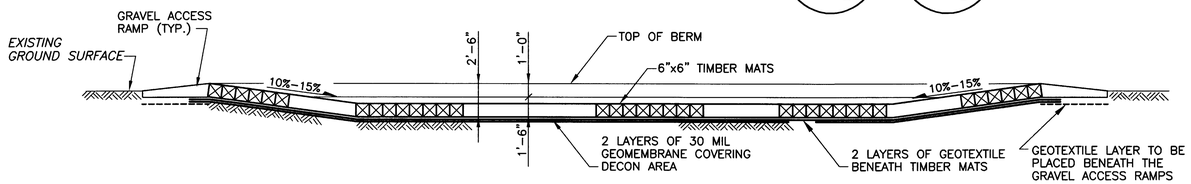
Plot Date/Time: Sep 08, 2003 - 9:10am
Plotted By: greg.jones

OFFICE Pittsburgh, PA | DRAWING NUMBER 840225-D4



PLAN



SECTION A

DETAIL 5 C-2

TEMPORARY DRILLING MUD STOCKPILE DETAIL

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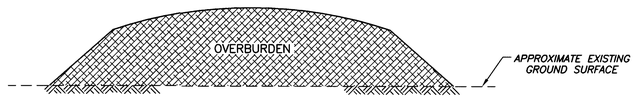

DETAIL 6 C-2

TEMPORARY OVERBURDEN STOCKPILE DETAIL

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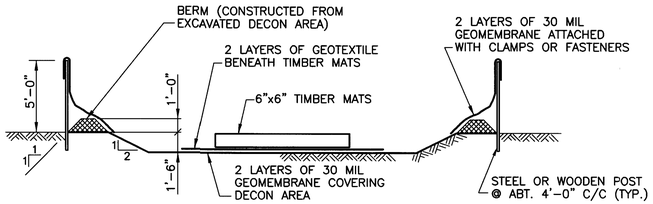
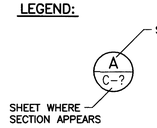


SECTION B

LEGEND:



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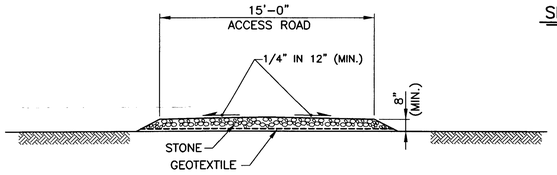
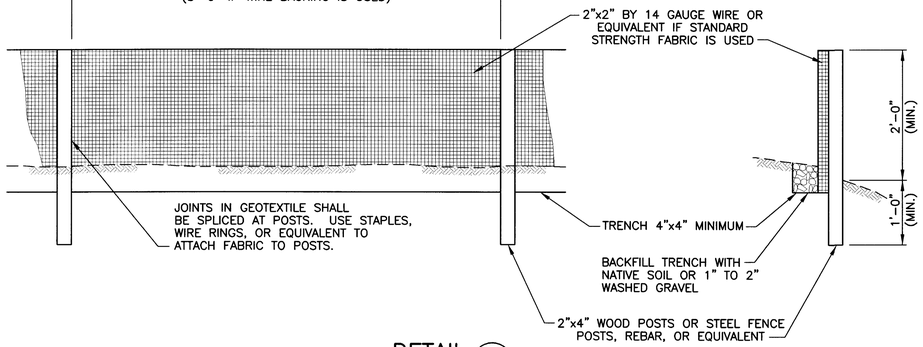


DETAIL 2 C-2

TYPICAL ACCESS ROAD SECTION

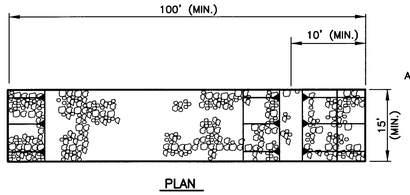
NOT TO SCALE



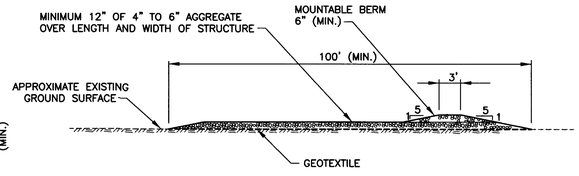
DETAIL 3 C-2

TYPICAL SILT FENCE DETAIL

NOT TO SCALE



PLAN



PROFILE

DETAIL 4 C-2

STABILIZED CONSTRUCTION EXIT

NOT TO SCALE

1. GEOTEXTILE SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE.
2. CRUSHED AGGREGATE (4" TO 6") SHALL BE PLACED AT LEAST 12" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION/ISSUE
0	9/10/03	GSJ	TJC	DCS	SUBMISSION TO NM VRP
A	5/01/03	BAK	TJC	DCS	DRAFT SUBMISSION TO DOE

Shaw™ Environmental, Inc.

NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA SITE OFFICE

MISCELLANEOUS DETAILS
GASBUGGY SITE INVESTIGATION
SURFACE GROUND ZERO AND GB-D AREA
RIO ARRIBA COUNTY, NEW MEXICO

DESIGNED BY	–	–	CHECKED BY	J. Coburn	29 Aug 03
DRAWN BY	B. A. Kumpf	19 Feb 03	APPROVED BY	D. Stohl	5 Sept 03
SCALE: AS SHOWN	DRAWING NO. 840225-D4		SHEET NO. C-7		REVISION NO. 0

VERIFY SCALE 0 1"

XREF Files: IMAGE Files:
File: D:\Project\Department of Energy\840225\840225D4.dwg
Plot Date/Time: Aug 29, 2003 - 10:24am
Plotted By: greg.jones

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Jenny Chapman Desert Research Institute P.O. Box 19040, M/S 433 Las Vegas, NV 89132-0040	1 (Controlled)
Christine D. Bynum Voluntary Remediation Program New Mexico Environment Department Harold Runnels Building 1190 St. Francis Drive, N-2300 Santa Fe, NM 87502	1 (Controlled) 3 (Uncontrolled)
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