Nevada
Environmental
Restoration
Project

DOE/NV--860

National Nuclear Security Administration

Corrective Action Investigation Report for the Rio Blanco Site, Colorado

Controlled Copy No.: ____
Revision No.: 0

October 2002

Approved for public release; further dissemination is unlimited.

Environmental Restoration
Division

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

Available for public sale, in paper, from:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Phone: 800.553.6847
Fax: 703.605.6900
Email: orders@ntis.fedworld.gov
Online ordering: ***http://www.ntis.gov/ordering.htm***

Available electronically at ***http://www.doe.gov/bridge***

Available for a processing fee to U.S. Department of Energy and its contractors, in paper, from:

U.S. Department of Energy
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831-0062
Phone: 865.576.8401
Fax: 865.576.5728
Email: reports@adonis.osti.gov

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

Printed on recycled paper

DOE/NV--860

CORRECTIVE ACTION INVESTIGATION REPORT FOR THE RIO BLANCO SITE, COLORADO

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

Controlled Copy No.: ____

Revision No.: 0

October 2002

Approved for public release; further dissemination is unlimited.

CORRECTIVE ACTION INVESTIGATION REPORT
FOR THE RIO BLANCO SITE, COLORADO

Approved by: _____ Date: _____

Monica Sanchez, Project Manager
Offsites Project

Approved by: _____ Date: 10-29-02

Runore C. Wycoff, Division Director
Environmental Restoration Project

Table of Contents

List of Figures v
List of Plates vi
List of Tables vii
List of Acronyms and Abbreviations viii
Executive Summary ES-1

1.0 Introduction 1

1.1 Purpose 3
1.2 Scope of Work 3
1.3 Summary of Investigation 3
1.4 Report Content 4

2.0 Summary of Geophysical Investigation 6

2.1 Scope and Objectives of Geophysical Investigation 6
2.2 Survey Control 6
2.3 Geophysical Techniques 7
2.3.1 Surface Magnetic Survey 7
2.3.2 Frequency-Domain EM Survey 7
2.3.3 Time-Domain EM Survey 8
2.3.4 Resistivity Survey 8
2.4 Summary of Geophysical Investigation Results 8

3.0 Summary of Soil Investigation 10

3.1 Scope and Objectives of the Soil Investigation 10
3.2 Summary of Chemical Data Collection and Quality Control for the Soil Investigation 10
3.2.1 Project Data Quality Objectives 10
3.2.2 Chemical Data Quality Evaluation 11
3.2.3 Selected Analytical Methods and Contaminants of Potential Concern. 11
3.3 Summary of Soil Sampling Plan and Boring Location Selection 12
3.4 Sample Collection Methods 12
3.4.1 Direct-Push Method 12
3.4.2 Sample Collection by Rotosonic Drilling 14
3.5 Soil Field Screening 15
3.6 Sample Numbering 15

4.0 RB-E-01 Area Soil Investigation 17

4.1 Site Observations 17
4.2 Summary of Geophysics Surveys 17
4.2.1 G-858G Magnetic Field Survey 17
4.2.2 EM-31 Conductivity and EM-31 In-Phase 18

Table of Contents *(Continued)*

4.2.3 Resistivity Survey 18
4.2.4 EM-61 18
4.3 RB-E-01 Boring Locations 18
4.4 Summary of Analytical Results 21

5.0 RB-AR-2 and Fawn Creek Government Well Number 1 Area Soil Investigation 23

5.1 RB-AR-2/FCG No. 1 Site Observations 23
5.2 Summary of Geophysics Survey 23
5.2.1 G-858G Magnetic Field Survey 23
5.2.2 EM-31 Conductivity and EM-31 In-Phase 24
5.2.3 Resistivity 24
5.2.4 EM-61 24
5.3 RB-AR-2/FCG No. 1 Boring Locations 25
5.4 Summary Analytical Results 27

6.0 RB-U-4 Area Investigation 29

6.1 RB-U-4 Site Observations 29
6.2 Summary of Geophysics Surveys 29
6.2.1 G-858G Magnetic Field Survey 29
6.2.2 EM-31 Conductivity and EM-31 In-Phase 29
6.2.3 Resistivity 30
6.3 RB-U-4 Boring Locations 30
6.4 Summary of Analytical Results 33

7.0 Flare Stack Area Investigation 35

7.1 Flare Stack Area Site Observations 35
7.2 Summary of Geophysics Surveys 35
7.2.1 G-858G Magnetic Field Survey 35
7.2.2 EM-31 Conductivity and EM-31 In-Phase Conductivity 36
7.2.3 EM-61 Conductivity 36
7.3 Flare Stack Area Sample Locations 36
7.4 Summary of Chemical Analyses Results 36

8.0 Upgradient Area Investigation 39

8.1 Upgradient Area Site Observations 39
8.2 Summary of Geophysics Surveys 39
8.3 Upgradient Area Sample Locations 39
8.4 Summary of Analytical Results 40

9.0 Shallow Groundwater Investigation 41

9.1 Scope of Work for Monitoring Well Installation 41

Table of Contents *(Continued)*

9.2 Well Installation 41
9.3 Well Development 44
9.4 Groundwater Sample Collection 44
9.5 Summary of Analytical Results 44
9.6 Monitoring Well Plugging and Abandonment Activities 51

10.0 Waste Management 52

11.0 Demobilization and Survey Activities 53

11.1 Demobilization 53
11.2 Well and Soil Boring Location Survey 53

12.0 Conclusions 54

12.1 Conclusions from the Geophysical Investigation 54
12.2 Conclusions from the Soil Investigation 54
12.3 Shallow Groundwater Investigation 56
12.4 Conclusion Summary 57

13.0 Recommendations 58

14.0 References 59

Appendix A - Risk Assessment Report for the Rio Blanco Site, Colorado

Appendix B - Surface Geophysical Survey Diagrams for the Rio Blanco Site, Colorado

Appendix C - Rio Blanco Survey Data

Appendix D - Chemical Quality Control Summary Report for the Rio Blanco Site, Colorado

D.1.0 Chemical Quality Control Summary Report for the Rio Blanco Site, New Mexico . . . D-1

D.2.0 Data Collection, Data Management, and Quality Control Procedures D-2

D.2.1 Sample Collection and Analysis Procedures D-2
D.2.2 Field Quality Assurance/Quality Control Procedures D-2
D.2.3 Contracted Analytical Laboratories D-3
D.2.4 Sample Handling and Custody Procedures D-3
D.2.5 Equipment Calibration and Maintenance D-3
D.2.6 Quality Assurance Objectives D-3
D.2.7 Procedures for Data Quality Evaluation D-4
D.2.7.1 Laboratory Data Quality Evaluation D-4
D.2.7.2 Field Data Quality Evaluation D-5

Table of Contents *(Continued)*

D.2.8 Data Management D-5

D.3.0 Sampling, Analysis, and Quality Control Results D-7

D.3.1 Investigative Soil Samples D-7
D.3.1.1 Proposed Sample Collection and Analytical Requirements D-7
D.3.1.2 Actual Sampling and Analysis D-7
D.3.1.3 Deviations from Sample Handling and Custody Procedures D-7
D.3.1.4 Data Quality Evaluation D-8
D.3.1.5 Data Completeness and Representativeness D-8
D.3.1.6 Summary and Conclusions D-9
D.3.2 Groundwater Samples D-9
D.3.2.1 Proposed Sample Collection and Analytical Requirements D-9
D.3.2.2 Actual Sampling and Analysis D-9
D.3.2.3 Deviations from Sample Handling and Custody Procedures D-10
D.3.2.4 Data Quality Evaluation D-10
D.3.2.5 Data Completeness and Representativeness D-10
D.3.2.6 Summary and Conclusions D-11
D.3.3 Upgradient Soil Analysis D-11
D.3.3.1 Proposed Sample Collection and Analytical Requirements D-11
D.3.3.2 Actual Sampling and Analysis D-12
D.3.3.3 Deviations from Sample Handling and Custody Procedures D-12
D.3.3.4 Data Quality Evaluation D-12
D.3.3.5 Summary and Conclusions D-12
D.3.4 Blank Sample Analysis D-13

D.4.0 References D-14

Appendix E - Analytical Results

E.1.0 Analytical Tables E-1

List of Figures

Number	Title	Page
1-1	Rio Blanco Site Location	2
3-1	Example of Sampling Location	13
4-1	RB-E-01 Soil Boring Locations	19
5-1	RB-AR-2/FCG No. 1 Soil Boring Locations	26
6-1	RB-U-4 Soil Boring Locations	31
7-1	Flare Stack Area Sample Collection Points	37
9-1	Rio Blanco Well Construction Diagram for RBMW01	45
9-2	Rio Blanco Well Construction Diagram for RBMW02	46
9-3	Rio Blanco Well Construction Diagram for RBMW03	47
9-4	Rio Blanco Well Construction Diagram for RBMW04	48
9-5	Potentiometric Surface Map (12/20/00) Rio Blanco Site, Colorado	49

List of Plates

Number	Title
1	Rio Blanco Site Map

List of Tables

Number	Title	Page
1-1	Summary of Site Characterization	4
3-1	Summary of Soil Sample Collection	14
3-2	Operational Area Codes	16
5-1	RB-AR-2/FCG No. 1 Samples Exceeding Screening Levels	28
6-1	RB-U-4 Samples Exceeding Screening Levels	34
9-1	Summary of Groundwater Monitoring Wells Installed at the Rio Blanco Site, Colorado	42

List of Acronyms and Abbreviations

bgs	Below ground surface
COPC	Contaminants of potential concern
CDLE	Colorado Department of Labor and Employment
COGCC	Colorado Oil and Gas Conservation Commission
CQCSR	Chemical Quality Control Summary Report
Cs-137	Cesium-137
DOE	U.S. Department of Energy
DQO	Data Quality Objective
DRO	Diesel-range organics
EM	Electromagnetic
EPA	U.S. Environmental Protection Agency
FCG No. 1	Fawn Creek Government Well Number 1
FD	Field duplicate
ft	Feet/foot
GPS	Global Positioning System
IDW	Investigation-derived waste
in.	Inch(es)
LCS	Laboratory control sample
mg/kg	Milligrams per kilogram
mrem/yr	Millirem per year
NNSA/NV	U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office
PAH	Polynuclear aromatic hydrocarbons
PAL	Preliminary Action Level
pCi/g	Picocuries per gram
pCi/mL	Picocuries per milliliter
pCi/L	Picocuries per Liter

List of Acronyms and Abbreviations *(Continued)*

PID	Photoionization detector
PRG	Preliminary remediation goal
PVC	Polyvinyl chloride
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
RCRA	*Resource Conservation and Recovery Act*
RPD	Relative percent difference
SGZ	Surface ground zero
SVOC	Semivolatile organic compound
TCL	Target Compound List
TCLP	Toxicity characteristic leaching procedure
TOC	Top of casing
TPH	Total petroleum hydrocarbons
VOC	Volatile organic compound
µg/kg	Micrograms per kilogram
µg/L	Micrograms per liter

Executive Summary

This Corrective Action Investigation Report has been prepared for the surface investigation at the Rio Blanco Site, Colorado. The Rio Blanco Site is located approximately 52 air miles northeast of Grand Junction, Colorado, in Rio Blanco County. The site is comprised of four operational areas where the U.S. Department of Energy conducted drilling and other surface support activities for the Rio Blanco Project. This report does not address deep subsurface impacts of the Rio Blanco Project.

The purpose of this Corrective Action Investigation Report is to provide justification for selecting the No Further Action alternative for the Rio Blanco Site surface. The Rio Blanco Site surface includes the surface and shallow subsurface soils and shallow groundwater to a depth of approximately 50 feet below ground surface. Justification for no further action is provided through a review of current surface and shallow subsurface conditions, including the presence, concentration, and extent of contamination and the documentation of a risk assessment for constituents of concern identified above screening limits.

A corrective action investigation was performed from July to September 2000. Additional activities took place in December 2000 (surveying) and July 2002 (groundwater sampling). Soil sample analytical results for total *Resource Conservation and Recovery Act* metals (other than lead), total volatile organic compounds, semivolatile organic compounds, gamma-emitting radionuclides, and tritium did not exceed the screening levels. Soil sample analytical results for lead and total petroleum hydrocarbons diesel-range organics indicated these compounds were present above screening levels in one or more samples. However, based on the results of a risk assessment, the concentrations of these compounds in the soil were found to pose no significant human heath risks.

Initial groundwater sample analytical results indicated *Resource Conservation and Recovery Act* metals (i.e., arsenic and lead), along with volatile organic compounds (i.e., chloroform, bromodichloromethane, and dibromochloromethane) were present above screening levels. All other *Resource Conservation and Recovery Act* metals and volatile organic compounds, along with all semivolatile organic compounds, total petroleum hydrocarbons diesel-range organics, gamma-emitting radionuclides, and tritium were not detected above screening limits or background levels. Due to the unexpected presence of volatile organic compounds in the samples collected from the shallow groundwater wells, a second round of groundwater samples was collected in July 2002.

The analytical results for the second round samples indicated the compounds detected above screening levels in the initial samples were either not present at detection levels or were below screening levels.

Under the conservative reasonable maximum exposure assumptions (including the assumption of 30 years of exposure to constant maximum concentrations of the COPCs), and using the maximum detected concentrations from the 2000 investigation, the lifetime cancer risk to potential future residents is 4.2×10^{-6}. Although this is above the 1×10^{-6} level, this risk is within and near the conservative end of the U.S. Environmental Protection Agency target range of 1×10^{-6} to 1×10^{-4}. The 2002 investigation did not detect any volatile organic compounds, so the potential lifetime cancer risk from these compounds is likely to be negligible. Currently, there are no water supply sources within the vicinity of the site that tap the aquifer in which these compounds were detected; therefore, there are no risks to human health from site constituents. Future risks are not expected based on the most recent groundwater data.

1.0 Introduction

This report presents a summary of the surface investigation activities conducted at the Rio Blanco Site by the U.S. Department of Energy (DOE), National Nuclear Security Administration Nevada Operations Office (NNSA/NV).

The Rio Blanco Site is in Rio Blanco County, Colorado, approximately 52 air miles northeast of Grand Junction (Figure 1-1). The Rio Blanco Project was a joint government-industry experiment conducted in the early 1970s. The experiment used nuclear devices to attempt to stimulate the flow of natural gas from a low permeability, natural gas field. Rio Blanco consisted of the simultaneous detonation of three 33-kiloton nuclear devices, emplaced in one boring, at depths of 5,838; 6,230; and 6,689 feet (ft) below ground surface (bgs) (DOE/NV, 2000b). Site restoration activities were conducted in 1976; however, there was a concern for possible remaining chemical contaminants in the former operational areas, and the possible migration of these contaminants to the shallow groundwater and Fawn Creek.

Characterization of the surface and shallow subsurface of the Rio Blanco Site was conducted according to the *Site Characterization Work Plan for the Rio Blanco Site, Colorado* (DOE/NV, 2000a) (Work Plan). The majority of site activities took place from July 20 to September 29, 2000, and consisted of geophysical surveys, soil sampling, monitoring well installation, and groundwater sampling. Well and soil boring location survey work was completed in December 2000, and additional groundwater sampling was completed in July 2002.

Work was conducted in the following operational areas of the Rio Blanco Site (see Plate 1):

- RB-E-01 drill pad
- RB-AR-2/Fawn Creek Government Well Number 1 (FCG No. 1) drill pad
- RB-U-4 drill pad
- Flare Stack Site

Additional descriptions of these operational areas are provided in the Work Plan (DOE/NV, 2000a). Work (e.g., monitoring well installation and groundwater sampling) was also conducted at a location hydraulically upgradient from the site. This area is referred to as the Upgradient Area in the remainder of this document.

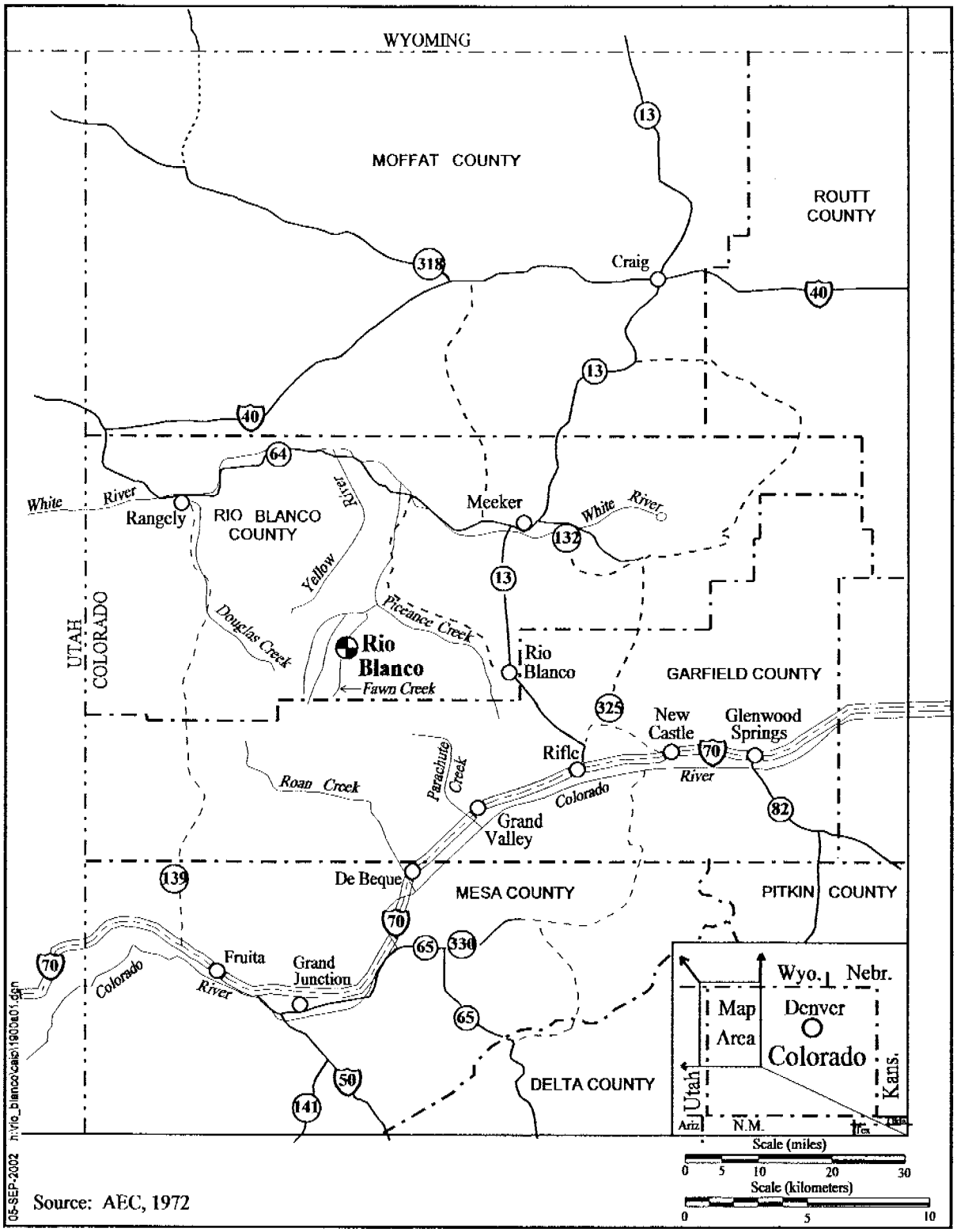


Figure 1-1
Rio Blanco Site Location

1.1 Purpose

The purpose of the environmental investigation at the Rio Blanco Site surface was to determine the nature and extent of radiological and/or chemical constituents that may remain in the surface soil, shallow subsurface soil, and/or shallow groundwater. The purpose of this report is to provide justification that the data collected is sufficient to warrant approval from the State of Colorado for the Rio Blanco Site surface closure without further remedial action.

1.2 Scope of Work

Investigation work at the Rio Blanco Site was conducted in accordance with the Work Plan (DOE/NV, 2000a) that was approved by the State of Colorado. In order to complete the scope of work for the surface and shallow subsurface site characterization investigation, the following Data Quality Objectives (DQOs), as outlined in the Work Plan (DOE/NV, 2000a), were met:

- Verify or confirm that the site has been successfully decommissioned, if contamination is detected.
- Determine the nature and extent of potential contamination.
- Collect sufficient data and use existing data to support a risk-based decision on the need to perform corrective actions.
- Collect sufficient data to support the approval of closure of the Rio Blanco Site surface with no further remedial action.

1.3 Summary of Investigation

The field investigation consisted of three major tasks: (1) a geophysical investigation, (2) collecting soil samples, and (3) a shallow groundwater investigation. The geophysical investigation was used to aid in identifying areas of suspect contamination so that soil samples could be collected. Soil samples were collected in suspect areas identified through the geophysical investigation and/or historical documentation. Soil samples were also collected at undisturbed areas to establish background conditions. During soil sampling it was discovered that the shallow groundwater table was present within 20 ft of suspected contamination; therefore, in accordance with the Work Plan (DOE/NV, 2000a), four monitoring wells were installed. Groundwater samples were collected from these wells on two occasions, in September 2000 and July 2002.

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
Mobilization and Site Setup	July 20 - 24, 2000
Vegetation Clearing	July 24 - 26, 2000
Geophysical Survey	July 27 - Aug. 19, 2000
Soil Sampling	August 14 - Sept. 13, 2000
Groundwater Monitoring Well Installation	September 18 - 21, 2000
Groundwater Monitoring Well Development	September 22 and 23, 2000
Groundwater Sampling	September 24, 2000
Demobilization and Site Cleanup	September 25 - 29, 2000
Well and Soil Boring Location Survey	December 19 - 20, 2000
Groundwater Sampling	July 17, 2002[a]
Groundwater Well Closure	September 20, 2002

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

1.4 Report Content

This report is intended to provide information and data to support the approval of closure for the site surface without further action. 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 summary of the geophysical investigation.
- Section 3.0 provides a summary of the soil investigation.
- Section 4.0 provides details of the investigation at the RB-E-01 area.
- Section 5.0 provides details of the investigation at the RB-AR-2 and Fawn Creek Government Well Number 1 area.

- Section 6.0 provides details of the investigation at the RB-U-4 area.
- Section 7.0 provides details of the investigation at the Flare Stack area.
- Section 8.0 provides details of the investigation at the Upgradient area.
- Section 9.0 provides details of the shallow groundwater investigation.
- Section 10.0 provides a summary of waste management activities.
- Section 11.0 provides a summary of survey and demobilization activities.
- Section 12.0 provides conclusions.
- Section 14.0 provides recommendations.
- Section 14.0 provides a list of references.

Appendix A - Risk Assessment Report for the Rio Blanco Site, Colorado

Appendix B - Geophysical Survey Diagrams for the Rio Blanco Site, Colorado

Appendix C - Well and Soil Boring Location Survey Data

Appendix D - Chemical Quality Control Summary Report for the Rio Blanco Site, Colorado

Appendix E - Analytical Results

To make this report a concise summary, the complete field documentation and laboratory data (e.g., Field Activity Daily Logs, Sample Collection Logs, Analysis Request/Chain of Custody Forms, Visual Classification of Soils Form, laboratory certificates of analyses, and analytical results) 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 Geophysical Investigation

This section provides general information on the geophysical investigation conducted at the Rio Blanco Site. Specific information regarding the findings of the geophysical investigation are provided in Section 4.0 through Section 8.0.

Prior to beginning the geophysical surveys, the extent of each area of concern was estimated and marked based on the available aerial photographs, historical photographs, site diagrams, and present site surface conditions. The areas were then cleared of vegetation to facilitate the geophysical surveys and other site activities.

2.1 Scope and Objectives of Geophysical Investigation

All areas suspected of contamination could not be located through historical research and/or current site features. Therefore, a geophysical survey was conducted to more accurately locate and delineate the known and/or suspected subsurface features (e.g., mud pits) and to locate other potential unknown subsurface features. The geophysical investigation attempted to locate the following:

- Mud pits associated with Wells RB-E-01, RB-AR-2, RB-U-4, and potentially FCG No. 1
- Trenches containing "jelly-like" materials (see Work Plan [DOE/NV, 2000a]) at RB-E-01 and RB-AR-2
- Gas burn pit south of FCG No. 1
- Well RB-AR-2; there was no surface marker associated with this well
- The concrete pad associated with the former Flare Stack
- Any other significant pits containing buried metal objects or debris
- Septic tanks

2.2 Survey Control

A reference grid was established at each of the four operational areas. When the geophysical survey was complete, the grid nodes were surveyed with global positioning system (GPS) technology. At

the completion of site activities, the specific site locations were surveyed by a Colorado-registered land surveyor. Key geophysical survey positions were fixed and tied into the grids previously surveyed by GPS.

2.3 Geophysical Techniques

Geophysical techniques used during this investigation included magnetic survey, time-domain electromagnetic (EM) survey, frequency-domain EM survey, and electrical resistivity survey. All surveys were conducted in accordance with internal procedures.

2.3.1 Surface Magnetic Survey

The primary purpose of surface magnetic surveys was to locate and determine boundaries of buried objects (e.g., landfill pits, trenches, pipelines, tanks, and drums). A Geometrics, Inc. G-858G magnetic gradiometer was used for survey data acquisition and a G-856AX magnetometer was used for base-station measurements. The magnetic gradiometer measures the intensity of the earth's magnetic field and the vertical gradient of the magnetic field. A surface magnetic survey was conducted at the RB-E-01 suspected septic tank location and to determine the location of the RB-AR-2 cellar.

2.3.2 Frequency-Domain EM Survey

The purpose of surface frequency-domain EM surveys was to locate and delineate buried objects (e.g., pipelines, utilities, drums, and tanks) and to map variations in surface and shallow subsurface conductivity (e.g., soil and groundwater) potentially related to contaminant source areas. A Geonics EM-31 terrain conductivity meter (EM-31) coupled to a data logger was used for survey data acquisition. Electrical conductivity is a function of moisture and soil type. Electromagnetic measurements provide a means of measuring and mapping subsurface electrical conductivity. Generally, the technology has an effective exploration depth of approximately 9 ft. The EM-31 data was the primary tool used to map the lateral boundaries of the mud pits. The EM-31 measurements also provide in-phase data that can help define lateral boundaries of buried metallic objects. The digital data were acquired continuously along parallel profile lines spaced 20 ft apart. The EM-31 surveys were conducted at each of the four operational areas.

2.3.3 Time-Domain EM Survey

The purpose of surface time-domain EM surveys was to locate and delineate subsurface features containing metal (e.g., buried wellheads, drums). A Geonics EM-61 high-resolution metal detector (EM-61) coupled with a data logger was used for survey data acquisition. In operation, a transmitter coil generates a primary magnetic field that induces eddy currents in nearby metallic conductors. These eddy currents produce secondary magnetic fields that are measured by the time-dependent, decaying voltage they produce in the receiver coils. The EM-61 was used to survey the RB-AR-2 site and the Flare Stack site. EM-61 data were collected at 2.5-ft intervals along survey lines spaced 2.5 ft apart at the RB-AR-2 site and along survey lines spaced 5 ft apart at the Flare Stack site.

2.3.4 Resistivity Survey

The purpose of the electrical resistivity survey was to determine the vertical extent of the Rio Blanco mud pits, the vertical extent of conductive contaminants, and to locate the depth of groundwater. An Electrode Sting R1/Swift Resistivity Imaging System was utilized. Electrical resistivity methods involve the measurement of the apparent resistivity (resistance of a material to the flow of current) of soil and rock as a function of depth or position. The data are generally presented as profiles or contour maps and interpreted qualitatively. Electrical resistivity data were collected at each of the operational areas except for the Flare Stack area.

2.4 Summary of Geophysical Investigation Results

The geophysical investigation aided in locating the mud pits associated with RB-E-01, RB-AR-2, and RB-U-4. The geophysical survey did not locate a mud pit associated with FCG No. 1 or any trench-like signatures for the "jelly-like" material believed to be at RB-E-01 or RB-AR-2. An anomaly was identified south of FCG No. 1 in the general location where a gas burn pit was thought to exist. The cellar for the RB-AR-2 Well was located with the EM-61. There was no evidence of a concrete pad located at the Flare Stack area. No significant pits containing buried metal or septic tanks were found.

The geophysical investigation was able to locate areas of shallow groundwater, and areas on the drill pads where the ground was disturbed during the Rio Blanco testing and cleanup activities.

Specific results of the geophysical investigation are presented and discussed in Section 4.0 through Section 8.0.

3.0 Summary of Soil Investigation

This section provides general information on the surface and near-surface soil investigation conducted at the Rio Blanco Site. Specific information regarding the soil investigation, including summaries of the results of soil samples analysis, is provided in Section 4.0 through Section 8.0.

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 to a maximum depth of 50 ft bgs at each of the four operational areas.

The results of the geophysical surveys along with historical photographs, site diagrams, and current site conditions were used to determine sampling locations. In areas where historical photo documentation was not available, sample locations were primarily selected based on the results of the geophysical investigation.

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 Rio Blanco surface investigation. Positive detects for soil samples are discussed with regard to the corresponding operational area in Section 4.0 through Section 8.0. A Chemical Quality Control Summary Report (CQCSR) is provided in Appendix D. Analytical results are provided in Appendix E.

3.2.1 Project Data Quality Objectives

All project DQOs listed in Section 1.2 were met for contaminants of potential concern (COPCs) in the background location and the operational areas in accordance with Work Plan (DOE/NV, 2000a).

3.2.2 Chemical Data Quality Evaluation

The CQCSR in Appendix D 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

Analytical methods for investigative samples were selected based on a list of COPCs as described in Section 3.2 of the Work Plan (DOE/NV, 2000a). 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 Rio Blanco, process knowledge from a similar site (i.e., the Rulison Site), and State of Colorado guidance on selection of contaminants of concern. The COPCs and their corresponding method of analyses for the soil investigation included:

- Total petroleum hydrocarbons (TPH) diesel-range organics (DRO) - U.S. Environmental Protection Agency (EPA) Method 8015B (EPA, 1996)
- Volatile organic compounds (VOC): benzene, toluene, ethylbenzene, and xylene - EPA Method 8260B (EPA, 1996)
- Semivolatile organic compounds (SVOC), priority polynuclear aromatic hydrocarbons (PAHs): acenapthene, acenapthylene, anthracene, beno(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene - EPA Method 8270C (EPA, 1996)
- Total *Resource Conservation and Recovery Act* (RCRA) metals - EPA Methods 6010B/7470A (EPA, 1996)
- Tritium - Laboratory-specific method
- Gamma spectroscopy - Laboratory-specific method
- Toxicity characteristic leaching procedure (TCLP) - EPA Method 1311 (EPA, 1996) followed by VOCs, SVOCs, and metals analysis of extract (collected for waste characterization purposes)

A master sample log is provided in Table E.1-1. This log contains sampling information such as sample identification number and analyses performed for each sample submitted to Paragon Analytics Inc. for analysis. Specific sample logs for investigative soil samples, groundwater samples,

upgradient soil samples, waste management samples, and blank samples are provided in Table E.2-1, Table E.3-1, Table E.4-1, Table E.5-1, and Table E.6-1, respectively.

3.3 Summary of Soil Sampling Plan and Boring Location Selection

Boring locations were selected based on a combination of geophysical survey results and historical documentation. According to the Work Plan (DOE/NV, 2000a), mud pits and areas larger than 30 x 30 ft were to be sampled by dividing the anomaly into six, approximately equal, sections by bisecting the area along the long dimension and trisecting along the short dimension. Sampling would be conducted at the center of each section. Smaller areas were to have one boring drilled at the estimated center, with four borings drilled at a distance of approximately 20 ft from the center. Step-out borings were to be conducted in order to define the horizontal extent of potential contamination. See Figure 3-1 for an example of potential sampling locations. Sample intervals in each boring were to be selected based on field conditions.

3.4 Sample Collection Methods

Soil samples were collected either from the surface using a clean sample scoop or by one of two drilling methods (i.e., direct-push or sonic drilling).

3.4.1 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 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 and the ends capped. The soil core was transferred from the driller to the sample collection team, where it was opened. Once opened, the core was screened for radioactivity using alpha and beta/gamma survey instruments. Immediately after screening, sample aliquots for VOC analysis and headspace screening were collected from the bottom of the interval.

The contents of all sampling sleeves were inspected, and the physical features of the soil or drilling materials were described and logged. Depending on the results of the headspace and radiological

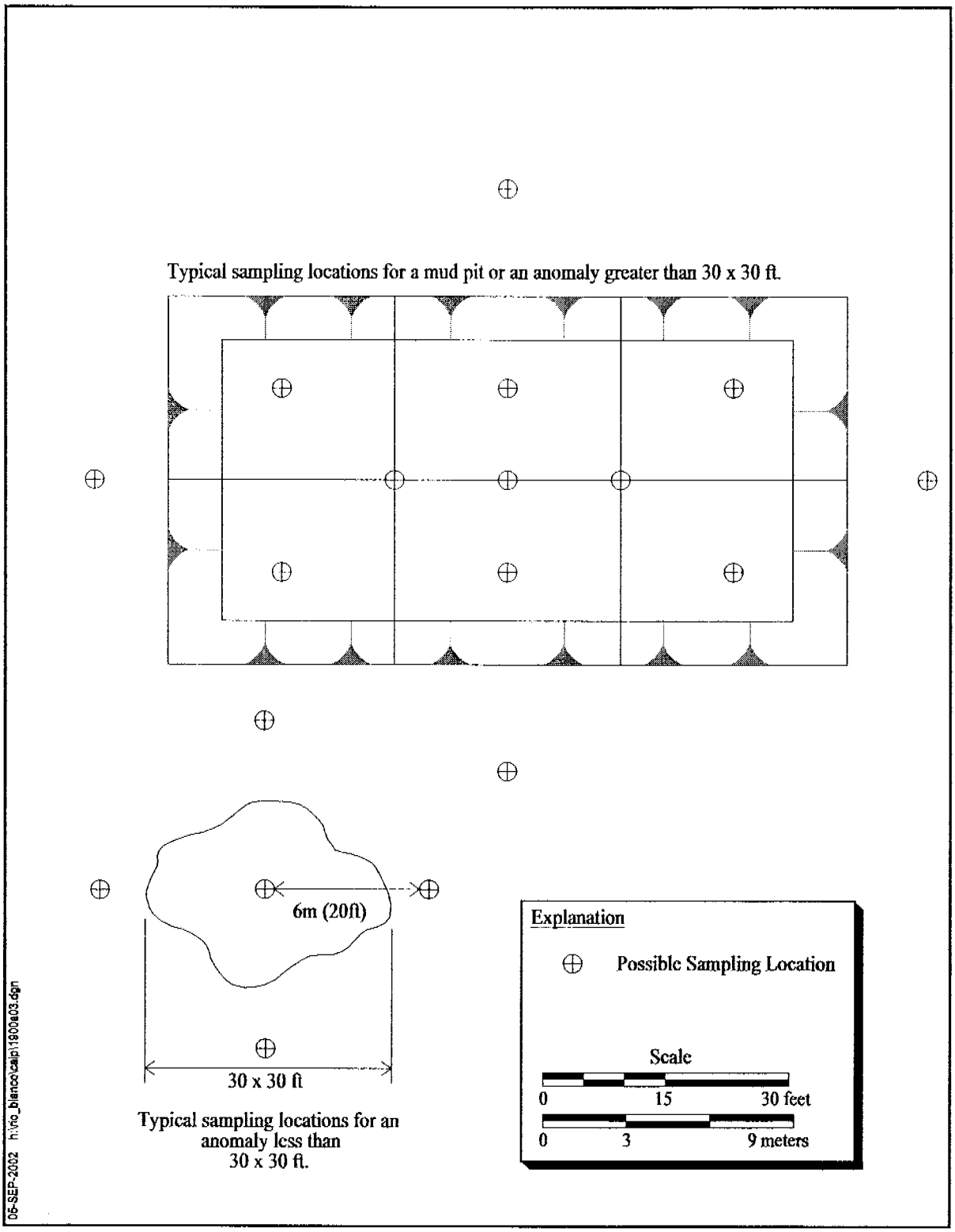


Figure 3-1
Example of Sampling Location

field screening, and 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.

A minimum of two sample intervals were selected for analysis from each boring. The first sample was collected as a composite sample from 0 to 5 ft bgs. The purpose of this sample was to evaluate surface conditions. The second sample was collected from the deepest vertical, field-screening, nondetect interval. In addition, where contamination was detected through field screening, a third sample was collected from the interval with the highest concentration of VOCs as determined by field screening. Table 3-1 provides a summary of the number and location of soil samples collected by both direct-push and rotosonic drilling methods.

Table 3-1
Summary of Soil Sample Collection

Location	No. of Borings	No. of Soil Samples
RB-E-01	17	48
RB-AR-2/FCG No. 1	42	125
RB-U-4	45	103
Flare Stack	10	10
Background (Upgradient Area)	2	7
Total	116	293

Note: The number of soil samples does not include duplicates, re-samples, or waste management samples.

3.4.2 Sample Collection by Rotosonic Drilling

Five borings were drilled at the Rio Blanco Site using rotosonic drilling. Four of the soil borings were converted to groundwater monitoring wells. 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 of the five locations. 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, where it was opened and the soil was screened for radioactivity.

Immediately after radiological screening, sample aliquots for VOC analysis and headspace screening were collected from the bottom of the interval.

The contents of all sampling sleeves were inspected, and the physical features of the soil were described and logged. Depending on the results of the headspace and radiological field screening, and visual observations of the soils, the contents of the sleeves were homogenized over the selected interval. The homogenized soils were then placed in sample containers and labeled.

The borings drilled by this method and the soil samples collected by this method are included in the totals presented in Table 3-1.

3.5 Soil Field Screening

All samples were visually inspected and screened for VOCs and radiation. Headspace screening was accomplished by taking a small, relatively undisturbed portion of the soil core and placing it in a small, zip-lock plastic baggie. The bag was set aside for approximately 5 minutes prior to inserting the nozzle of a photoionization detector (PID).

Radiation screening was conducted using portable alpha and beta/gamma detectors. Background radiological field-screening levels for gross alpha, beta, and gamma were determined by taking measurements at 10 undisturbed locations around each area of concern. A concentration of twice the background was used as a preliminary action level (PAL). Originally, only samples which exceeded the PAL were to be submitted for laboratory radiological analyses. However, all soil samples were submitted for tritium and gamma spectroscopy analysis. The PAL was exceeded in a total of 15 soil samples.

3.6 Sample Numbering

The area location, boring identification number, and depth interval from which each sample was collected is reflected in the sample numbering system. The first three characters indicate the operation area from which the sample was collected (see Table 3-2). The next two characters indicate the boring number. The last four characters indicate the depth in feet from which the sample was collected. For example, RBB011216 indicates that the sample was a collected from Boring Location 1 at the 12- to 16-foot depth interval.

Table 3-2
Operational Area Codes

Sample Code	Operational Area or Description
RBA	RB-E-01
RBB	RB-AR-2/FCG No. 1
RBC	RB-U-4
RBD	Flare Stack
RBM	Duplicate Sample
RBMW or RBW	Groundwater Sample
RBT	QC Blank Sample (field, trip, rinse, and source)
RBZ	Upgradient Area

4.0 RB-E-01 Area Soil Investigation

This section provides details on the investigation activities conducted at the RB-E-01 area and the data collected as a result of those activities.

4.1 Site Observations

The RB-E-01 area is the drill pad where emplacement Well RB-E-01 is located. This area is also referred to as surface ground zero (SGZ). The RB-E-01 area is located on the west side of Rio Blanco County Road 29 in a side drainage to Fawn Creek, and is bordered on the north and southwest by sandstone cliff walls (see Plate 1). Prior to beginning the investigation, the RB-E-01 area was overgrown with sagebrush. Surface features include the SGZ monument, Well RB-D-01, Well RB-S-03, and a 4.5-in. diameter, 10-ft deep, metal pipe that is the remains of Well RB-W-01. Well RB-D-01 is sampled annually by the EPA as part of the Long-Term Hydrologic Monitoring Program. The dirt road that was cut from the northwest corner of the drill pad to the Flare Stack area still remains in passable condition. There is no surface expression of the RB-E-01 Mud Pit.

4.2 Summary of Geophysics Surveys

Geophysical surveys including EM-31 conductivity/in-phase and total magnetic field were conducted at the RB-E-01 area. A discrete survey was conducted with the EM-61 over a portion of the area in an attempt to locate a septic tank possibly associated with the 4.5-in. steel pipe (i.e., Well RB-W-01). The geophysical surveys failed to locate the mud pit or any trenches. The mud pit was located using historical photographs (see Figure 4-2 of the Work Plan [DOE/NV, 2000a]).

4.2.1 G-858G Magnetic Field Survey

A magnetic field survey was conducted along parallel lines oriented north-south with a line separation of 10 ft. The grid lines extended over the whole RB-E-01 location and included Rio Blanco County Road 29 (see Figure B-1 in Appendix B). Strong magnetic signatures of wells RB-E-01, RB-D-02, RB-S-03; various surface metallic debris; and the culverts at the north and south ends of the site are visible. A weaker signature is visible for RB-W-01 and the 4-in. diameter metal

pipe. A slight anomalous magnetic signature is visible in the area of the RB-E-01 Mud Pit. The magnetic field survey did not identify buried pits with metallic debris or underground storage tanks.

4.2.2 EM-31 Conductivity and EM-31 In-Phase

The EM-31 conductivity and EM-31 in-phase survey was conducted along parallel lines oriented west-east with a line separation of 10 ft. The grid lines extended over the whole RB-E-01 area and included Rio Blanco County Road 29. The EM-31 survey failed to identify the location of the mud pit. However, several anomalies identified by EM-31 are apparent in the RB-E-01 area (see Figure B-2 and Figure B-3 of Appendix B). Anomalies identified by the survey were interpreted to be induced by natural geology, backfill events, surface metal, buried metal, buried cable, and County Road 29. The anomalies are discussed in further detail in conjunction with soil boring observations in Section 4.3.

4.2.3 Resistivity Survey

Two resistivity soundings were acquired across the suspected mud pit area in an attempt to determine the vertical stratification of muds within the RB-E-01 Mud Pit (see Lines 1 and 2 on Figure B-1, Figure B-2, and Figure B-3). The resistivity survey did not indicate a conductivity anomaly where the mud pit was thought to exist.

4.2.4 EM-61

EM-61 data was acquired in a 20- by 30-ft area around the 4-in. diameter metal pipe in an attempt to locate a potential septic tank. This grid had a 2-ft spacing between data collection lines. The survey did not locate a septic tank or other buried structure related to this pipe.

4.3 RB-E-01 Boring Locations

Seventeen soil borings were completed within the RB-E-01 area for the purpose of collecting soil samples (see Figure 4-1). Sixteen borings, RBA01 through RBA16, were drilled with a direct-push rig. The seventeenth boring (RBA17) was drilled with a rotosonic drill rig and converted into a groundwater monitoring well and renamed RBMW03 (see Section 9.0). The coordinates of the borings are provided in Appendix C. Borings ranged in depth from 8 to 49 ft.

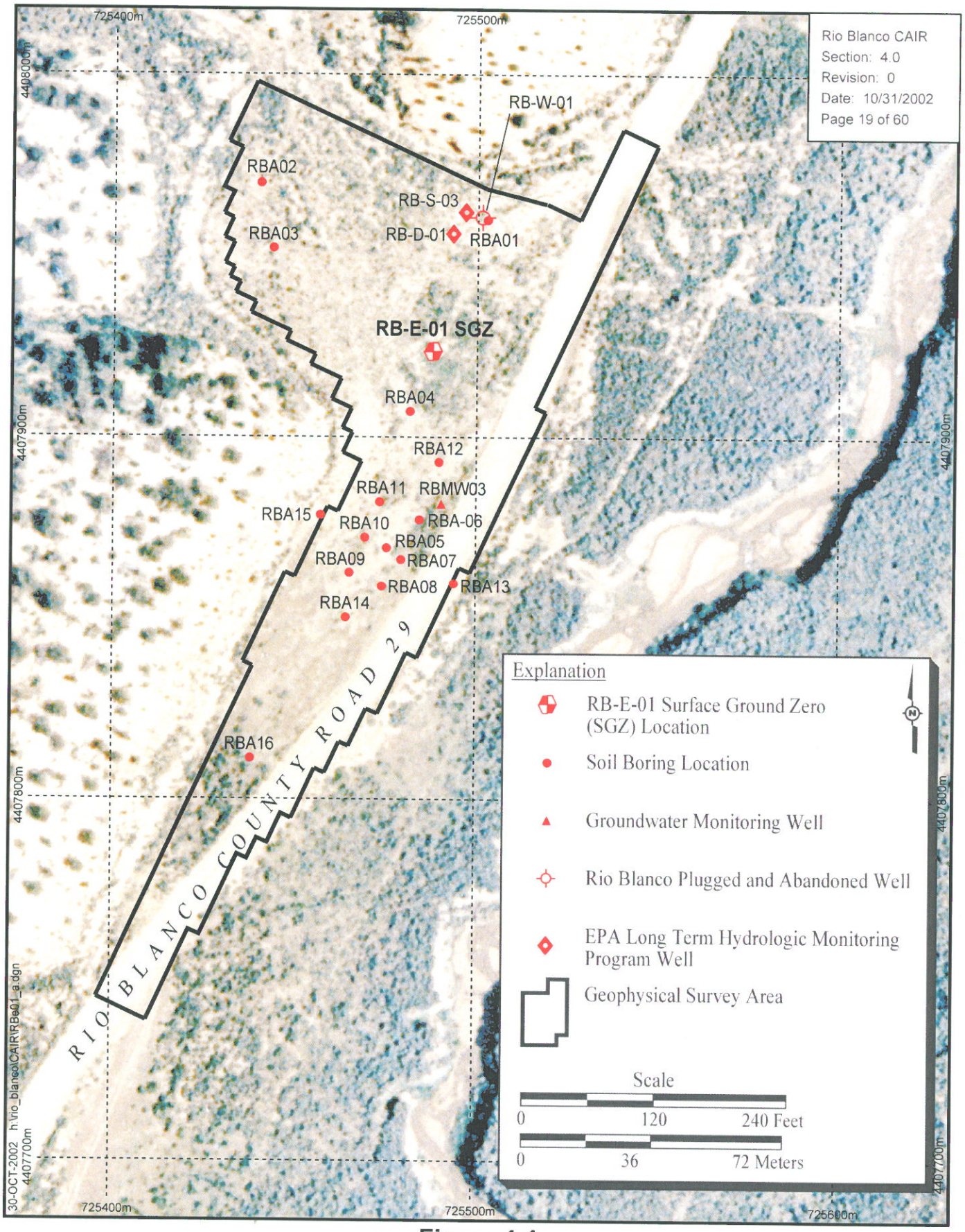


Figure 4-1
RB-E-01 Soil Boring Locations

Boring RBA01 was drilled to a depth of 20 ft bgs, 5 ft east of the 4.5-in. diameter, open pipe. The geophysical survey does not indicate an elevated conductivity at this location. This boring was installed to verify the presence or absence of a septic tank or leach system. No septic tank or leach system was identified. Expedited analytical results were available and did not show elevated COPC levels at this location; therefore, step-out borings were not warranted.

Boring RBA02 was drilled at the center of the conductivity high at the western edge of the northwestern geophysical anomaly (see Figure B-2 in Appendix B). From historical site diagrams and photos, this was the location of the oil and gas flareline separator and TRY-KRY Monitoring System. During site cleanup and restoration activities in 1976, six samples at this location indicated tritium at greater than 300 picocuries per milliliter (pCi/mL). Analytical results for tritium at this location were below the method detection limit (see Table E.7-1). Expedited analytical results were available and did not show elevated COPC levels at this location; therefore, step-out borings were not warranted.

Boring RBA03 was drilled at the center of the triangular-shaped conductivity high at the southwestern corner of the northwestern geophysical anomaly (i.e., the anomaly located between 30E and 210E and 640N and 780N in Figure B-2 in Appendix B). From historical site diagrams and photos, this was the location of the wastewater holding tanks, injection pump and filter, *in situ* system, production phase decon pan, and bulk water trap. During site cleanup and restoration activities in 1976, tritium was detected between 30 and 300 pCi/mL in ten of the samples collected at these locations. The soil in this area was excavated and shipped to Beatty, Nevada, for disposal (Eberline, 1978). The area was then backfilled with clean material. This excavation event may have contributed to the conductivity high at the northwestern corner of the RB-E-01 drill pad, and could account for the regular shape of the higher conductivity areas. Expedited analytical results were available and did not show elevated COPC levels at this location, so step-out borings were not warranted. Analytical results for tritium at this location were below the method detection limit (see Table E.7-1).

Boring RBA04 was drilled at the western side of the anomaly, south of SGZ (i.e., the anomaly located between 240E and 300E and 550N and 640N in Figure B-2 in Appendix B). The EM-31 conductivity survey indicated a potential buried pipe at this location. Initially it was thought that this may have

been the location of the RB-E-01 Mud Pit; however, no drilling mud or cuttings were found in the soil core from RBA04. Since this area was not a mud pit and available field screening and expedited analytical results did not show elevated COPC levels, additional borings were not drilled.

Borings RBA05 through RBA15 were drilled to determine the horizontal and vertical extent of the RB-E-01 Mud Pit. Although the signature of the area located between 430N to 530N and 235E to 300E (see Figure B-2 in Appendix B) did not show up as a conductivity high, this area corresponded to historical photo documentation of the RB-E-01 Mud Pit. Boring RBA05 was drilled as an exploratory boring to confirm the presence of the RB-E-01 Mud Pit. When drilling mud was detected in RBA05, the edges of the mud pit were estimated based on the conductivity change across the area. The historical documentation indicates the dimensions of the mud pit to be 145 ft long by 85 ft wide.

This estimated mud pit area was divided into six sections in accordance with the sample plan, and borings were advanced in the center of each section (borings RBA06 through RBA11). Borings RBA12 through RBA15 were step-out borings to determine the horizontal extent of potential contamination. Drilling mud was identified intermittently between approximately 15 to 18 ft bgs, and ranged in thickness from 1 to 2 ft. The mud was generally dark brown to black, clay-like material along with light brownish-gray, gravelly sand drill cuttings.

Based on the low conductivity signature that the RB-E-01 Mud Pit presented, boring RBA16 was drilled in the center of the conductivity low at around 250N and 255E (see Figure B-2 in Appendix B) to determine if this was the area of the trenches with the "jelly-like" fluid. Indications of the "jelly-like" fluid were not found. Expedited analytical results were available and did not show elevated COPC levels at this location, so step-out borings were not warranted.

Boring RBA17 was drilled 20 ft northeast of boring RBA06 with rotosonic drilling methods. This boring is downgradient of the RB-E-01 Mud Pit, and was converted into groundwater monitoring Well RBMW03 (see Section 9.0).

4.4 Summary of Analytical Results

A total of 48 soil samples were collected in the RB-E-01 area. Positive detects for chemical COPCs are presented in Table E.2-2. The table contains a column of "screening values." Screening values

are taken from three sources including: Colorado Oil and Gas Conservation Commission (COGCC) Series 900, EPA *Region IX Preliminary Remediation Goals* (PRGs), and Colorado Department of Labor and Employment (CDLE) Tier 1 or 1A screening values. These values were used for screening purposes to flag chemical contaminants requiring evaluation by a risk assessment (see Appendix A).

Evaluation of soil boring chemical analytical results indicated that no concentrations of chemical COPCs exceeded established screening levels in samples collected from RB-E-01.

Evaluation of soil boring radiological analytical results indicated cesium-137 (Cs-137) was the only man-made radioisotope identified above minimum detectable concentrations (see Table E.7-1). The Cs-137 dataset from the Rio Blanco Site characterization is within the average Cs-137 fallout deposition concentration range for the state of Colorado and is considered to be at background concentrations (McArthur and Miller, 1989).

Tritium was identified below the requested minimum detectable concentration but above the sample specific minimum detectable concentration in six soil samples collected at the RB-E-01 area and the RBAR-2/FCG No. 1 area (see Table E.7-1). The concentration of tritium detected in the soil samples collected at the RB-E-01 and RB-AR-2/FCG No. 1 areas were compared to the 110 picocuries per gram (pCi/g) soil concentration that is deemed compliant with the 25 millirem per year (mrem/yr) unrestricted release dose limit in Title 10 *Code of Federal Regulations* Part 20.1402 (FR, 1999). The reported tritium soil activity sample results are well below the 110 pCi/g screening limit.

One sample was collected at boring RBA07 from 8 to 12 ft bgs for the purpose of characterizing investigation-derived waste (IDW). No hazardous waste constituents were identified above regulatory levels. See Table E.5-2 in Appendix E for analytical results.

5.0 RB-AR-2 and Fawn Creek Government Well Number 1 Area Soil Investigation

This section provides details on the investigation activities conducted at the RB-AR-2/FCG No. 1 area and the data collected as a result of those activities.

5.1 RB-AR-2/FCG No. 1 Site Observations

The RB-AR-2/FCG No. 1 area is the drill pad where the alternate re-entry well, RB-AR-2, and the FCG No. 1 are located. The RB-AR-2/FCG No. 1 area is located south of the RB-E-01 area, on the east side of the Rio Blanco County Road 29, and along the west side of Fawn Creek (see Plate 1). Prior to beginning the investigation, the RB-AR-2 area had abundant sagebrush with some grassy open areas. The only surface feature at RB-AR-2/FCG No. 1 is the wellhead marker for the plugged and abandoned FCG No. 1. There is no wellhead marker for RB-AR-2. There is a small topographic low at the northeast corner of the RB-AR-2 Mud Pit.

5.2 Summary of Geophysics Survey

Geophysical surveys including EM-31 conductivity/in-phase, total magnetic field, and resistivity were conducted at the RB-AR-2/FCG No. 1 area to determine the approximate vertical and lateral extent of the drilling muds and to locate any remaining septic tanks, buried debris pits, trenches used to dispose of the "jelly-like" material, the gas burn pit located south of RB-AR-2, and/or unknown features. The trenches used to dispose of the "jelly-like" material were not found. A discrete survey was conducted with the EM-61 over a portion of the area to locate the RB-AR-2 Well.

5.2.1 G-858G Magnetic Field Survey

A magnetic field survey was conducted along parallel lines oriented north-south with a line separation of 10 ft. The grid lines extended over the whole RB-AR-2/FCG No. 1 location (see Figure B-4 in Appendix B). Strong magnetic signatures of Wells RB-AR-2 and FCG No. 1, along with various surface metallic debris, are visible in Figure B-4. A third significant anomaly labeled as A-1 on Figure B-4 is interpreted to be a near-surface buried metal object, possibly a section of

pipeline. The magnetic field survey did not locate buried pits with metallic debris or underground storage tanks.

5.2.2 EM-31 Conductivity and EM-31 In-Phase

An EM-31 conductivity and EM-31 in-phase survey were conducted along parallel lines oriented west-east with a line separation of 10 ft. The grid lines extended over the whole RB-AR-2/FCG No. 1 area. Higher conductivity areas were observed in five locations on this drill pad. These anomalies are labeled as A-1 through A-5 on Figure B-5. Anomalies A-1 through A-4 were also observed on the in-phase data (see Figure B-6).

Anomaly A-1 is interpreted to be a near-surface buried metal object, possibly a section of pipeline. Historical documentation and soil sampling confirmed Anomaly A-2 as the location of the RB-AR-2 Mud Pit anomaly. Anomaly A-3 was interpreted to be a potential mud pit and was sampled as such (see Section 5.3). Anomaly A-4 was also interpreted to be a potential mud pit; however, its location also matches with the location of aboveground storage tanks seen in historical photographs. Anomaly 5 was interpreted to potentially represent the gas burn pit thought to exist south of Well FCG No. 1. Anomalies A-3, A-4, and A-5 may have been caused by near-surface buried metal debris, excavation during the gas stimulation project activities, or shallow groundwater.

5.2.3 Resistivity

In order to determine the vertical stratification of muds within the RB-AR-2 Mud Pit, and across Anomalies A-3, A-4, and A-5, six resistivity soundings were acquired (see Figure B-5 and Figure B-6). Resistivity data correlated well with the EM-31 data. No new anomalies were identified by the resistivity survey.

5.2.4 EM-61

The EM-61 data was acquired in a 50- by 60-ft area in an attempt to locate Well RB-AR-2. The survey identified the location of the well.

5.3 RB-AR-2/FCG No. 1 Boring Locations

Forty-two soil borings were completed within the RB-AR-2/FCG No. 1 area for the purpose of collecting soil samples (see Figure 5-1). Forty-one borings, RBB01 through RBB43 (borings RBB18 and RBB19 were planned but not drilled), were drilled with a direct-push rig. Soil boring RBB44 was drilled with a rotosonic drill rig, converted into a groundwater monitoring well, and renamed RBMW02 (see Section 9.0). The coordinates of the borings are provided in Appendix C. The borings ranged in depth from 8 to 49 ft.

The geophysical anomaly (i.e., Anomaly A-2) for the RB-AR-2 Mud Pit was larger than 30 x 30 ft. Sampling locations were determined by bisecting the anomaly area along the long dimension and trisecting along the short dimension. Borings RBB01 through RBB06 were drilled at the center of each of these sections. Drilling mud was identified in boring RBB01 from 5 to 28 ft bgs. Drilling mud was identified intermittently between approximately 5 and 15 ft bgs in borings RBB02 through RBB06, with the exception of RBB04 where no drilling mud was identified. Borings RBB07 through RBB10 were drilled outside of the mud pit to complete the horizontal definition of the mud pit. Since boring RBB07 had elevated headspace readings, boring RBB41 was completed as a step-out boring to the north.

Boring RBB44 was a step-out boring installed east of RBB08 and north of RBB26 with rotosonic drilling methods. This boring is downgradient of the RB-AR-2 Mud Pit and was converted into groundwater monitoring Well RBMW02 (see Section 9.0).

Anomaly A-3 was larger than 30 x 30 ft. Sampling locations were determined by bisecting the anomaly area along the long dimension and trisecting along the short dimension. Borings RBB11 through RBB16 were drilled at the center of each of these sections. Boring RBB17 was drilled to the east, outside of the anomaly to complete the vertical and horizontal definition. A boring to the north of the anomaly was not drilled, since boring RBB09 had been drilled to define the RB-AR-2 Mud Pit. Borings RBB18 and RBB19 were planned to define the south and west sides of the anomaly; however, these borings were not drilled. Analytical results for RBB14 and RBB15, on the south and west sides of the anomaly, were below detection limits. These results define the southern and western edges and make RBB18 and RBB19 unnecessary.

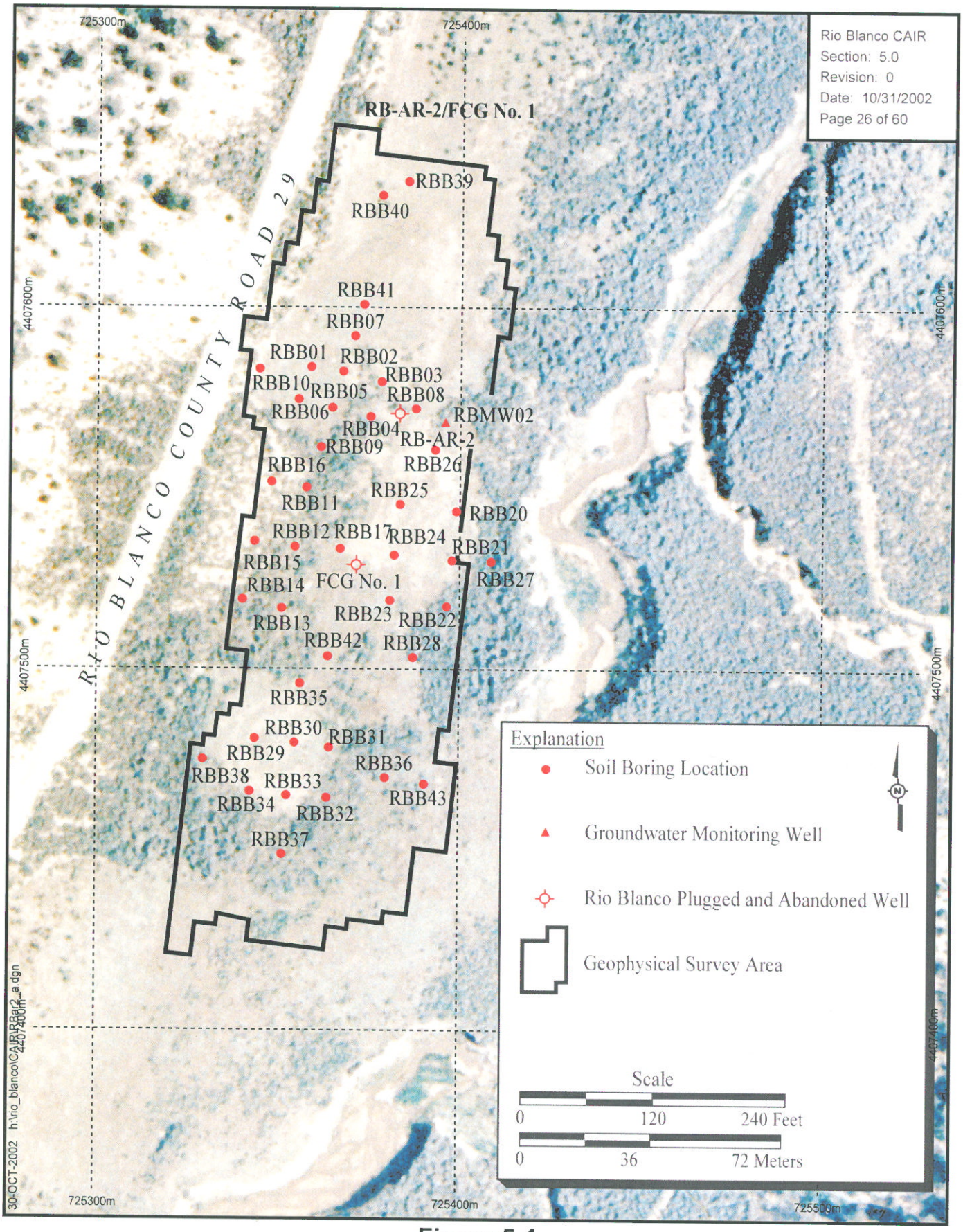


Figure 5-1
RB-AR-2/FCG No. 1 Soil Boring Locations

Anomaly A-4 was larger than 30 x 30 ft. Sampling locations were determined by dividing the anomaly by bisecting the area along the long dimension and trisecting along the short dimension. Borings RBB20 through RBB25 were drilled at the center of each of these sections. Borings RBB26, RBB27, and RBB28 were drilled to the north, east, and south, respectively, outside of the anomaly to complete the vertical and horizontal definition. Boring RBB17 was already completed to the west; therefore, another step-out boring was not drilled to the west.

Anomaly A-5 was larger than 30 x 30 ft. Sampling locations were determined by dividing the anomaly by bisecting the area along the long dimension and trisecting along the short dimension. Borings RBB29 through RBB34 were drilled at the center of each of these sections. Borings RBB35, through RBB38 were drilled outside of the anomaly to complete the vertical and horizontal definition. Since boring RBB35 had elevated headspace readings, boring RBB42 was completed as a step-out boring to the north. Since boring RBB36 had elevated headspace readings, boring RBB43 was completed as a step-out boring to the east.

Anomaly A-1 was smaller than 30 x 30 ft. Boring RBB39 was drilled at the center of this anomaly. Field screening with the PID indicated slightly elevated readings to a depth of 8 ft in this boring. A second boring, RBB40, was drilled southwest. No PID readings in this boring were above screening levels; therefore, no additional borings were drilled in this area.

5.4 Summary Analytical Results

A total of 125 soil samples were collected in the RB-AR-2/FCG No. 1 area. Positive detects for chemical COPCs are presented in Table E.2-2. The table contains a column of "screening values." Screening values are taken from three sources including: COGCC Series 900, EPA Region IX PRGs, and CDLE Tier 1 or 1A screening values. These values were used for screening purposes to flag chemical COPCS requiring evaluation by a risk assessment (see Appendix A).

Samples in which chemical screening values were exceeded are listed in Table 5-1. Concentrations exceeded the screening level of 1,000 milligrams per kilogram (mg/kg) for TPH-DRO were detected in 3 out of the 125 samples collected from RB-AR-2. In addition, one sample exceeded the screening level of 300 mg/kg for total lead. Based on the risk assessment, these results do not indicate an increased risk to human health. See Appendix A for the complete risk assessment report.

Table 5-1
RB-AR-2/FCG No. 1 Samples Exceeding Screening Levels

Sample Number	Location	Contaminate Concentration (mg/kg)	
		TPH-DRO	Lead
Screening Value		1,000	300
RBB011216	RB-AR-2 Mud Pit, sample collected from a mud layer	8,100 Rerun 13,000	470
RBB020508	RB-AR-2 Mud Pit, sample collected from a layer of drill cuttings	2,000	Did not exceed screening value
RBB061620	RB-AR-2 Mud Pit, sample collected from thin layer of drilling mud and underlying native material	1,700	Did not exceed screening value

Evaluation of soil boring radiological analytical results indicated Cs-137 was the only man-made radioisotope identified above minimum detectable concentrations (see Table E.7-1). The Cs-137 data set from the Rio Blanco Site characterization is within the average Cs-137 fallout deposition concentration range for the state of Colorado and is considered to be at background concentrations (McArthur and Miller, 1989).

Tritium was identified below the requested minimum detectable concentration but above the sample specific minimum detectable concentration in 6 soil samples collected at the RB-E-01 area and the RBAR-2/FCG No. 1 area (see Table E.7-1). The concentration of tritium detected in the soil samples collected at the RB-E-01 and RB-AR-2/FCG No. 1 areas were compared to the 110 pCi/g soil concentration that is deemed compliant with the 25 mrem/yr unrestricted release dose limit in 10 CFR 20.1402 (FR, 1999). The reported tritium soil activity sample results are well below the 110 pCi/g screening limit.

Waste characterization samples were collected at boring locations RBB01, RBB15, RBB24, RBB30, and RBB39 for the purpose of IDW characterization. No hazardous waste constituents were identified above regulatory levels. See Table E.5-2 in Appendix E.

6.0 RB-U-4 Area Investigation

This section provides details on the investigation activities conducted at the RB-U-4 area and the data collected as a result of those activities.

6.1 RB-U-4 Site Observations

The RB-U-4 area is the drill pad where the reservoir formation evaluation well, RB-U-4, is located. The RB-U-4 area is located north of the RB-E-01 area on the east side of the Rio Blanco County Road 29, and along the west side of Fawn Creek (see Plate 1). Prior to beginning the investigation, the RB-U-4 area had abundant sagebrush with some grassy open areas. The only surface feature is the wellhead marker for the plugged and abandoned RB-U-4 Well.

6.2 Summary of Geophysics Surveys

Geophysical surveys including EM-31 conductivity/in-phase, total magnetic field, and resistivity were conducted at the RB-U-4 area to locate the mud pit associated with RB-U-4, any remaining septic tanks, buried debris pits, and/or unknown features.

6.2.1 G-858G Magnetic Field Survey

Magnetic field survey data were acquired along parallel lines oriented north-south with a line separation of 10 ft. The grid lines extended over the whole RB-U-4 location (see Figure B-7). A strong magnetic signature is visible for Well RB-U-4. Another strong magnetic signature is visible south of Well RB-U-4, labeled as D-1 in Figure B-7. This anomaly appears to be in the same location where EM-31 data indicate a bend in a pipe or utility identified by the EM survey (see Section 6.2.2).

6.2.2 EM-31 Conductivity and EM-31 In-Phase

EM-31 conductivity and EM-31 in-phase data were acquired along parallel lines oriented west-east with a line separation of 10 ft. The grid lines extended over the whole RB-U-4 area. Higher conductivity areas were observed in four locations on this drill pad (see Figure B-8). No additional significant anomalies were identified in the in-phase data (see Figure B-9).

A large area of higher conductivity, not specifically labeled as an anomaly on the geophysical maps of RB-U-4, covers the northeastern corner of the RB-U-4 area extending from 60N to 420N and from 60E to 220E (see Figure B-8). Based on the soil boring logs, it is likely this anomaly represents near-surface groundwater. A conductivity low (blue) is visible cutting across the southern portion of the northeastern anomaly. Conductivity lows in this pattern usually delineate a trench or a pipe. This area of conductivity low corresponds with the location of Anomaly D-1 described in Section 6.2.1. There is a small area of higher conductivity at the south end labeled as Anomaly D-2 in Figure B-8. There are two higher conductivity anomalies along the western edge of the site. These anomalies are labeled together as D-3 in Figure B-8. Based on the soil boring logs, it is likely the conductivity highs that make up Anomaly D-3 represent near-surface groundwater.

6.2.3 Resistivity

In an attempt to determine the vertical stratification of muds within the RB-U-4 Mud Pit and further define the northwestern conductivity high, Anomaly D-2 and Anomaly D-3, five resistivity soundings were acquired across the RB-U-4 area. Figure B-8 in Appendix B shows the locations of the five resistivity soundings. The resistivity data correlated well with the EM-31 data. No new anomalies were identified by the resistivity survey.

6.3 RB-U-4 Boring Locations

Forty-six soil borings were completed within the RB-U-4 area for the purpose of collecting soil samples (see Figure 6-1). Forty-four borings, RBC01 through RBC45 (boring RBC30 was planned but not drilled), were drilled with a direct-push rig. Soil boring RBC46 was drilled with a rotosonic drill rig, converted into a groundwater monitoring well, and renamed RBMW04 (see Section 9.0). The coordinates of the borings are provided in Appendix C. Borings ranged in depth from 12 to 30 ft.

The geophysical anomaly covering the northeastern corner of the RB-U-4 area was much larger than 30 x 30 ft. An area at the center of the large area of higher conductivity was selected for sampling. Sampling locations within the approximate center of the anomaly were determined by bisecting the anomaly area along the long dimension and trisecting along the short dimension. Borings RBC01 through RBC06 were drilled at the center of each of these sections. Borings RBC07 and RBC08 were drilled to the east and south, respectively, to complete the vertical and horizontal definition of this

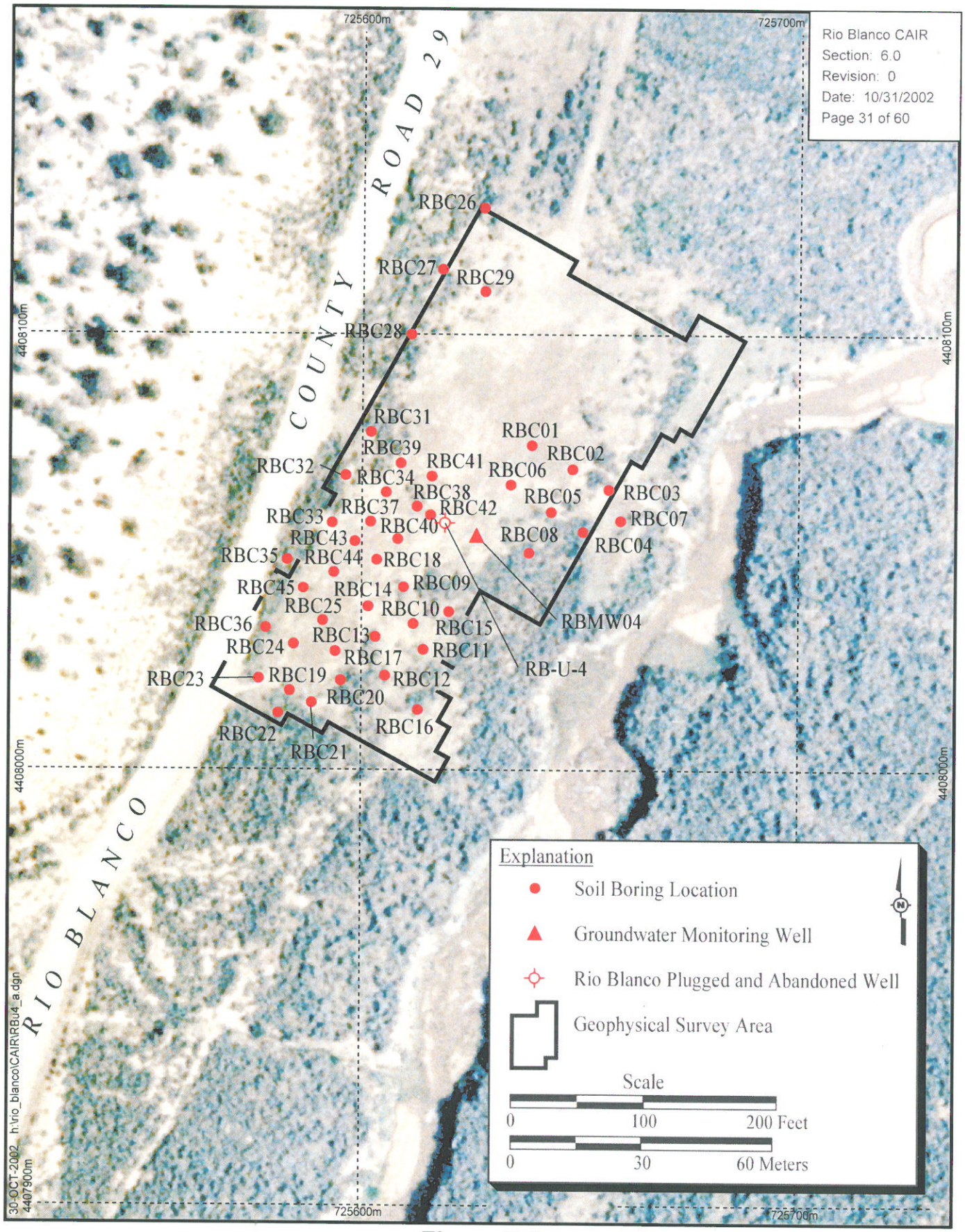


Figure 6-1
RB-U-4 Soil Boring Locations

eastern anomaly. Field-screening results from borings RBC01, RBC02, and RBC06 were negligible, so step-out borings to the north and west were not drilled. A saturated, coarse-grained sand was encountered at approximately 13 ft bgs. The combination of negligible field-screening results and shallow depth-to-water strongly suggested that the conductivity high at the northeast corner of the site was due to water rather than contamination. Because this conductivity high was attributed to shallow groundwater instead of contamination, additional samples were not collected in the anomaly.

Sampling was conducted around the location where the conductivity low (i.e., the blue linear anomaly in Figure B-9) is visible cutting across the southern portion of the northeastern geophysical anomaly. Since this area was larger than 30 x 30 ft, sampling locations were determined by bisecting the anomaly area along the long dimension and trisecting along the short dimension. Borings RBC09 through RBC14 were drilled at the center of each of these sections. Borings RBC15 through RBC18 were drilled to the north, east, south, and west outside of the anomaly to complete the vertical and horizontal definition. A 1-ft thick layer of drilling mud was detected in step-out boring RBC17 at a depth of 15 ft.

Anomaly D-2 is at the southern portion of the RB-U-4 area and is smaller than 30 x 30 ft. Boring RBC19 was drilled at the estimated center. Drilling mud was detected in RBC19 at a depth of 11 ft. Step-out borings RBC20 through RBC25 were drilled around borings RBC17 and RBC19 to completely define the horizontal and vertical extent of the drilling mud. Drilling mud was detected in step-out boring RBC24 at depth of 18 to 18.5 ft. Step-out boring RBC36 was drilled to define the western boundary of the drilling mud detected in borings RBC17, RBC19, and RBC24. No drilling mud was detected in boring RBC36.

The two conductivity highs that make up Anomaly D-3 are larger than 30 x 30 ft. Sampling locations were determined at each anomaly by bisecting the area along the long dimension and trisecting along the short dimension. Borings RBC26 through RBC29 were drilled at the center of four of these sections in the northern conductivity high of Anomaly D-3. The additional two borings required by the sampling plan were not drilled because no contamination was indicated in these four borings. Borings RBC30 through RBC35 were planned to make up the six borings for the southern conductivity high of Anomaly D-3. Since field-screening results for borings RBC28 and RBC31 were non-detect, boring RBC30 (planned to be located between RBC28 and RBC31) was not drilled.

Observations made in borings RBC26, RBC27, RBC28, RBC29, RBC31, RBC32, RBC33, and RBC35 indicated that both conductivity highs that make up Anomaly D-3 are the result of shallow groundwater. However, drilling mud was detected in step-out boring RBC34 at a depth of 6 to 9 ft bgs.

Borings RBC37 through RBC44 were drilled to define the RB-U-4 Mud Pit. Drilling mud was identified intermittently between approximately 3 to 15 ft bgs in borings RBC37, RBC38, RBC43, and RBC44. Drilling mud was not found in borings RBC39, RBC40, RBC41, RBC42, or RBC45.

Boring RBC46 was a step-out boring installed east of RBC42 and southwest of RBC08 with rotosonic drilling methods. This boring is downgradient of the RB-U-4 Mud Pit and was converted into groundwater monitoring Well RBMW04 (see Section 9.0).

6.4 Summary of Analytical Results

A total of 103 soil samples were collected at the RB-U-4 area. Positive detects for soil samples collected from within the RB-U-04 area are presented in Table E.2-2. The table contains a column of "screening values." Screening values are taken from three sources including: COGCC Series 900, EPA Region IX PRGs, and CDLE Tier 1 or 1A screening values. These values were used for screening purposes to flag contaminants requiring evaluation by a risk assessment (see Appendix A).

Samples in which screening values were exceeded are listed in Table 6-1. Concentrations exceeding the screening level of 1,000 mg/kg for TPH-DRO were detected in 2 out of the 103 samples collected from RB-U-4. In addition, one sample exceeded the screening level of 300 mg/kg for total lead. Based on the risk assessment, these results do not indicate an increased risk to human health. See Appendix A for the complete risk assessment report.

Evaluation of soil boring radiological analytical results indicated Cs-137 was the only man-made radioisotope identified above minimum detectable concentrations (see Table E.7-1). The Cs-137 dataset from the Rio Blanco Site characterization is within the average Cs-137 fallout deposition concentration range for the state of Colorado and is considered to be at background concentrations (McArthur and Miller, 1989).

Table 6-1
RB-U-4 Samples Exceeding Screening Levels

Sample Number	Location	Contaminate Concentration (mg/kg)	
		TPH-DRO	Lead
Screening Value		**1,000**	**300**
RBC110005	Boring was done in the vicinity of the conductivity low thought to be a pipe. This sample was collected in native material.	1,200	Did not exceed screening value
RBC241620	Boring was drilled as a step-out boring for Anomaly D-2. This sample was collected from a layer of drilling mud. Because mud was found in this boring an additional step-out boring, RBC36, was completed to define the contamination. No mud was found in boring RBC36.	1,100	Did not exceed screening value
RBC090005	Boring was done in the vicinity of the conductivity low thought to be a pipe. This sample was collected in native material.	Not applicable	340

Samples were collected at boring locations RBC02, RBC10, RBC17, RBC27, RBC32, and RBC34 for the purpose of IDW characterization. No hazardous waste constituents were identified above regulatory levels (see Table E.5-2 in Appendix E).

7.0 Flare Stack Area Investigation

This section provides details on the investigation activities conducted at the Flare Stack area and the data collected as a result of those activities.

7.1 Flare Stack Area Site Observations

The Flare Stack area is located on the ridge northwest of the RB-E-01 Well location (see Plate 1). This location was used to flare off (i.e., burn in the open atmosphere) the natural gas generated during production testing. The location of the Flare Stack area was determined based on historical photo documentation and maps. A dirt road remains from the RB-E-01 Pad, up the ridge, to the Flare Stack area. Some old uprooted trees still remained at the edges, and a moderate covering of short grasses, and some small brush was growing in the clearing. The area surrounding the Flare Stack area had large pinon and juniper trees. There is no evidence of the concrete pad and there are no surface features remaining in the Flare Stack area.

7.2 Summary of Geophysics Surveys

Geophysical surveys including EM-31 conductivity/in-phase, EM-61 conductivity, and total magnetic field were conducted at the Flare Stack area in an attempt to identify any remaining subsurface features such as a concrete pad.

7.2.1 G-858G Magnetic Field Survey

A magnetic field survey was conducted along parallel lines oriented north-south with a line separation of 10 ft. The grid lines extended over the whole Flare Stack area (see Figure B-10 of Appendix B). One magnetic anomaly was indicated at the southeast corner of the Flare Stack area. Smaller magnetic anomalies are indicated running north to south at approximately the 80 E grid line. The magnetic field survey did not indicate buried pits with metallic debris or underground storage tanks. The anomalies are interpreted to be shallow buried metal objects.

7.2.2 EM-31 Conductivity and EM-31 In-Phase Conductivity

An EM-31 conductivity and EM-31 in-phase survey were conducted along parallel lines oriented west-east with a line separation of 10 ft. The grid lines extended over the whole Flare Stack area (see Figure B-11 and Figure B-12). A large area of higher conductivity covers the southern portion of the Flare Stack area, extending from 0N to 80N and across the surveyed area from 0E to 200E (see Figure B-11). This area of higher conductivity may represent natural changes in the geology.

7.2.3 EM-61 Conductivity

The EM-61 survey was conducted in an attempt to locate the concrete pad. The EM-61 survey was conducted along parallel lines oriented west-east with a line separation of 10 ft. The grid lines extended over the whole Flare Stack area. The results of the EM-61 do not show any structures resembling a concrete pad. The numerous small anomalies indicated in Figure B-13 are interpreted to be shallow buried metal objects.

7.3 Flare Stack Area Sample Locations

Ten surface soil samples were collected within the Flare Stack area (see Figure 7-1). These samples were collected to a maximum depth of 1 ft. Due to the shallow nature of the surface soil, refusal was met at four of the sampling locations (RBD02, RBD03, RBD05, and RBD07) prior to reaching a depth of 1 ft. Samples were collected with hand trowels, homogenized, and placed in sample jars. The coordinates of the sample collection points are provided in Appendix C.

The large conductivity high identified by the EM-31 survey was the only area of the Flare Stack area that was sampled. The conductivity high is a roughly rectangular area between 0N and 80N and from 75E to 140E. This area was larger than 30 x 30 ft and was sampled accordingly. Borings RBD01 through RBD06 were sampled at the center of each of the sections, and borings RBD07 through RBD10 were step-out borings to the north, south, east, and west.

7.4 Summary of Chemical Analyses Results

A total of 10 soil samples were collected from surface soil at the Flare Stack area. Positive detects for soil samples collected from the Flare Stack area are presented in Table E.2-2. The table contains a

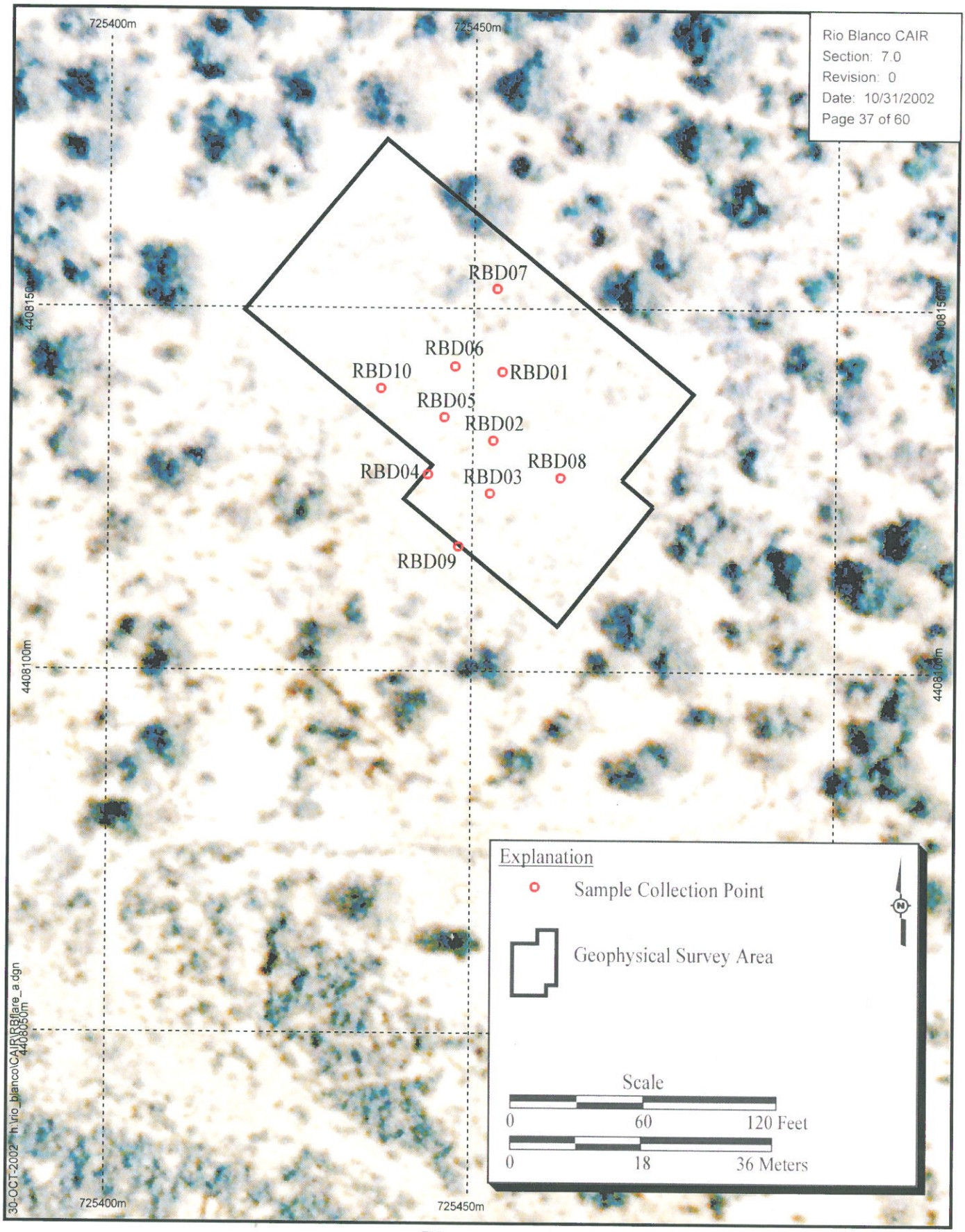


Figure 7-1
Flare Stack Area Sample Collection Points

column of "screening values." Screening values are taken from three sources including: COGCC Series 900, EPA Region IX PRGs, and CDLE Tier 1 or 1A screening values. These values were used for screening purposes to flag chemical contaminants requiring evaluation by a risk assessment (see Appendix A).

Evaluation of soil analytical results (see Appendix E, Table E.2-2) indicated that no chemical COPC concentrations exceeded established screening levels in the soil samples collected from the Flare Stack area.

Evaluation of soil boring radiological analytical results indicated Cs-137 was the only man-made radioisotope identified above minimum detectable concentrations (see Table E.7-1). The Cs-137 dataset from the Rio Blanco Site characterization is within the average Cs-137 fallout deposition concentration range for the state of Colorado and is considered to be at background concentrations (McArthur and Miller, 1989).

A sample was collected at RBD05 for the purpose of characterizing IDW. No hazardous waste constituents were identified above regulatory levels (see Table E.5-2 in Appendix E).

8.0 Upgradient Area Investigation

An area located approximately 420 ft south of the southern-most extent of the RB-AR-2/FCG No. 1 area was selected for sampling as the "Upgradient Area." The Upgradient Area was to be an area which had been previously undisturbed so as to provide background data. The specific location was selected because there is no historical documentation of activities in this area, and this area is hydrologically upgradient of the Rio Blanco Project operational areas.

This section provides details on the investigation activities that were conducted at the Upgradient Area and the data collected as a result of those activities.

8.1 Upgradient Area Site Observations

The site for the Upgradient Area was selected based on visual observations that it was not previously disturbed (see Plate 1). It was overgrown with sage and did not appear to have been graded. No man-made debris was found in this area prior to or after clearing the sage. The area is hydrologically upgradient of the Rio Blanco Project operational areas. The Upgradient Area is also within Section 14, Township 3 South, Range 98 West. An area measuring 15 ft wide by 200 ft east-west was cleared of sage to provide access for a rotosonic drill rig to collect soil samples and install a groundwater monitoring well.

8.2 Summary of Geophysics Surveys

Geophysical surveys including EM-31 conductivity/in-phase and total magnetic field were conducted to provide additional data to support the assumption that the Upgradient Area was previously undisturbed. No significant anomalies were observed.

8.3 Upgradient Area Sample Locations

Seven soil samples were collected from two borings drilled at the upgradient location (see Plate 1 for boring locations). The samples were collected from the surface to a maximum depth of 60 ft. The coordinates of these borings are provided in Appendix C.

Boring RBZ01 was drilled approximately 300 ft west of Fawn Creek. Boring RBZ01 was converted to a groundwater monitoring well and renamed RBMW01 (see Section 9.0). Boring RBZ02 was drilled just east of Rio Blanco County Road 29.

8.4 Summary of Analytical Results

A total of seven soil samples were collected from subsurface soil at the Upgradient Area. Positive detects for soil samples collected from the Upgradient Area are presented in Table E.4-2. Concentrations of all analytes listed in Table E.4-2 were below screening levels as would be expected from an upgradient sample. However, several analytes were identified above detectable limits.

Sample results showed detectable concentrations of five naturally occurring metals and seven organic compounds. Five out of the seven organic compounds detected are common laboratory contaminants which were also contained in one or more quality control (QC) blanks. These compounds include: 2-butanone, acetone, bis(2-ethylhexyl)phthalate, carbon disulfide, and toluene.

The two remaining organic compounds are dichlorodifluoromethane and TPH-DRO range organics. It is believed that the dichlorodifluoromethane in sample RBZ025560 is attributed to laboratory contamination caused by refrigerator repair work that was being completed in the metals section of the lab at the time of analysis.

The TPH-DRO detects in upgradient samples are both qualified as estimated based on laboratory error. Based on the concentration of TPH-DRO in the samples, 15 mg/kg and 29 mg/kg, and the depth at which the samples were collected, 35 to 39 ft bgs and 20 to 25 ft bgs, it is possible these detects do not represent true conditions.

Evaluation of soil boring radiological analytical results indicated Cs-137 was the only man-made radioisotope identified above minimum detectable concentrations (see Table E.7-1). The Cs-137 dataset from the Rio Blanco Site characterization is within the average Cs-137 fallout deposition concentration range for the state of Colorado and is considered to be at background concentrations (McArthur and Miller, 1989).

9.0 Shallow Groundwater Investigation

This section provides details on the shallow groundwater investigation activities conducted at the Rio Blanco Site and the data collected as a result of those activities.

9.1 Scope of Work for Monitoring Well Installation

The scope of work for the shallow groundwater investigation was to determine the depth to shallow groundwater, groundwater flow direction, and to determine if contamination is migrating through the soils to the groundwater. According to Section 4.2.2.1 of the Work Plan (DOE/NV, 2000a), and the DQO process, groundwater monitoring wells would be installed if it was determined that contamination from the mud pits intercepted the groundwater table, if contamination from the mud pits was within 20 ft of the groundwater, or if contaminant migration was occurring through the soil to the shallow groundwater table. Because groundwater was found within 20 ft of suspected contamination, the shallow groundwater investigation was initiated.

9.2 Well Installation

A total of four groundwater monitoring wells were installed from September 18 through 21, 2000. Groundwater Well RBMW01, converted from boring RBZ01, was installed hydraulically upgradient of the Rio Blanco Site approximately 700 ft south of RB-AR-2/FCG No. 1. Three additional wells, RBMW02, RBMW03, and RBMW04, were installed at the RB-AR-2, RB-E01, and RB-U-4 operational areas, respectively. Well construction is summarized in Table 9-1.

The depth to the bottom of the RB-E-01 Mud Pit was determined to be 20 ft bgs. Groundwater was not encountered during soil sampling by direct-push at the RB-E-01 area. The deepest direct-push boring was 30 ft bgs. During drilling of RBA17 (sonic boring), groundwater was identified at approximately 32 ft bgs; therefore, monitoring Well RBMW03 was installed. The groundwater level in monitoring Well RBMW03 was at a depth of 37.0896 ft bgs on December 20, 2000.

Table 9-1
Summary of Groundwater Monitoring Wells Installed at the Rio Blanco Site, Colorado

Well Number	Area Location	Well Construction					SWL[c]	Surveyed Locations UTM Zone 12, NAD 27		
		Well Dia. (in.)[a]	Total Depth (ft)[b]	Screen Length (ft)	Screen Size (in.)	Casing Material		Northing	Easting	Elev. TOC (1929 NGVD)
RBMW01	Upgradient	4.625	41	20	0.010	PVC	25.16	4,407,314.523	725,290.981	6,644.37
RBMW02	RB-AR-2	4.625	39	20	0.010	PVC	22.21	4,407,570.616	725,396.270	6,626.53
RBMW03	RB-E-01	4.625	49	20	0.010	PVC	37.08	4,407,881.436	725,490.422	6,626.59
RBMW04	RB-U-4	4.625	30	20	0.010	PVC	15.23	4,408,053.835	725,626.219	6,597.01

[a]Well Dia. - Nominal well diameter in inches
[b]Total depth to nearest whole foot
[c]SWL - Static water level in feet as measured on December 20, 2000, from top of casing

in. - Inches
TOC - Top of casing
Elev. TOC - Elevation of top of casing in feet above mean sea level
PVC - Polyvinyl chloride
UTM - Universal transverse mercator
NAD - North American datum

During soil sampling at the RB-AR-2/FCG No. 1 area, groundwater was encountered at depths ranging from 20 to 28 ft. The bottom of the RB-AR-2 Mud Pit was determined to be at 28 ft bgs. Based on this, groundwater monitoring Well RBMW02 was installed. The groundwater level in monitoring Well RBMW02 was at a depth of 22.21 ft bgs on December 20, 2000.

During soil sampling at the RB-U-4 location, groundwater was encountered at depths of 13 to 22 ft. The bottom of the RB-U-4 Mud Pit was determined to be at 18.5 ft. Based on this, groundwater monitoring Well RBMW02 was installed. The groundwater level in monitoring Well RBMW04 was at a depth of 15.23 ft bgs on December 20, 2000.

No monitoring wells were installed at the Flare Stack location since there was no evidence of mud pits or other subsurface intrusive activities at this site.

According to the Work Plan (DOE/NV, 2000a), three soil borings were to be drilled upgradient to locate the shallow groundwater table. Since the shallow groundwater table was located during soil sampling at the RB-AR-2 location and the RB-U-4 location, and groundwater monitoring wells were required to be installed at these locations, only two borings were drilled upgradient, RBZ01 and RBZ02. To obtain upgradient groundwater samples, monitoring Well RBMW01 was installed in RBZ01. This well is the closest to Fawn Creek. The groundwater level in RBMW01 was at a depth of 25.16 ft bgs on December 20, 2000.

Water levels measured in RBMW01 and boring RBZ02 located at the Upgradient Area and RBMW02 located at the RB-AR-2/FCG No. 1 area were used to determine general groundwater flow direction for the Rio Blanco Site.

All wells were installed using a rotosonic drilling technique. The well construction consisted of 2-in. Schedule-40 polyvinyl chloride screen and risers. All wells were installed with 20 ft of 0.010-slot screen, with risers installed with an approximate stick-up of 2-½ ft above the ground surface. The annular space between the casing and the boring wall was backfilled with 10/20 washed sand-pack material to approximately 5 ft above the screened interval. A 5-ft thick bentonite seal was placed above the sand pack to minimize grout from entering the well. The remaining annulus was filled with a neat cement grout and placed on top of the bentonite seal to the ground surface. A locking, protective, steel surface casing was placed over each well casing and cemented in place. A 4-ft

square concrete pad was installed around the protective steel casing. Guard posts were installed only at monitoring Well RBMW03 due to its close proximity to County Road 29. Well construction diagrams are provided in Figure 9-1, Figure 9-2, Figure 9-3, and Figure 9-4.

9.3 Well Development

The four groundwater monitoring wells were developed on September 22 and 23, 2000. Well development activities consisted of bailing the well until the groundwater parameters stabilized. All development water was containerized in 55-gallon drums. Prior to well sampling activities, groundwater elevations were measured with a water-level indicator. Groundwater elevations are presented on Table 9-1. Figure 9-5 shows the groundwater potentiometric surface levels in the Rio Blanco study area. As indicated in Figure 9-5, available data indicate groundwater flow at the site is to the northeast (note orientation of figure) roughly paralleling the flow of Fawn Creek.

9.4 Groundwater Sample Collection

The first round of groundwater sampling was conducted on September 24, 2000. A second round of groundwater sampling was conducted on July 17, 2002. Groundwater samples were collected using a 1 ½-in. disposable bailer to retrieve the water from the well. The groundwater was transferred from the bailers directly into the sample bottles. Samples were shipped to Paragon Analytics in Fort Collins, Colorado.

9.5 Summary of Analytical Results

Groundwater samples were submitted to Paragon Analytics Inc. for the following analyses:

- VOCs
- TPH-DRO
- SVOCs
- Target analyte list total and dissolved metals
- Gamma spectroscopy
- Tritium

Positive detects for both rounds of groundwater sampling are presented in Table E.3-2. The table contains a column of "screening values." Screening values are taken from three sources including: COGCC Series 900, EPA Region IX PRGs, and CDLE Tier 1 or 1A screening values. These values

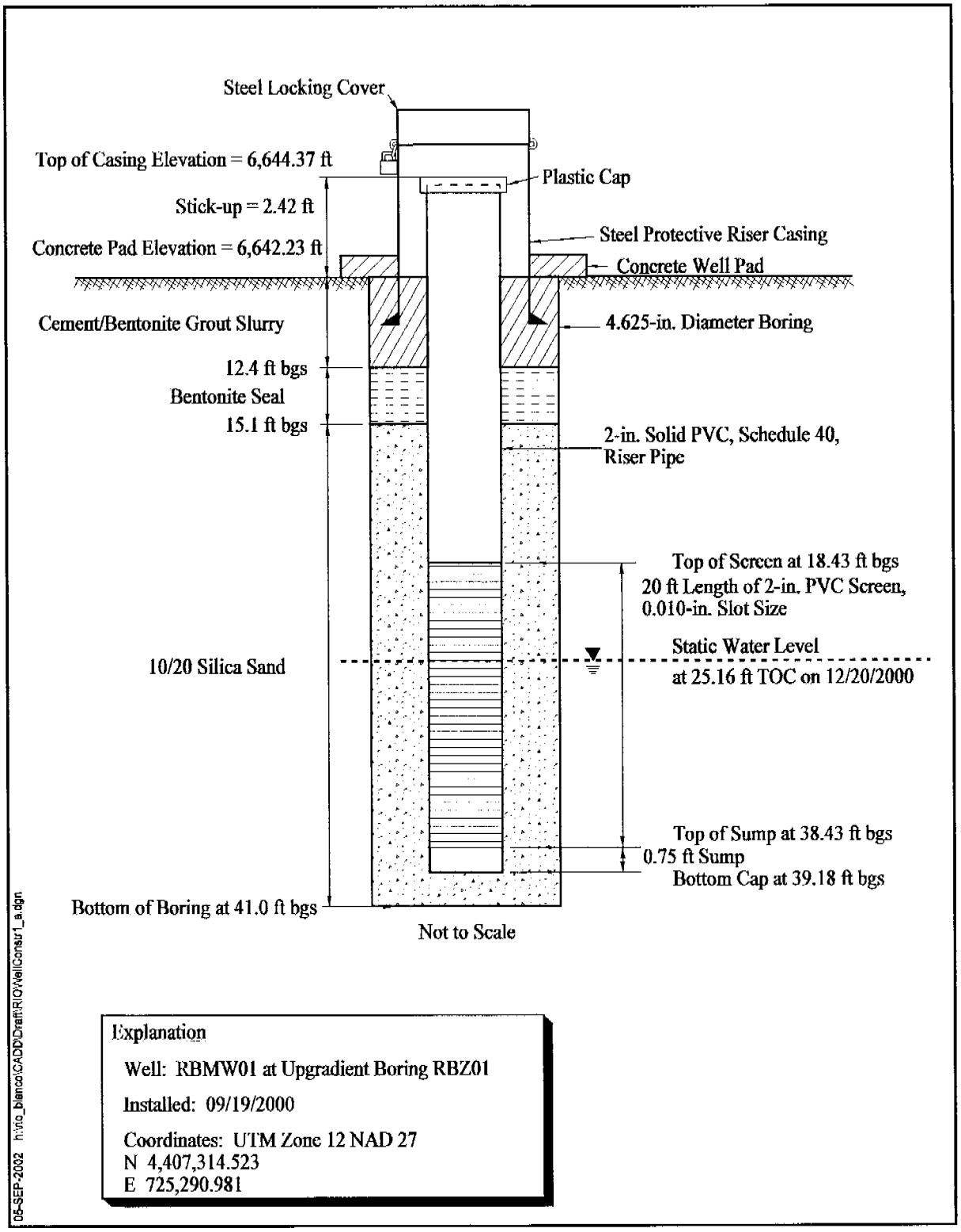


Figure 9-1
Rio Blanco Well Construction Diagram for RBMW01

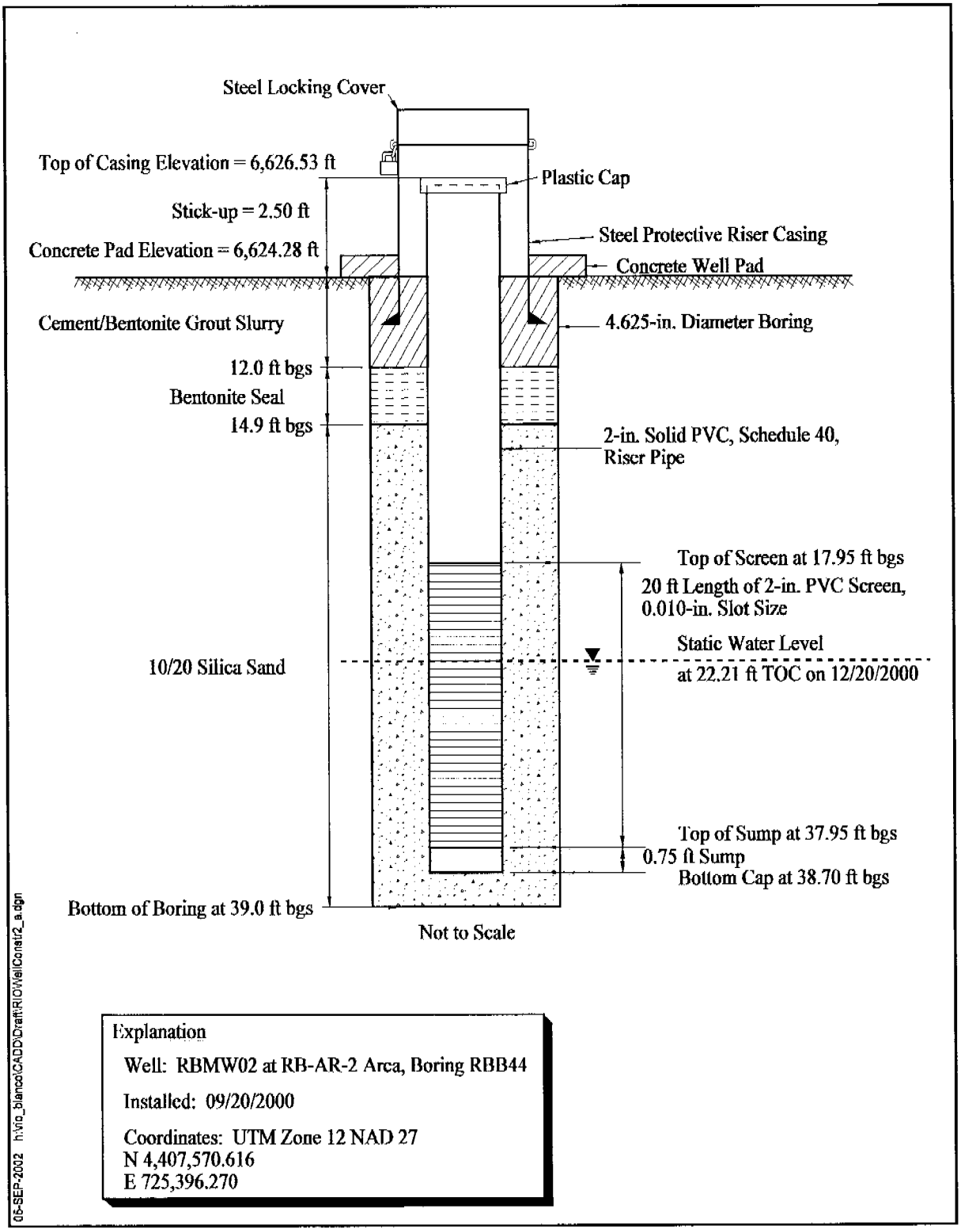


Figure 9-2
Rio Blanco Well Construction Diagram for RBMW02

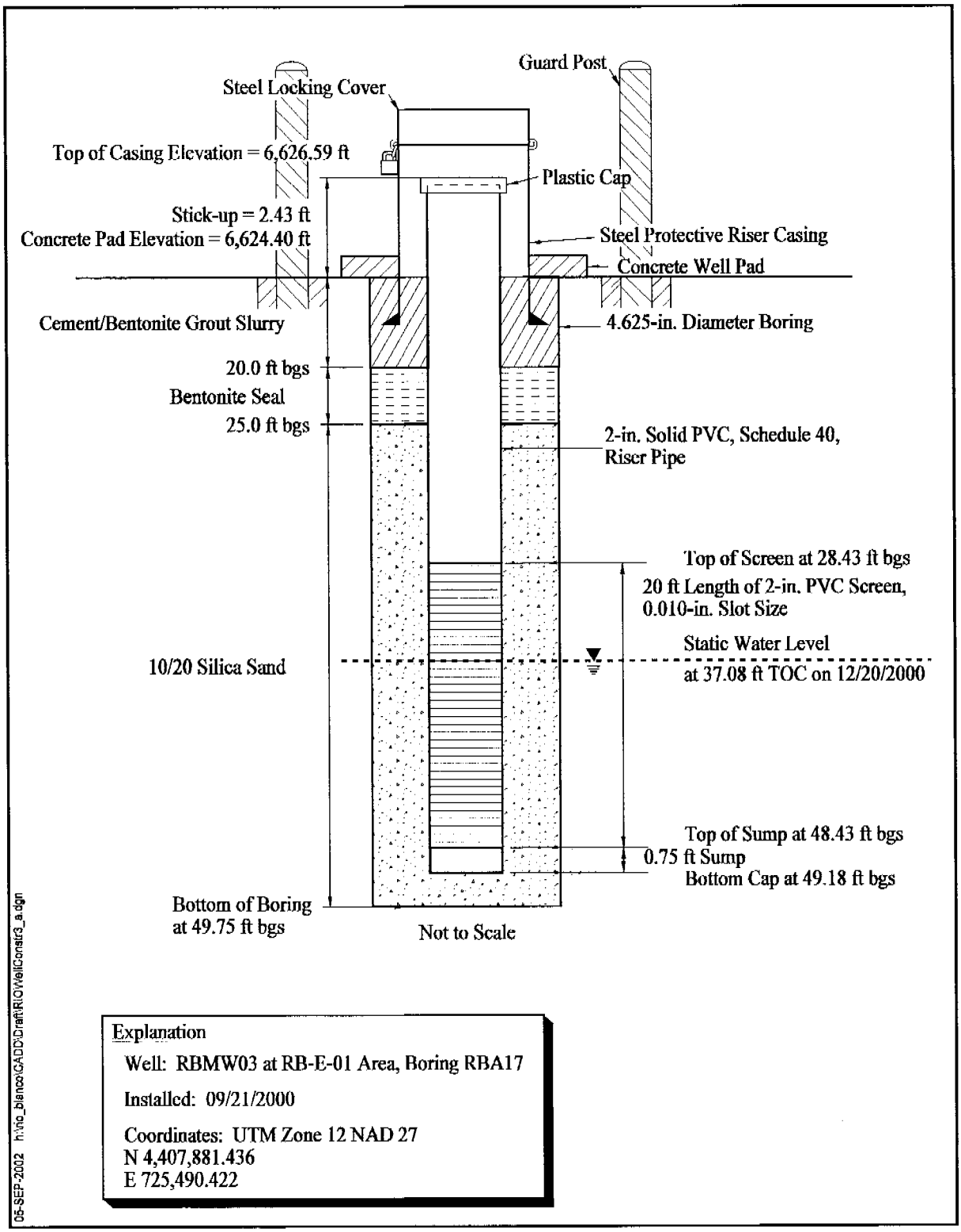


Figure 9-3
Rio Blanco Well Construction Diagram for RBMW03

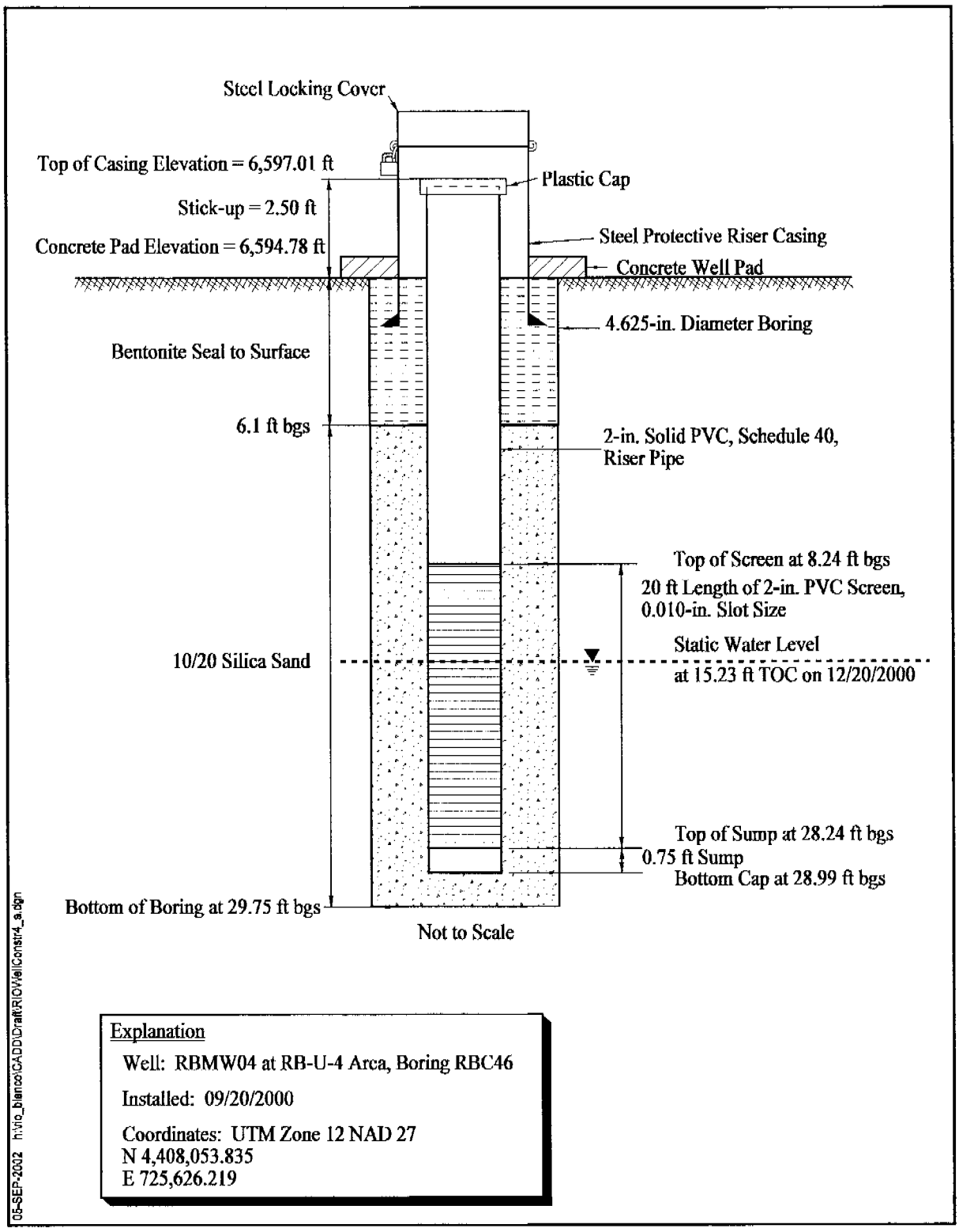


Figure 9-4
Rio Blanco Well Construction Diagram for RBMW04

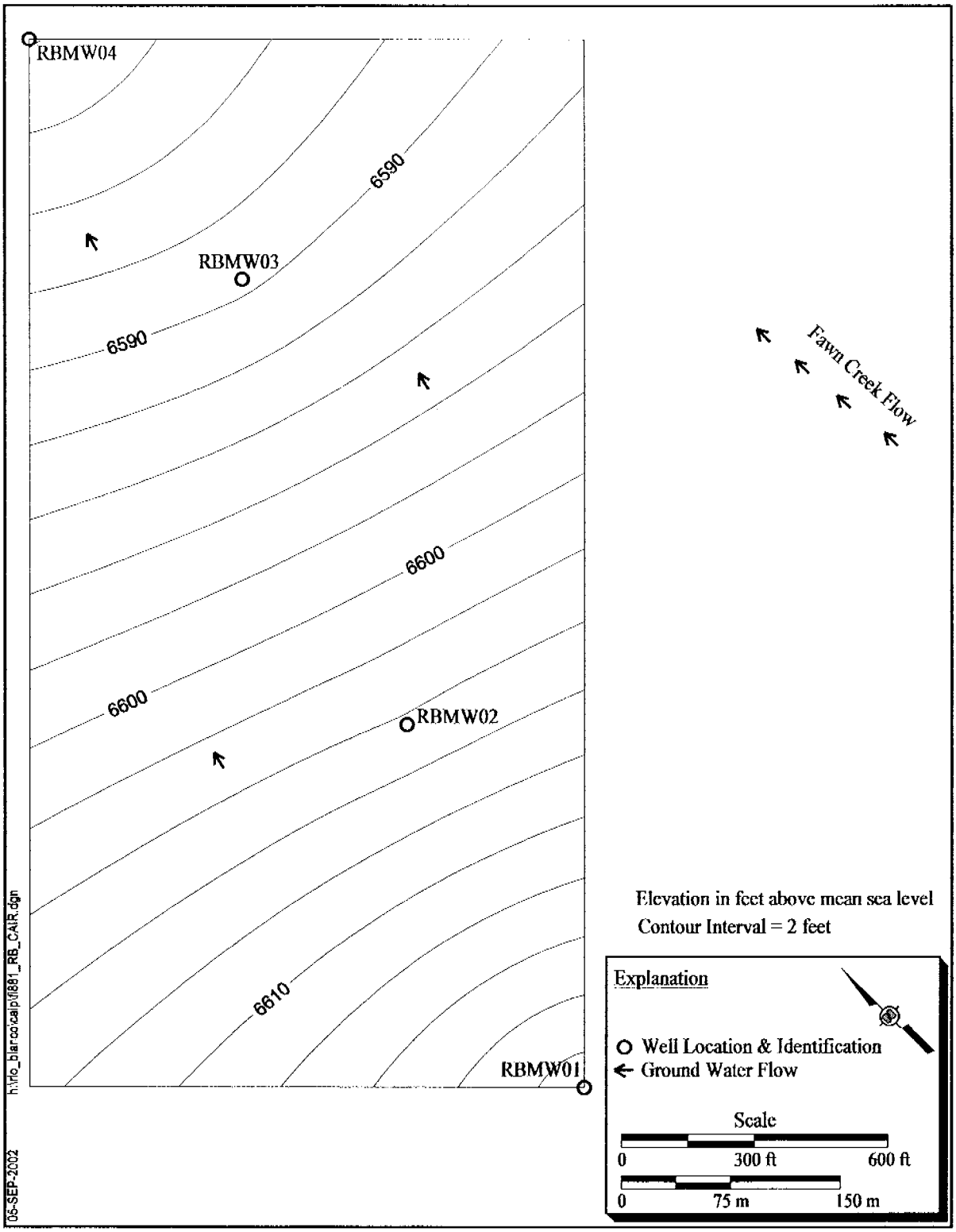


Figure 9-5
Potentiometric Surface Map (12/20/00)
Rio Blanco Site, Colorado

were used for screening purposes to flag contaminants requiring further evaluation by a risk assessment.

Evaluation of groundwater analytical results from the first round of sampling indicated that concentrations of lead, arsenic, bromodichlormethane, dibromochloromethane, and chloroform exceeded established screening levels for groundwater in one or more samples. The trihalomethanes (i.e., bromodichlormethane, dibromochloromethane, and chloroform) were not on the list of COPCs for the site and would not be expected in groundwater due to DOE activities at the Rio Blanco Site. Evaluation of groundwater analytical results from the second round of sampling indicated that the levels of lead detected did not exceed established screening levels for groundwater and arsenic, bromodichlormethane, dibromochloromethane, and chloroform were not detected.

Based on the screening process for COPCs as described in the risk assessment (see Appendix A), lead and arsenic were not considered COPCs for the groundwater risk assessment. However, the three VOCs could not be eliminated from consideration. Based on the results of the September 2000 groundwater samples, there may be a lifetime cancer risk to potential future residents of 4.2×10^{-6}. Though above the 1×10^{-6} risk level, the potential future risk is within and near the conservative end of the EPA target range of 1×10^{-6} to 1×10^{-4} (EPA, 1991).

Currently, there are no water supply sources that tap the alluvial aquifer within the vicinity of the site. A trailer that serves as a temporary residence during cattle round-ups and is occupied several weeks a year is located near the RB-U-4 site. The trailer does have access to the RB-D-03 Well; however, this well is screened in a lower aquifer (CER, 1975). The lower aquifer exhibits only intermittent hydraulic continuity with the upper and alluvial aquifers, and testing of monitoring wells during the Rio Blanco Project suggested that any flow is upward from the lower aquifer to the upper aquifers (DRI, 1991). Thus, currently, there are no risks to human health from site constituents. Future risks are not expected based on the most recent groundwater sampling conducted in 2002. See Appendix A for the complete risk assessment report.

No man-made radioisotope were identified in the groundwater samples (see Table E.7-2).

9.6 Monitoring Well Plugging and Abandonment Activities

The four monitoring wells, RBMW01 through RBMW04, were plugged and abandoned as per State of Colorado Regulations, on Friday September 20, 2002. The four wells were abandoned in the following sequence. The protective cover, concrete pad, and guard posts were removed. The concrete debris was placed on the west bank of Fish Creek as rip rap material to prevent bank erosion. The protective covers and guard posts were disposed at the Garfield County landfill as solid waste. Each monitoring well was filled with 10/20 silica sand to the static water level. A five-foot thick layer of bentonite chips was then placed on top of the sand as an impermeable seal. The well was then grouted to the surface with neat Portland cement. Following well abandonment activities, the disturbed area was back dragged to restore the natural grade conditions. Well abandonment reports are included in Appendix F.

10.0 Waste Management

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.

Analytical data from the site characterization samples indicated that there were no hazardous waste constituents detected above regulatory levels in the soil or water at the site. Therefore, all IDW was characterized as non-regulated waste and disposed of as sanitary waste. On September 28, 2002, the following waste was shipped to the Safety-Kleen landfill in Westmoreland, California:

- Nine 55-gallon drums of non-regulated solid waste
- Seven 55-gallon drums of non-regulated hydrocarbon waste/drill cuttings
- Fifteen 55-gallon drums of non-regulated decontamination rinsate

11.0 Demobilization and Survey Activities

This section provides details on the demobilization activities conducted upon the completion of site characterization activities as well as the well and soil boring location surveys.

11.1 Demobilization

Demobilization activities were completed between September 25 and 29, 2000. Sage and brush piles cleared from the investigation areas were chipped, and the disturbed (e.g., cleared) area was then broadcast seeded with a seed mixture compatible with the Rio Blanco Site and approved by the U.S. Bureau of Land Management.

Power was disconnected from the site office trailer and the trailer was removed from the site on September 28, 2000. All IDW was transported off site for disposal on September 28, 2000.

11.2 Well and Soil Boring Location Survey

On December 20 and 21, 2000, soil sample boring locations, monitoring wells, surface features, and key geophysical survey coordinates at the RB-E-01, RB-AR-2/FCG No. 1, RB-U-4, Flare Stack areas, and Upgradient location were surveyed by Kelly Surveying Associates Inc., a Colorado-licensed professional surveyor. Coordinates for sample points and wells are provided in Appendix C.

12.0 Conclusions

This section provides a summary of the conclusions made on the environmental conditions at the Rio Blanco Site based on observations made during the field investigation, analytical data results for soil and groundwater samples, and the risk assessment. This section also provides a set of recommendations on further action at the Rio Blanco Site.

The following conclusions are based on site observations, soil and groundwater analytical results, and the Risk Assessment.

12.1 Conclusions from the Geophysical Investigation

- Mud pits were located at RB-E-01, RB-AR-2.
- No mud pit was identified for the FCG No. 1 Well. There was no historical evidence that such a mud pit existed.
- No trenches containing a "jelly-like" material were identified.
- An anomaly in the general location where the "gas burn pit" south of FCG No. 1 was identified and sampled.
- The location of the Well RB-AR-2 Cellar was identified.
- The concrete pad associated with the former Flare Stack area was not definitively located.
- Several anomalies other than mud pits were identified and sampled.
- No other significant pits containing buried metal objects, septic tanks, or underground storage tanks were identified.

12.2 Conclusions from the Soil Investigation

- Tritium was identified below the requested minimum detectable concentration but above the sample-specific minimum detectable concentration in six soil samples (see Table E.7-1).
- The concentration of tritium detected in the soil samples collected at the RB-E-01 and RB-AR-2/FCG No. 1 areas were compared to the 110 pCi/g soil concentration that is deemed

compliant with the 25 mrem/yr unrestricted release dose limit in 10 CFR 20.1402 (FR, 1999). The reported tritium soil activity sample results are well below the 110 pCi/g screening limit.

- Cs-137 was the only man-made radioisotope identified above detection limits in soil samples.
- The concentration of Cs-137 in the soil at the Rio Blanco Site was not above the average Cs-137 fallout deposition concentration range for the state of Colorado.
- Lead and diesel-range organics were detected above the screening limit in several soil samples (see Table 5-1 and Table 6-1).
- The levels of lead and diesel in the soil at the Rio Blanco Site do not pose a current or future risk to human health (see Appendix A).

RB-E-01 Area

- Drilling mud was identified at the RB-E-01 Mud Pit intermittently between 12 and 20 ft bgs.
- Soil samples were collected to define the nature and extent of contamination originated from the mud pit and from five other suspect locations/anomalies at the RB-E-01 area.
- No concentrations of chemical COPCs exceeded established screening levels in soil samples collected in the RB-E-01 area.

RB-AR-2/FCG No. 1 Area

- Drilling mud was identified at the RB-AR-2 Mud Pit intermittently between 5 to 28 ft bgs.
- Soil samples were collected to define the nature and extent of contamination originated from the mud pit and from four other suspect locations/anomalies at the RB-AR-2/FCG No. 1 area.
- Concentrations of TPH-DRO in three soil samples collected in, or just below, the drilling mud layer of the RB-AR-2 Mud Pit exceeded the screening value (see Table 5-1).
- Concentrations of lead in one soil sample collected in the drilling mud layer of the RB-AR-2 Mud Pit exceeded the screening level (see Table 5-1).

RB-U-4 Area

- Drilling mud was identified at the RB-U-4 Mud Pit intermittently between 3 to 15 ft bgs.
- Soil samples were collected to define the nature and extent of contamination originating from the mud pit and from four other suspect locations/anomalies at the RB-U-4 area.

- Concentrations of TPH-DRO exceeded the screening value in two soil samples. One sample was collected in a drilling mud layer. The second sample was collected in native material within a geophysical anomaly thought to be a pipe (see Table 6-1).

- Concentrations of lead in one soil sample collected in native material within a geophysical anomaly thought to be a pipe exceeded the screening level (see Table 6-1).

Flare Stack Area

- One anomaly identified during the geophysical survey was sampled.

- No concentrations of chemical COPCs exceeded established screening levels in soil samples collected in the Flare Stack area.

12.3 Shallow Groundwater Investigation

- Shallow groundwater wells were installed at the Upgradient Area, RB-AR-2/FCG No. 1 area, RB-E-01 area, and the RB-U-4 area.

- The groundwater surface was at approximately 22 ft below the top of the casing (TOC) in Well RBMW02 at the RB-AR-2 location on December 20, 2000; therefore, groundwater is likely in contact with drilling mud at this location.

- The groundwater surface was at approximately 37 ft below the TOC in Well RBMW03 at the RB-E-01 location December 20, 2000; therefore, groundwater is likely within 10 ft of separation from drilling mud at this location.

- The groundwater surface was at approximately 15 ft below the TOC in Well RBMW04 at the RB-U-4 location December 20, 2000; therefore, groundwater is likely in contact with drilling mud at this location.

- Concentrations of lead, arsenic, and three VOCs collectively known as trihalomethanes (i.e., bromodichlormethane, dibromochloromethane, and chloroform) exceeded established screening levels for groundwater in one or more samples collected in the first round of groundwater sampling conducted in 2000.

- Trihalomethanes were not detected in the groundwater samples collected in 2002.

- There is no current risk to human health posed by the groundwater at the Rio Blanco Site (see Appendix A).

- The future risk to human health posed by the trihalomethanes, if present, has been calculated to be within and near the conservative end of the EPA target range using the analytical data from the groundwater samples collected in 2000.

12.4 Conclusion Summary

Recommendations on additional actions at the Rio Blanco Site surface and shallow subsurface are based on the following findings of the corrective action investigation and risk assessment:

- Chemical COPCs identified in the soil at the Rio Blanco Site do not pose a risk to human health (see Appendix A).

- Levels of tritium in the soil are compliant with the unrestricted release dose limit.

- No gamma-emitting radionuclides were identified above background levels in soil or groundwater.

- Under the conservative reasonable maximum exposure assumptions, which include the assumption of 30 years of exposure to constant maximum concentrations of the COPCs and using the maximum detected concentrations from the 2000 investigation, the lifetime cancer risk from VOCs in the groundwater to potential future residents is 4.2×10^{-6}. Although this is above the 1×10^{-6} level, this risk is within, and near, the conservative end of the EPA target range of 1×10^{-6} to 1×10^{-4} (EPA, 1991). The 2002 investigation did not detect any VOCs, so the potential lifetime cancer risk from these compounds is likely to be negligible.

  Currently, there are no water supply sources that tap the alluvial aquifer within the vicinity of the site. A trailer that serves as a temporary residence during cattle round-ups and is occupied several weeks a year is located near the RB-U-4 site. The trailer does have access to the RB-D-03 Well; however, this well is screened in a lower aquifer (CER, 1975). The lower aquifer exhibits only intermittent hydraulic continuity with the upper and alluvial aquifers, and testing of monitoring wells during the Rio Blanco Project suggested that any flow is upward from the lower aquifer to the upper aquifers (DRI, 1991). Thus, currently, there are no risks to human health from site constituents. Future risks are not expected based on the most recent groundwater sampling conducted in 2002 (see Appendix A).

13.0 Recommendations

Based on the conclusions of the corrective action investigation as stated in Section 12.1.4, the NNSA/NV is making the following recommendations on the Rio Blanco Site surface and shallow subsurface:

- No corrective actions be required for the site
- No Corrective Action Plan be required
- No use restrictions be placed on the site

A notice of completion to NNSA/NV is requested from the Colorado Department of Public Health and Environment for the Rio Blanco Site surface and shallow subsurface.

14.0 References

AEC, see U.S. Atomic Energy Commission.

CER, see CER GeoNuclear.

CER Geonuclear. 1973. *Predetonation Rio Blanco Hydrologic Testing for Period February 1, 1973, to May 1, 1973*, PNE-RB-43. Las Vegas, NV.

DRI, see Desert Research Institute.

Desert Research Institute. 1991. *Evaluation of Groundwater Monitoring at Offsite Nuclear Test Areas*, Publication No. 45085, DOE/NV/10845-07, UC-703. Las Vegas, NV.

Eberline Instrument Corporation. 1978. *Rio Blanco Radiation Contamination Clearance Report*, PNE-RB-79. Prepared for the U.S. Department of Energy. Santa Fe, NM.

EPA, see U.S. Environmental Protection Agency.

Federal Register. 1999. "Supplemental Information on the Implementation of the Final Rule on Radiological Criteria for License Termination," Vol. 64, No. 234, December 7. Washington, DC.

FR, see *Federal Register*.

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

McArthur, R.D., and F.L. Miller. 1989. *Off-Site Radiation Exposure Review Project Phase II Soils Program*, DOE/NV/10384-23, Publication #45064. Las Vegas, NV: Desert Research Institute, Water Resources Center.

U.S. Atomic Energy Commission. 1972. *Environmental Statement: Rio Blanco Gas Stimulation Project, Rio Blanco County, Colorado*, WASH-1519. Las Vegas, NV.

U.S. Department of Energy, Nevada Operations Office. 2000a. *Site Characterization Work Plan for the Rio Blanco Site, Colorado*, DOE/NV-607. Las Vegas, NV.

U.S. Department of Energy, Nevada Operations Office. 2000b. *United States Nuclear Tests, July 1945 through September 1992*, DOE/NV-209-REV 15. Las Vegas, NV.

U.S. Environmental Protection Agency. 1991. *Role of the Baseline Risk Assessment in Superfund Remedy Selection Decision*, OSWER Directive 9355.0-30. Washington, DC: Office of Solid Waste and Emergency Response.

U.S. Environmental Protection Agency. 1996. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846. Washington, DC.

Appendix A

Risk Assessment Report for the Rio Blanco Site, Colorado

(28 Pages)

This appendix was produced by the IT Corporation, Somerset, NJ Office, for the U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office.

Human Health Risk Assessment

For the Rio Blanco Site, Colorado

Prepared by:
IT Corporation

Prepared for:
U.S. Department of Energy
National Nuclear Security Administration
Nevada Operations Office

August 22, 2002

Table of Contents

TABLE OF CONTENTS ..... **I**

LIST OF TABLES ..... **II**

1.0 INTRODUCTION **1**

1.1 PURPOSE 2
1.2 SCOPE 2

2.0 SCREENING OF CONSTITUENTS OF POTENTIAL CONCERN **3**

2.1 ANALYTICAL DATA SETS 3
2.2 DATA QA/QC AND VALIDATION 3
2.3 SCREENING PROCEDURES 4

3.0 RISK ASSESSMENT **8**

3.1 RISK ASSESSMENT FOR SOIL COPCS 8
3.1.1 Lead *8*
3.1.2 Diesel Range Organics *10*
3.2 RISK ASSESSMENT FOR GROUNDWATER COPCS 11
3.2.1 Exposure Assessment *13*
3.2.2 Toxicity Assessment *14*
3.2.3 Risk Characterization *15*

4.0 SUMMARY AND CONCLUSION **16**

5.0 REFERENCES **18**

List of Tables

Number	Title
Table 2-1	Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Soil
Table 2-2	Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Groundwater
Table 3-1	Exposure Quantification – Intake Calculation
Table 3-2	Residential Risk Characterization – Risk Calculation – Carcinogens
Table 3-3	Residential Risk Characterization – Risk Calculation – Noncarcinogens

List of Acronyms

ATSDR	Agency for Toxic Substances and Disease Registry
BTEX	Benzene, toluene, ethylbenzene, and xylene
CDI	Chronic daily intake
CDLE	Colorado Department of Labor and Employment
CDPHE	Colorado Department of Public Health and Environment
COGCC	Colorado Oil and Gas Conservation Commission
COPC	Contaminants of potential concern
DRO	Diesel-range organics
EPA	U.S. Environmental Protection Agency
E&P	Exploration & production
FCG No.1	Fawn Creek Government Well Number 1
ft	Feet
HI	Hazard index
HQ	Hazard quotient
IEUBK	Integrated Exposure Uptake Biokinetic model
IT	IT Corporation
IRIS	Integrated Risk Information System
km	Kilometer
m	Meter
mg/kg	Milligrams per kilogram
mi	Mile
NNSA/NV	U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office
OIS	Oil Inspection Section
PAH	Polycyclic aromatic hydrocarbon
PRG	Preliminary remediation goal
QA/QC	Quality assurance/quality control
RAGS	Risk Assessment Guidance for Superfund
RBSL	Risk-based screening level
RfD	Reference dose
RME	Reasonable maximum exposure
SF	Slope factor
TPH	Total petroleum hydrocarbons
VOC	Volatile organic compound
µG/L	Micrograms per liter

1.0 Introduction

This report presents an assessment of potential human health risks at the Rio Blanco Site in Rio Blanco County, Colorado. The analytical data used in support of this assessment were collected in accordance with the *Site Characterization Work Plan for the Rio Blanco Site, Colorado* (DOE/NV, 2000) by IT Corporation (IT) on behalf of the U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office (NNSA/NV). Those data are reported concurrently in the *Corrective Action Investigation Report for the Rio Blanco Site, Colorado* (DOE/NV, 2002).

The Rio Blanco Site is in Rio Blanco County, Colorado, 52 miles (mi) northeast from Grand Junction, Colorado. The Rio Blanco Project was a joint government-industry experiment conducted in the early 1970s that used three nuclear devices. These nuclear devices were emplaced and detonated in one boring at depths of 5,840; 6,230; and 6,690 feet (ft). Although site restoration activities were completed in 1976, there was a concern for possible remaining chemical contaminants in the former operational areas, and the possible migration of these contaminants to the shallow groundwater and to Fawn Creek.

The four principal areas of the site listed below were associated with the drilling and completion of wells, and the associated natural gas production testing activities:

- RB-E-01 drill pad
- RB-AR-2/Fawn Creek Government Number 1 (FCG #1) drill pad
- RB-U-4 drill pad
- Natural gas flaring area (Flare Stack)

A total of 447 samples were collected for laboratory analysis during the initial field investigation, which lasted from July to December 2000. These included soil characterization samples, duplicate samples, quality assurance/quality control (QA/QC) samples (field blanks, equipment rinsate blanks, trip blanks), waste characterization samples, and groundwater samples as specified in the Work Plan (DOE/NV, 2000). In July 2002, an additional 7 samples were collected for further groundwater

characterization. These included groundwater characterization samples, duplicate samples, and QA/QC samples.

1.1 Purpose

The purpose of this risk assessment is to determine if any chemical constituents remain in the surface and shallow subsurface that may pose a risk to human health.

The risk assessment, as presented, is based on the following guidance:

- *Interim Final Policy and Guidance on Risk Assessments for Corrective Action at RCRA Facilities* (Colorado Department of Public Health and Environment [CDPHE], 1993)
- *Risk Assessment Guidance for Superfund (RAGS), Volume I: Human Health Evaluation Manual* (U.S. Environmental Protection Agency [EPA], 1989)
- *Petroleum Storage Tank Owner/Operator Guidance Document* (Colorado Department of Labor and Employment Oil Inspection Section, 1999)
- *Colorado Oil and Gas Conservation Commission (COGCC) Series 900 Rules – Exploration & Production (E&P) Waste Management*
- *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (EPA, 1994)
- *The Basic Standards for Groundwater* (CDPEH, 2001)

1.2 Scope

The scope of the human health risk assessment and its presentation in the report is as follows. In Section 2.0, the detected constituents are evaluated based on occurrence and distribution in order to identify constituents that should be addressed more formally within the risk assessment. The assessment of risks to these identified constituents is presented in Section 3.0 for both soil and groundwater. Section 4.0 presents a brief summary and conclusion of the risk assessment. References are presented in Section 5.0.

2.0 Screening of Contaminants of Potential Concern

The first step in the risk assessment process is the screening of the analytical data for the identification of contaminants of potential concern (COPC). The purpose of this screen is to focus the risk assessment process on the detected constituents that pose the greatest threat to human health. The screening for COPCs is outlined below.

2.1 Analytical Data Sets

Soil and groundwater samples were collected at the Rio Blanco Site, and both are used in this risk assessment. A total of 314 soil samples were collected; seven of these were from background or upgradient locations. Surface, shallow subsurface, and deep surface samples were collected. For purposes of the risk assessment, the deep subsurface is considered to be anything beyond 12 ft. In order to remain conservative during the screening process, all soil samples are considered together without regard to sample depth. A total of eight groundwater samples were collected from the four monitoring wells, one of which was located upgradient of the site. One sample from each well was collected in 2000 and one sample from each well was collected in 2002.

2.2 Data QA/QC and Validation

Analytical data quality used in the risk assessment was assured through the use of standard field-sampling and analytical laboratory procedures. All chemical data were validated to further assess the quality of the data. Data validation is a specific data evaluation process that examines adherence to performance-based acceptance criteria. The analytical data validation process consisted of ensuring analytical data quality through the use of standard field-sampling and analytical laboratory procedures, specifically evaluation of data completeness, verification of instrument calibration, measurement of laboratory precision using duplicates, measurement of laboratory accuracy using spikes, examination of blanks for contamination, assessment of adherence

to method specifications and QC limits, and evaluation of method performance in the sample matrix.

2.3 Screening Procedures

In some cases, the list of constituents detected at a site may be large and the resultant risk assessment may not focus on the constituents that have the potential to invoke the greatest risk. In such circumstances, screening procedures are used to reduce the number of COPCs in each medium (EPA, 1989). Three screening procedures are used for the risk assessment datasets to reduce the number of constituents (if any) carried through in a more in-depth quantitative or qualitative risk assessment. The analytical data and results of the screening process are presented in Table 2-1 and Table 2-2 for soils and groundwater, respectively.

The first level of screening is an evaluation of the frequency of detection in each of the datasets. Constituents that are infrequently detected may be artifacts in the data due to sampling, analytical, or other procedures; therefore, they may not be related to site operations or disposal practices. For this risk assessment, a constituent not detected or detected at a frequency no greater than 5 percent in any given environmental medium is not considered to be a COPC for further risk evaluation in that medium (EPA, 1989). The following constituents detected in at least one soil sample were not considered COPCs for the risk assessment due to low detection frequency: mercury (0.3%), 1,1,1-trichloroethane (0.3%), 1,2,4-trimethylbenzene (2.2%), 1,2-dichloroethane (0.3%), 1,3,5-trimethylbenzene (1.6%), 2-hexanone (0.6%), 4-methyl-2-pentanone (0.6%), chloromethane (0.3%), cis-1,2-dichloroethene (0.6%), dichlorodifluoromethane (0.3%), isopropylbenzene (1.6%), methylene chloride (2.2%), naphthalene (2.2%), n-butylbenzene (1.6%), n-propylbenzene (1.6%), p-isopropyltoluene (1.6%), sec-butylbenzene 11.6%), tert-butylbenzene (0.3%), tetrachloroethene (0.6%), 2,4-dichlorophenol (0.3%), 2-methylnaphthalene (3.8%), anthracene (0.3%), and phenanthrene (3.1%).

The second level of screening is a comparison to background concentrations. The maximum detected concentrations for each medium (presented in Table 2-1 and Table 2-2) are compared to the background level. The background level is defined as the arithmetic mean plus two standard deviations of the data from the upgradient areas (CDPHE, 1993). This definition is applied to the soil data for which there are seven upgradient soil samples. The soil background levels are listed in Table 2-1. For groundwater, only two upgradient samples were collected. The results for the maximum detected concentrations of the two samples are listed as the background levels in Table 2-2. If the maximum detected concentration in the site soils and groundwater is less than the background level, the constituent is not considered to be a COPC for the risk assessment. No inorganic constituents detected in site soils were eliminated based on a comparison to background levels. However, the five inorganics detected in groundwater samples (i.e., arsenic, barium, chromium, lead, and selenium) were detected at lower concentrations in the site groundwater than in the upgradient groundwater. Therefore, no inorganic constituents were considered COPCs in groundwater for the risk assessment.

The third level of screening applied to the datasets is a toxicity-based comparison method. The maximum detected concentration in a medium was compared to a risk-based screening level. If the maximum detected concentration for a constituent in a medium did not exceed the screening level, the constituent was not considered a COPC for that medium. Toxicity-based screening levels were used from several sources.

The *Petroleum Storage Tank Owner/Operator Guidance Document* (Colorado Department of Labor and Employment [CDLE] Oil Inspection Section [OIS], 1999) provides generic risk-based soil screening levels (RBSL) for several volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAH) that are common at petroleum storage tank sites, which are referred to as Tier 1 RBSLs. Of the detected constituents, Tier 1 RBSLs are available for benzene, ethylbenzene, xylene, toluene, and anthracene. The maximum concentrations of these constituents did not exceed the Tier 1 RBSLs. Thus, they are not considered as COPCs for the risk assessment.

The COGCC has produced a list of allowable concentrations and levels for several organic and inorganic constituents in soil and groundwater within their 900 Series Rules. These are applicable to E&P waste or other solid waste where the CDPHE has allowed remediation and oversight by the COGCC. The 900 Series Rules provide allowable concentrations and levels for the seven inorganic constituents detected in soil. The maximum concentrations of arsenic, barium, cadmium, chromium, selenium, and mercury are below the maximum allowable concentrations; therefore, these are not considered as COPCs for the risk assessment. However, lead was detected in one sample at a concentration of 470 milligrams per kilogram (mg/kg), whereas the COGCC allowable concentration is 300 mg/kg. Thus, lead is retained as a COPC in soil for the risk assessment. The 900 Series Rules also provide allowable concentration for total petroleum hydrocarbons (TPH) in soil: 1,000 mg/kg for sensitive areas and 10,000 mg/kg for non-sensitive areas. The maximum concentration of diesel-range organics (DRO), which is a subset of TPH, was 13,000 mg/kg, exceeding both the sensitive and non-sensitive area maximum allowable concentrations. Thus, DRO is retained as a COPC in soil for the risk assessment.

EPA Region IX has compiled a list of preliminary remediation goals (PRG) for many inorganic and organic constituents. These PRGs are developed based on protection of human health assuming residential exposures through incidental soil ingestion, inhalation of air-borne dusts, consumption of tap water, and migration to groundwater. These PRGs reflect cancer risks of 1×10^{-6} (i.e., one in one million) or non-cancer hazard quotients of 0.1. EPA Region IX PRGs in soil are available for 2-butanone, acetone, carbon disulfide, and bis(2-ethylhexyl)phthalate, as well as many of the other organic constituents that were detected infrequently. Maximum concentrations of these organic constituents did not exceed the PRGs; thus, they are not addressed as COPCs for the risk assessment. EPA Region IX PRGs for tap water are available for acetone, bromodichloromethane, carbon disulfide, chloroform, dibromochloromethane, and di-n-butylphthalate. Acetone, carbon disulfide, and di-n-butylphthalate were not detected above the PRG. However, maximum detected concentrations of bromodichloromethane, chloroform, and

dibromochloromethane were above the PRGs. These VOCs are retained as COPCs in groundwater for the risk assessment.

As a result of the screening process, the following constituents have been identified as COPCs for the risk assessment. In soils, lead and DRO are identified as COPCs. In groundwater, bromodichloromethane, chloroform, and dibromochloromethane are identified as COPCs.

3.0 Risk Assessment

The risk assessment addresses those COPCs identified in soil and groundwater at the Rio Blanco Site. Typically, a risk assessment consists of three parts:

- Exposure assessment
- Toxicity assessment
- Risk characterization

The COPCs will be addressed in this risk assessment individually in a qualitative manner. If necessary, individual COPCs are also addressed quantitatively following the three steps identified above.

3.1 Risk Assessment for Soil COPCs

As described in the screening procedures outlined above, both lead and DRO were identified as COPCs for soil. These are addressed in the following sections.

3.1.1 Lead

Lead was identified as a COPC in soil since the maximum detected concentration in soil was 470 mg/kg, which exceeded the COGCC allowable concentration of 300 mg/kg. The screening process evaluated all soil samples regardless of depth in order to ensure that the screening process remained conservative.

The CDPHE (1993) guidance requires that risk be evaluated for surface soils and subsurface soils to a depth of 12 ft, since this is typically a maximum basement excavation depth. Contaminated subsurface soils deeper than 12 ft are not to be considered in the risk assessment, but can be addressed in any subsequent corrective actions, if necessary. The soil sample containing 470 mg/kg of lead was collected in the RB-AR-2/Fawn Creek Government Number 1 (FCG #1) drill pad area at a depth of 12 to 16 ft. Surface soils (0 to 5 ft) from the same location had a concentration of only

16 mg/kg. Deeper soils (24 to 28 ft and 28 to 30 ft) from the same location had concentrations of only 12 to 15 mg/kg. Due to the depth of the subsurface sample, exposure to these soils would not be expected, even with residential conditions. Therefore, the 470 mg/kg soil concentration is not considered to pose any risk.

The second highest lead concentration was 340 mg/kg and was collected in the RB-U-4 drill pad area at a depth of 0 to 5 ft. This concentration also exceeds the COGCC allowable concentration of 300 mg/kg. The next two highest concentrations were 120 and 130 mg/kg from the RB-AR-2/Fawn Creek Government Well Number 1 (FCG No.1) drill pad area. The next highest concentration in the RB-U-4 drill pad area was only 53 mg/kg. Thus, the 300 mg/kg concentration, but no others, warrants additional examination.

Lead is a ubiquitous environmental contaminant associated with many current and historic uses. It has historically been used in plumbing (e.g., water pipes, solder) and lead-based pigments were widely used in paints and coatings. Tetraethyl lead, a gasoline additive widely used from 1920 to the mid-1970s, was the single largest source of lead in the atmosphere. Currently, the primary use of lead is in the manufacture of storage batteries. The gradual recognition of the adverse health effects of lead has led to a severe curtailment, and, in some instances, a ban, on industrial/manufacturing uses of lead (ATSDR, 1988).

Elevated levels of lead in the body can affect many organs and systems. Lead is a known neurotoxic compound. It can interfere with heme syntheses and blood hemoglobin production leading to anemia and can increase blood pressure. EPA classifies lead as a B2 carcinogen. The fetus and young children are most susceptible to the toxic effects of lead and lead exposure is associated with learning impairment and other neurobehavioral effects.

The EPA has determined that it is inappropriate to derive a reference dose (RfD) for oral exposure to lead for several reasons. First, the use of an RfD assumes that a threshold for

toxicity exists, below which adverse effects are not expected to occur. However, the most sensitive effects of lead exposure, impaired neurobehavioral development in children and altered blood enzyme levels associated with anemia, may occur at blood lead concentrations so low as to be considered practically no-threshold in nature. Second, RfD values are specific for the route of exposure for which they are derived. Lead, however, is ubiquitous, so that exposure occurs from virtually all media and by all pathways simultaneously, making it practically impossible to quantify the contribution to blood lead from any one route or exposure. Finally, the dose-response relationships common to many toxicants, and upon which the derivation of an RfD is based, do not hold true for lead. This is due to the fact that the fate of lead within the body depends, in part, on the amount and route of previous exposures, the age of the recipient, and the rate of exposure.

Instead, EPA (1994) recommends the use of the Integrated Exposure Uptake Biokinetic Model (IEUBK). This model accounts for the multimedia nature of lead exposure and addresses the risks to children, which are deemed most susceptible to effects from lead. Based on the IEUBK model, EPA has determined that, unless special circumstances exist, there is no significant health hazard at soil lead concentrations less than 400 mg/kg. Since the maximum concentration in surface soils or subsurface soils to a depth of 12 ft is 340 mg/kg, with only two other samples having concentrations over 100 mg/kg, exposure to lead in soil is determined to pose no significant health hazard.

3.1.2 Diesel Range Organics

Diesel range organics were identified as COPCs in soil since the maximum detected concentration in soil was 13,000 mg/kg, which exceeded the COGCC allowable concentration of 10,000 mg/kg. The COGCC allowable concentration of 10,000 mg/kg for non-sensitive area was deemed appropriate since no domestic wells exist within 1/8 mile of the site and no public water supply exists within ¼ mile of the site. The soil sample containing 13,000 mg/kg of DRO was collected in the RB-AR-2/FCG No.1 drill pad area at a depth of 12 to 16 ft. Due to the depth of the subsurface sample, exposure to

these soils would not be expected, even with residential conditions. Therefore, the 13,000 mg/kg soil concentration is not considered to pose any risk.

The second highest concentration was 8,100 mg/kg and was also collected in the RB-AR-2/FCG No.1 drill pad area at a depth of 12 to 16 ft. Only two soil samples from depths of 12 ft or less were above 1,000 mg/kg: 2,000 mg/kg in the RB-AR-2/FCG No.1 drill pad area at a depth of 5 to 8 ft and 1,200 mg/kg in the RB-U-4 drill pad area at a depth of 0 to 8 ft. Since the surface or near surface soils to be considered relevant for exposure in the risk assessment do not exceed the COGCC allowable concentration of 10,000 mg/kg, a risk from exposure to DROs is not expected.

Additionally, DRO is an analytical measurement of a class of constituents and is typically not used in a risk assessment. Instead, the individual components that comprise the class of constituents are examined. For example, the CDLE (1999) recommends assessing the benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations and the priority PAH concentrations to determine potential human health concerns when elevated petroleum hydrocarbon concentrations are detected. As can be seen in Table 2-1, all detected BTEX and PAH concentrations in soil, even soils below 12 ft, were found below the risk based screening values. This supports the conclusion that DRO in soil does not pose a risk to human health at the site.

3.2 Risk Assessment for Groundwater COPCs

As described in the screening procedures outlined above, bromodichloromethane, chloroform, and dibromochloromethane were identified as COPCs for groundwater. The CDPHE (1993) does not require an evaluation of the water pathways in the risk assessment. Instead, they recommend that concentrations of constituents be compared to water quality standards.

The maximum detected concentration of bromodichloromethane was 2.3 micrograms per liter (μg/L) in the RB-AR-2/FCG No.1 drill pad area monitoring well during the 2000

investigation. This exceeds the groundwater standard for bromodichloromethane of 0.56 μg/L (CDPHE, 2001). Bromodichloromethane was also detected in the RB-U-4 drill pad area monitoring well during the 2000 investigation at a concentration of 0.88 μg/L, which is also above the water quality standard. Bromodichloromethane was not detected in the other two monitoring wells during the 2000 investigation, and it was not detected in any of the four monitoring wells during the 2002 investigation.

The maximum detected concentration of chloroform was 7.5 μg/L in the RB-E-01 drill pad area monitoring well during the 2000 investigation. This exceeds the groundwater standard for chloroform of 6 μg/L (CDPHE, 2001). Chloroform was also detected in the RB-U-4 drill pad area monitoring well at a concentration of 6.1 μg/L during the 2000 investigation, which is just above the water quality standard. Chloroform was detected in the RB-AR-2/ FCG No.1 drill pad area monitoring well during the 2000 investigation at 4.3 μg/L, which is below the water quality standard. Chloroform was not detected in the upgradient monitoring well during the 2000 or 2002 investigations and was not detected in any monitoring wells during the 2002 investigation.

The maximum detected concentration of dibromochloromethane was 0.79 μg/L in the RB-E-01 drill pad area monitoring well during the 2000 investigation. This exceeds the groundwater standard for dibromochloromethane of 0.42 μg/L (CDPHE, 2001). Dibromochloromethane was not detected in any other monitoring wells during the 2000 investigation and was not detected in any monitoring wells during the 2002 investigation.

In order to evaluate the impact of these elevated VOC concentrations, relative to the water quality standards, on the potential risk to human health, an evaluation of the water pathways is presented below.

3.2.1 Exposure Assessment

The exposure assessment includes the characterization of the exposure setting and identification of the exposure pathways, and it also includes the quantification of exposure.

For the human health risk assessment, a potential future residential setting at the site is assumed. Thus, direct exposures to COPCs could occur. The most significant exposures may occur through the use of the groundwater as a residential tap water supply with the subsequent consumption of this water. The exposure can be quantified in terms of the chronic daily intake (CDI). The CDI of the COPCs in groundwater due to ingestion is calculated by the following formula (EPA, 1989; CDPHE, 1993):

$$CDI = \frac{CW \times IR \times ABS \times EF \times ED}{BW \times AT}$$

where:

CDI = chronic daily intake of constituents in groundwater (mg/kg-day)
CW = constituent concentration in groundwater (mg/L)
IR = ingestion rate (L/day)
ABS = absorption factor (1, unitless)
EF = exposure frequency (days/year)
ED = exposure duration (years)
BW = body weight (kg)
AT = averaging time (days)

The exposure parameters used in the above equation are based on assessing the CDI for the reasonable maximum exposed (RME) individuals. The ingestion rate for drinking water is assumed to be 2 L/day for adults and 1.3 L/day for children (EPA, 1997). Use of groundwater as a drinking water source by adults is assumed to occur 350 days per year for 24 years. Exposure duration for children is 6 years at a frequency of 350 days per year. The body weight for adults is assumed to average 70 kg and that for children to average 15 kg. The averaging time for non-cancer health hazards is 10,950 days (i.e., 6

years as a child and 24 years as an adult) and for cancer risks is 25,550 days (i.e., 70 years lifetime). The maximum concentration detected in the groundwater is used to calculate the CDI (CDPHE, 1993). Since the maximum concentrations were found during the 2000 investigation, the CDIs calculated using the maximum concentration are representative of the CDIs during that period. No groundwater COPCs were detected during the 2002 investigation, so the calculation of CDIs for the 2002 period is not applicable. The CDI of the three groundwater COPCs, based on the 2000 maximum detected concentrations, are listed in Table 3-1.

3.2.2 Toxicity Assessment

In the toxicity assessment step of the risk assessment, toxicity values for both carcinogenic and non-carcinogenic COPCs are determined. The toxicity values used in this risk assessment were obtained from the Integrated Risk Information System (IRIS) in April 2002.

Bromodichloromethane has been shown to produce non-cancerous effects on kidneys in animal studies as well as an increase rate of tumors in kidneys, lungs, and intestines. The oral reference dose (RfD) for bromodichloromethane is 0.02 mg/kg-day and the oral cancer slope factor (SF) is 0.062 per mg/kg-day.

Chloroform has been shown, in animal studies, to cause the increased development of fatty cysts in the liver as well as to increase the incidence of tumors in the liver. The oral RfD for chloroform is 0.01 mg/kg-day and the oral SF is 0.0061 per mg/kg-day.

Dibromochloromethane has been shown to produce non-cancerous effects on the liver in additional to other organs and to increase the incidence of hepatocellular adenomas and carcinomas in mice. The oral RfD for dibromochloromethane is 0.02 mg/kg-day and the oral SF is 0.084 per mg/kg-day.

3.2.3 Risk Characterization

In the risk characterization step, the result of the exposure assessment is combined with the toxicity assessment into a risk calculation. The risk calculation is performed differently for carcinogens and non-carcinogens.

For carcinogens, the risk for a particular COPC for a particular pathway is calculated by multiplying the CDI for that contaminant and pathway by the appropriate SF. The total risk is calculated by summing the individual risks across all pathways and contaminants. The total cancer risk, based on the maximum concentrations detected in 2000, is presented in Table 3-2. The total cancer risk is 4.2×10^{-6}. The greatest individual risk is from bromodichloromethane (2.4×10^{-6}). The individual risks from dibromochloromethane and chloroform are 1.1×10^{-6} and 7.6×10^{-7}, respectively. The total cancer risk is within the EPA target range of 10^{-4} to 10^{-6} (EPA, 1991).

For non-carcinogens, the effects are expressed as a ratio of the CDI to the RfD for each contaminant and pathway. This is referred to as the hazard quotient (HQ). The total non-carcinogenic health hazard is the hazard index (HI) and is the sum of the individual HQs. The total HI, based on the maximum concentrations detected in 2000, is presented in Table 3-3. The HI is 0.034, which is well below the EPA target level of 1 (EPA, 1991).

4.0 Summary and Conclusion

In response to concerns regarding possible remaining chemical contaminants in the former operational areas of the Rio Blanco Site, site characterization sampling took place in 2000 with subsequent groundwater characterization in 2002. Both soil (surface and subsurface) and groundwater samples were collected. The potential risk to human health of the constituents detected in site samples was evaluated in this report.

Although lead and DRO were detected in soil samples above the COGCC allowable concentrations, these were found at soil depths greater than 12 ft. The potential exposure to soils at this depth is not considered in the risk assessment (CDPHE, 1993) for future potential residential exposure. Concentrations in soils ranging to a depth of 12 ft were found to pose no significant health risks.

Three VOCs (bromodichloromethane, chloroform, and dibromochloromethane) were detected above the water quality standards (CDPHE, 1999) during the 2000 investigations. These VOCs were not detected in additional sampling conducted in 2002. If present at the levels detected in 2000, potential future residents at the site could be exposed to these compounds through the use of the local groundwater as a drinking water source. Under the RME assumptions, and using the maximum detected concentrations from the 2000 investigation, the lifetime cancer risk to potential future residents is 4.2×10^{-6}. Although above the 1×10^{-6} level, this risk is within, and near the conservative end of the EPA target range of 1×10^{-6} to 1×10^{-4} (EPA, 1991). The RME assumptions include the assumption of 30 years of exposure to constant maximum concentrations of the COPCs. The 2002 investigation did not detect any VOCs, so the potential lifetime cancer risk from these compounds is likely to be negligible.

Bromodichloromethane, chloroform, and dibromochloromethane are regulated by the National Primary Drinking Water Regulations as total trihalomethanes. The maximum contaminant level listed in the National Primary Drinking Water Regulations for trihalomethanes is 80.0 μg/L (EPA, 2002b). Although the National Primary Drinking

Water Regulations are used for the regulation of public water systems it is worth mentioning that the sum of maximum concentrations of these contaminants is approximately 11 μg/L, well below the national standard of 80 μg/L for public drinking water systems.

Currently, there are no water supply sources screened in the alluvial aquifer within the vicinity of the site. A trailer that serves as a temporary residence during cattle round-ups and is occupied several weeks a year is located near the RB-U-4 site. The trailer does have access to the RB-D-03 well, however, this well is screened in a lower aquifer (CER, 1975). The lower aquifer exhibits only intermittent hydraulic continuity with the upper and alluvial aquifers, and testing of monitoring wells during the Rio Blanco Project suggested that any flow is upward from the lower aquifer to the upper aquifers (DRI, 1991). Thus, currently, there are no risks to human health from site constituents, and future risks are not expected based on the most recent groundwater sampling conducted in 2002.

5.0 References

Agency for Toxic Substances and Disease Registry (ATSDR), 1988, ***Toxicological Profile for Lead***, U.S. Public Health Services, Atlanta, Georgia.

CER Geonuclear (CER), 1973, ***Predetonation Rio Blanco Hydrologic Testing for Period February 1, 1973 to May 1, 1973***, PNE-RB-43, Las Vegas, NV.

Colorado Department of Labor and Employment (CDLE), 1999, ***Petroleum Storage Tank Owner/Operator Guidance Document***, Oil Inspection Section (OIS), Denver Colorado.

Colorado Department of Public Health and Environment (CDPHE), 2001, ***Basic Standards for Groundwater***, Regulation No. 41, Water Quality Control Commission, Denver, Colorado.

Colorado Department of Public Health and Environment (CDPHE), 1993, ***Interim Final Policy and Guidance on Risk Assessments for Corrective Action at RCRA Facilities***, Hazardous Materials and Waste Management Division, Denver, Colorado.

Desert Research Institute (DRI), 1991, ***Evaluation of Groundwater Monitoring at Offsite Nuclear Test Areas***, Publication No. 45085, DOE/NV/10845-07, UC-703, Prepared by Jenny B. Chapman and Sam L. Hockett, Las Vegas, NV.

U.S. Department of Energy, Nevada Operations Office (DOE/NV), 2002, ***Corrective Action Investigation Report for the Rio Blanco Site, Colorado***, Las Vegas, Nevada.

U.S. Department of Energy, Nevada Operations Office (DOE/NV), 2000, ***Site Characterization Work Plan for the Rio Blanco Site, Colorado***, Las Vegas, Nevada.

U.S. Environmental Protection Agency (EPA), 2002a, ***Integrated Risk Information System (IRIS)***, accessed April 2002 on line at http://www.epa.gov/iris/index.html, National Center for Exposure Assessment, EPA/600/P-95/002F, Washington, D.C.

U.S. Environmental Protection Agency (EPA), 2002b, **National Primary Drinking Water Regulations**, accessed October 23, 2002 on line at http://www.epa.gov/safewater/mcl.html, Current Drinking Water Standards, EPA 816-F-02-013, Washington, D.C.

U.S. Environmental Protection Agency (EPA), 1997, ***Exposure Factors Handbook***, Office of Research and Development, Washington, D.C.

U.S. Environmental Protection Agency (EPA), 1994, ***Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities***, OSWER Directive # 9355.4-12, Office of Solid Waste and Emergency Response, Washington, D.C.

U.S. Environmental Protection Agency (EPA), 1991, ***Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions***, OSWER Directive 9355.0-30, Office of Solid Waste and Emergency Response, Washington, D.C.

U.S. Environmental Protection Agency (EPA), 1989, ***Risk Assessment Guidelines for Superfund, Volume I, Human Health Evaluation Manual (Part A)***, OSWER Directive 9285.7-01a, Office of Emergency and Remedial Response, Washington, D.C.

TABLE 2-1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SOIL
RIO BLANCO SITE, COLORADO

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Concentration Used for Screening	Background (1)	Screening Value	Reference	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
	Total Metals by EPA 6010B/Mercury by 7471A															
	Arsenic	2		19		mg/kg	RBB340508	293/293	19	7.8	41	COGCC	0.39	EPA Reg 9 PRG	No	BSL
	Barium	100		8600		mg/kg	RBB011216	292/293	8600	399	180000	COGCC	5400	EPA Reg 9 PRG	No	BSL
	Cadmium	0.025	B	0.6	B	mg/kg	RBB200812	38/293	0.6	ND	26	COGCC	37	EPA Reg 9 PRG	No	BSL
	Chromium	5		410		mg/kg	RBB011216	293/293	410	39	1500	COGCC	210	EPA Reg 9 PRG	No	BSL
	Lead	1.2	B	**470**		mg/kg	RBB011216	293/293	**470**	14	300	COGCC	400	EPA Reg 9 PRG	Yes	ASL
	Selenium	0.38	B	2.5		mg/kg	RBB443539	238/293	2.5	1.6	Site Specific Tied	COGCC	390	EPA Reg 9 PRG	No	BSL
	Mercury	ND		0.07	B	mg/kg	RBD070001	1/293	0.07	ND	17	COGCC	23	EPA Reg 9 PRG	No	LDF BSL
	TPH-D by EPA8015B															
	Diesel Range Organics	15	J	**13000**		mg/kg	RBB011216	49/293	**13000**		1000	COGCC	500	CDLE Tier 1	Yes	ASL
	VOCs by EPA8260B															
	1,1,1-Trichloroethane	ND		3.2	J	ug/kg	RBC141620	1/314	3.2		630,000	EPA Reg 9 PRG			No	LDF,BSL
	1,2,4-Trimethylbenzene	1.4	J	6200	J	ug/kg	RBC171216	7/314	6200		52,000	EPA Reg 9 PRG			No	LDF,BSL
	1,2-Dichloroethane	ND		12		ug/kg	RBB210812	1/314	12		350	EPA Reg 9 PRG			No	LDF,BSL
	1,3,5-Trimethylbenzene	4.2	J	1800	J	ug/kg	RBC171216	5/314	1800		21,000	EPA Reg 9 PRG			No	LDF,BSL
	2-Butanone	3.4	J	150	B	ug/kg	RBB122024	17/314	150		7,300,000	EPA Reg 9 PRG			No	BSL
	2-Hexanone	11	J	64		ug/kg	RBA110005	2/314	64						No	LDF
	4-Methyl-2-Pentanone	3.7	J	11	J	ug/kg	RBA102630	2/314	11		790,000	EPA Reg 9 PRG			No	LDF,BSL
	Acetone	8.8	J	2900	J	ug/kg	RBB382024	77/314	2900		1,600,000	EPA Reg 9 PRG			No	BSL
	Benzene	0.58	J	420	E	ug/kg	RBB210812	46/314	420		4100	CDLE Tier 1			No	BSL
	Carbon Disulfide	0.93	J	47		ug/kg	RBB443539	52/314	47		360,000	EPA Reg 9 PRG			No	BSL
	Chloromethane	ND		27		ug/kg	RBB210812	1/314	27		1200	EPA Reg 9 PRG			No	LDF,BSL
	Cis-1,2-Dichloroethene	0.42	J	1.1	J	ug/kg	RBA061620	2/314	1.1		43,000	EPA Reg 9 PRG			No	LDF,BSL
	Dichlorodifluoromethane	ND		23		ug/kg	RBZ025560	1/314	23		94,000	EPA Reg 9 PRG			No	LDF,BSL
	Ethylbenzene	0.69	J	380		ug/kg	RBC171216	31/314	380		2,100,000	CDLE Tier 1			No	BSL
	Isopropylbenzene	1.7	J	500		ug/kg	RBC171216	5/314	500		160,000	EPA Reg 9 PRG			No	LDF,BSL
	M+P-Xylene	1.5	J	1100		ug/kg	RBC171216	57/314	1100		36,000,000	CDLE Tier 1			No	BSL
	Methylene Chloride	28	J	73	B	ug/kg	RBB080005	7/314	73		8900	EPA Reg 9 PRG			No	LDF,BSL
	Naphthalene	0.99	J	700	J	ug/kg	RBC171216	7/314	700						No	LDF
	N-Butylbenzene	2.5	J	1500	J	ug/kg	RBC171216	5/314	1500		140,000	EPA Reg 9 PRG			No	LDF,BSL
	N-Propylbenzene	2.1	J	1100		ug/kg	RBC171216	5/314	1100		140,000	EPA Reg 9 PRG			No	LDF,BSL
	O-Xylene	0.91	J	250		ug/kg	RBC171216	34/314	250		36,000,000	CDLE Tier 1			No	BSL
	P-Isopropyltoluene	2.9	J	1400	J	ug/kg	RBC171216	5/314	1400						No	LDF
	Sec-Butylbenzene	7.4		1900	J	ug/kg	RBC171216	5/314	1900		110,000	EPA Reg 9 PRG			No	LDF,BSL
	Tert-Butylbenzene	ND		1.2	J	ug/kg	RBB210812	1/314	1.2		130,000	EPA Reg 9 PRG			No	LDF,BSL
	Tetrachloroethene	1.8		21		ug/kg	RBC141620	2/314	21		5700	EPA Reg 9 PRG			No	LDF,BSL
	Toluene	0.7	J	59		ug/kg	RBC171216	112/314	59		4,100,000	CDLE Tier 1			No	BSL
	SVOCs by EPA8270C															
	2,4-Dichlorophenol	ND		3100		ug/kg	RBC241620	1/292	3100		180,000	EPA Reg 9 PRG			No	LDF,BSL
	2-Methylnaphthalene	190	J	79000	J	ug/kg	RBB011216	11/292	79000						No	LDF
	Anthracene	ND		9100		ug/kg	RBB011216	1/292	9100		18,000,000	CDLE Tier 1			No	LDF,BSL
	Bis(2-Ethylhexyl)Phthalate	73	J	1800		ug/kg	RBB242428	21/292	1800		35000	EPA Reg 9 PRG			No	BSL
	Naphthalene	780		12000	J	ug/kg	RBB011216	5/292	12000		2,400,000	CDLE Tier 1			No	LDF,BSL
	Phenanthrene	180		38000	J	ug/kg	RBB011216	9/292	38000						No	LDF

(1) Background concentrations calculated as the mean plus two standard deviations

(2) Rationale Codes Selection Reason:

ASL = Above screening level

Deletion Reason:

BSL = Below screening level

LDF = Low detection frequency

Definitions:

ND = Not Detected

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

J = Estimated Value

B = detected below instrument detection limit

COGCC = Colorado Oil & Gas Conservation Commission Series 900 screening value

CDLE Tier 1 = Colorado Dept of Labor and Employment Tier 1 or Tier 1A screening value

EPA Region 9 PRG = EPA Region 9 Preliminary Remediation Goal

TABLE 2-2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN GROUNDWATER
RIO BLANCO SITE, COLORADO

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Concentration Used for Screening	Background (1)	Screening Value	Source	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
	Total and Dissolved (D) Metals by EPA6010															
	Arsenic	0.0067		0.025		mg/L	RBMW0101	4/8	0.025	0.025	0.000045	EPA Reg 9 PRG			No	BBKG
	Arsenic (D)	ND		ND		mg/L	NA	0/4	ND	ND	0.000045	EPA Reg 9 PRG			No	ND
	Barium	0.15		2.3		mg/L	RBMW0101	8/8	2.3	2.3	2.6	EPA Reg 9 PRG			No	BBKG BSL
	Barium (D)	0.091		0.048		mg/L	RBMW0201F	4/4	0.048	0.12	2.6	EPA Reg 9 PRG			No	BBKG BSL
	Chromium	0.0077		0.14		mg/L	RBMW0101	8/8	0.14	0.14	55(III), 0.11(VI)	EPA Reg 9 PRG			No	BBKG BSL
	Chromium (D)	ND		ND		mg/L	NA	0/4	0.0016	ND	55(III), 0.11(VI)	EPA Reg 9 PRG			No	BBKG BSL
	Lead	0.002		0.064		mg/L	RBMW0101	7/8	0.064	0.064	0.05	CWQS			No	BBKG
	Lead (D)	ND		ND		mg/L	NA	0/4	ND	ND	0.05	CWQS			No	ND
	Selenium	0.0027		0.0044	B	mg/L	RBMW0101	2/8	0.0044	0.0044	0.18	EPA Reg 9 PRG			No	BBKG BSL
	Selenium (D)	ND		ND		mg/L	NA	0/4	ND	ND	0.18	EPA Reg 9 PRG			No	ND
	TPH-D by EPA8015															
	Diesel Range Organics	ND		ND		mg/L	NA	0/8	ND						No	ND
	VOCs by EPA8260															
	Acetone	14		16	J	ug/L	RBMW0401	2/4	16		610	EPA Reg 9 PRG			No	BSL
	Bromodichloromethane	0.88		2.3	J	ug/L	RBMW0301	2/8	**2.3**		0.18	EPA Reg 9 PRG			Yes	ASL
	Carbon Disulfide	ND		0.83	J	ug/L	RBMW0401	1/8	0.83		1000	EPA Reg 9 PRG			No	BSL
	Chloroform	4.3		7.5	J	ug/L	RBMW0301	3/8	**7.5**		0.16	EPA Reg 9 PRG			Yes	ASL
	Dibromochloromethane	ND		0.79	J	ug/L	RBMW0301	1/9	**0.79**		0.13	EPA Reg 9 PRG			Yes	ASL
	SVOCs by EPA8270															
	Di-N-Butyl Phthalate	4.5		11		ug/L	RBMW0301	3/8	11		3600	EPA Reg 9 PRG			No	BSL

(1) Background concentration is concentration detected in upgradient monitoring well

(2) Rationale Codes Selection Reason:

ASL = Above screening level

Deletion Reason:

BSL = Below screening level

LDF = Low detection frequency

BKGD = Below background

ND = Not detected

Definitions:

ND = Not Detected

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

COGCC = Colorado Oil & Gas Conservation Commission Series 900 screening value

CDLE Tier 1 = Colorado Dept of Labor and Employment Tier 1 or Tier 1A screening value

EPA Region 9 PRG = EPA Region 9 Preliminary Remediation Goal

CWQS = CDPHE Water Quality Standard

Table 3-1
Exposure Quantification - Intake Calculation
Rio Blanco Site, Colorado

	Contaminant					
Maximum Concentration at Site (ug/L)	Bromodichloromethane 2.3		Chloroform 7.5		Dibromochloromethane 0.79	
Pathway	NC	C	NC	C	NC	C
Groundwater Ingestion						
Child Intake (mg/kg-day)	0.000038	0.000016	0.00012	0.000053	0.000013	0.0000056
Adult Intake (mg/kg-day)	0.000050	0.000022	0.00016	0.000070	0.000017	0.0000074
TOTAL INTAKE	0.000088	0.000038	0.00028	0.000123	0.000030	0.0000130

Table 3-2
Residential Risk Characterization - Risk Calculation - Carcinogens
Rio Blanco Site, Colorado

	Contaminant		
	Bromodichloromethane	Chloroform	Dibromochloromethane
Pathway			
Groundwater Ingestion			
Total Intake (mg/kg-day)	0.000038	0.000123	0.000013
Slope Factor $(mg/kg\text{-}day)^{-1}$	0.062	0.0061	0.084
RISK	2.4E-06	7.5E-07	1.1E-06
TOTAL RESIDENTIAL RISK			4.2E-06

Note: Slope factors obtained from IRIS (EPA, 2002a)

Table 3-3
Residential Risk Characterization - Risk Calculation - Noncarcinogens
Rio Blanco Site, Colorado

	Contaminant		
	Bromodichloromethane	Chloroform	Dibromochloromethane
Pathway			
Groundwater Ingestion			
Total Intake (mg/kg-day)	0.000088	0.00028	0.000030
Reference Dose (mg/kg-day)	0.020	0.010	0.020
HAZARD QUOTIENT	0.0044	0.028	0.0015
TOTAL RESIDENTIAL HQ			0.034

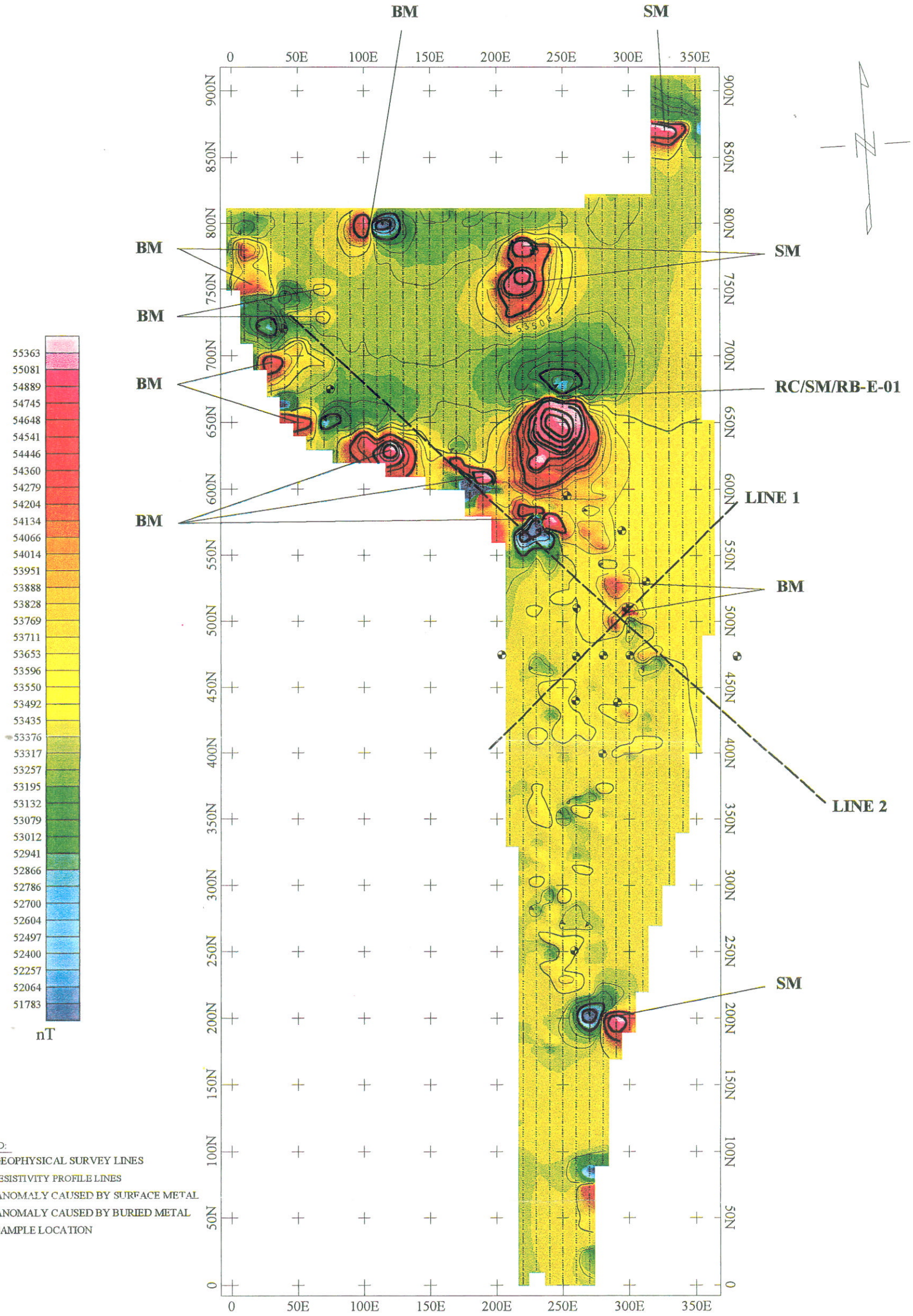
Note: Reference Doses obtained from IRIS (EPA, 2002)

Appendix B

Surface Geophysical Survey Diagrams for the Rio Blanco Site, Colorado

(13 Pages)

The figures in this appendix were produced by The IT Group, Knoxville, TN, for the U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office.



Scale 1:960

50 0 50 100

feet

MINIMUM CONTOUR INTERVAL: 100 nanoTeslas

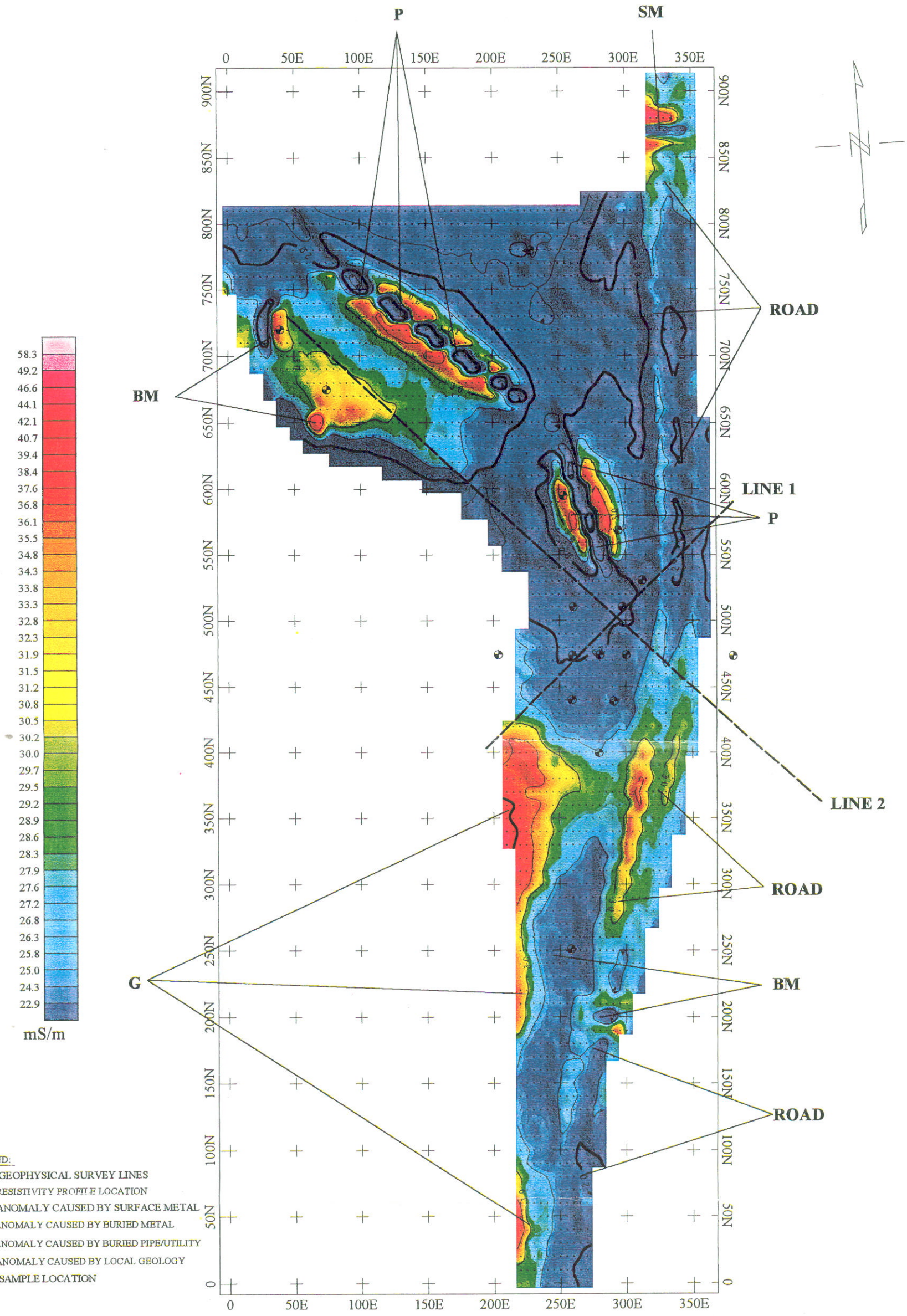
NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\RB1\MAGEO1_MTC.MAP

Figure B-1

RB-E-01
G-858G TOTAL MAGNETIC FIELD (UPPER SENSOR)
NORTH-SOUTH SURVEY LINE

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



Scale 1:960

50 0 50 100

feet

MINIMUM CONTOUR INTERVAL: 5 milliSiemens per meter

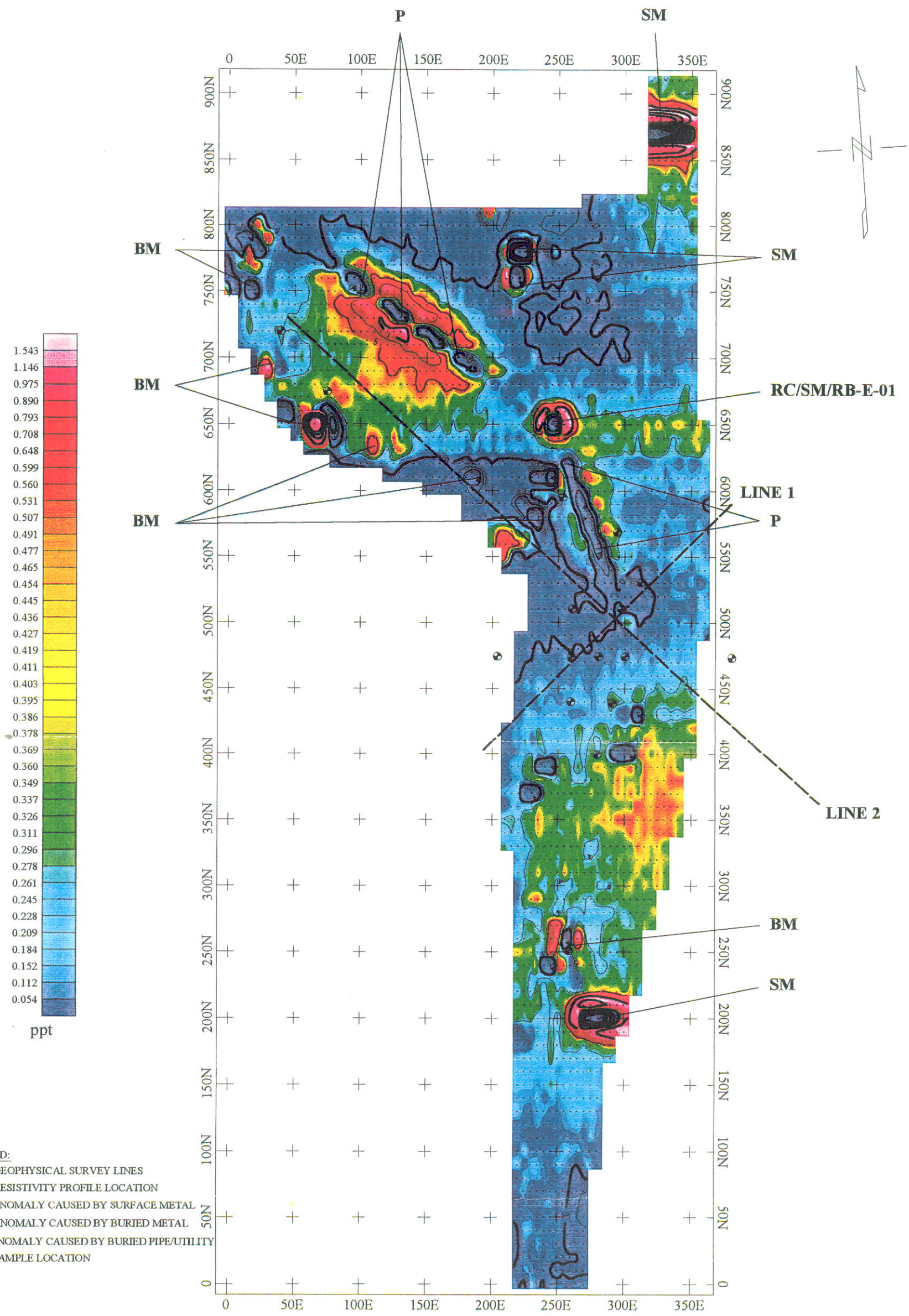
NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\RB1\01\E01_31_EC.MAP

Figure B-2

RB-E-01
EM31 CONDUCTIVITY (VERTICAL DIPOLE)
EAST-WEST SURVEY LINE

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



Scale 1:960

50 0 50 100

feet

MINIMUM CONTOUR INTERVAL: 0.25 ppt Secondary to Primary Field

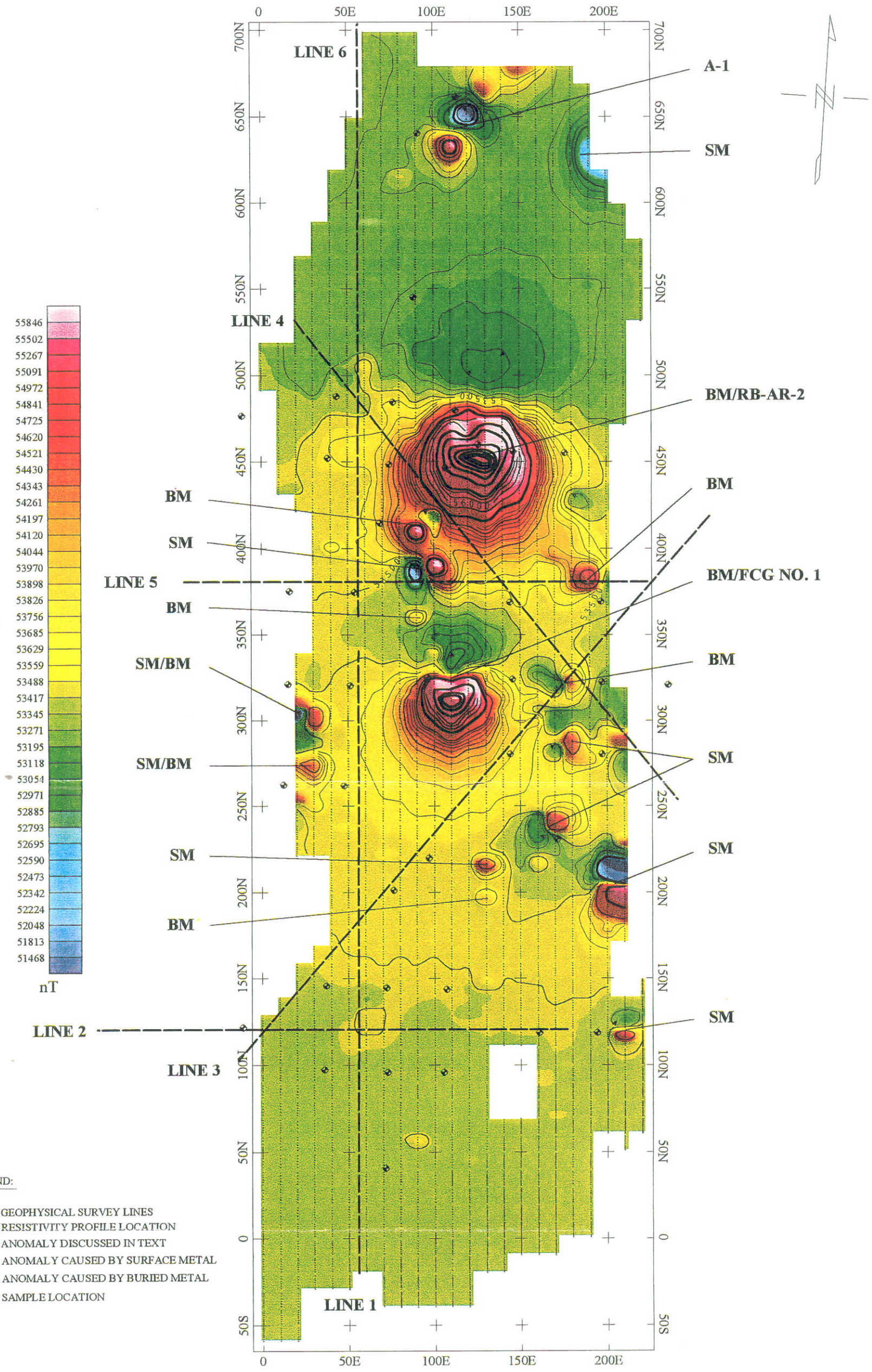
NAME:	DATE:
Ji Ma	SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\RB1\01\E01_31_EIMAP

Figure B-3

RB-E-01
EM31 IN-PHASE COMPONENT (VERTICAL DIPOLE)
EAST-WEST SURVEY LINE

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



LEGEND:

- ... GEOPHYSICAL SURVEY LINES
- —·— RESISTIVITY PROFILE LOCATION
- A-1 ANOMALY DISCUSSED IN TEXT
- SM ANOMALY CAUSED BY SURFACE METAL
- BM ANOMALY CAUSED BY BURIED METAL
- ◐ SAMPLE LOCATION

Scale 1:720

25 0 25 50 75

feet

MINIMUM CONTOUR INTERVAL: 100 nanoTeslas

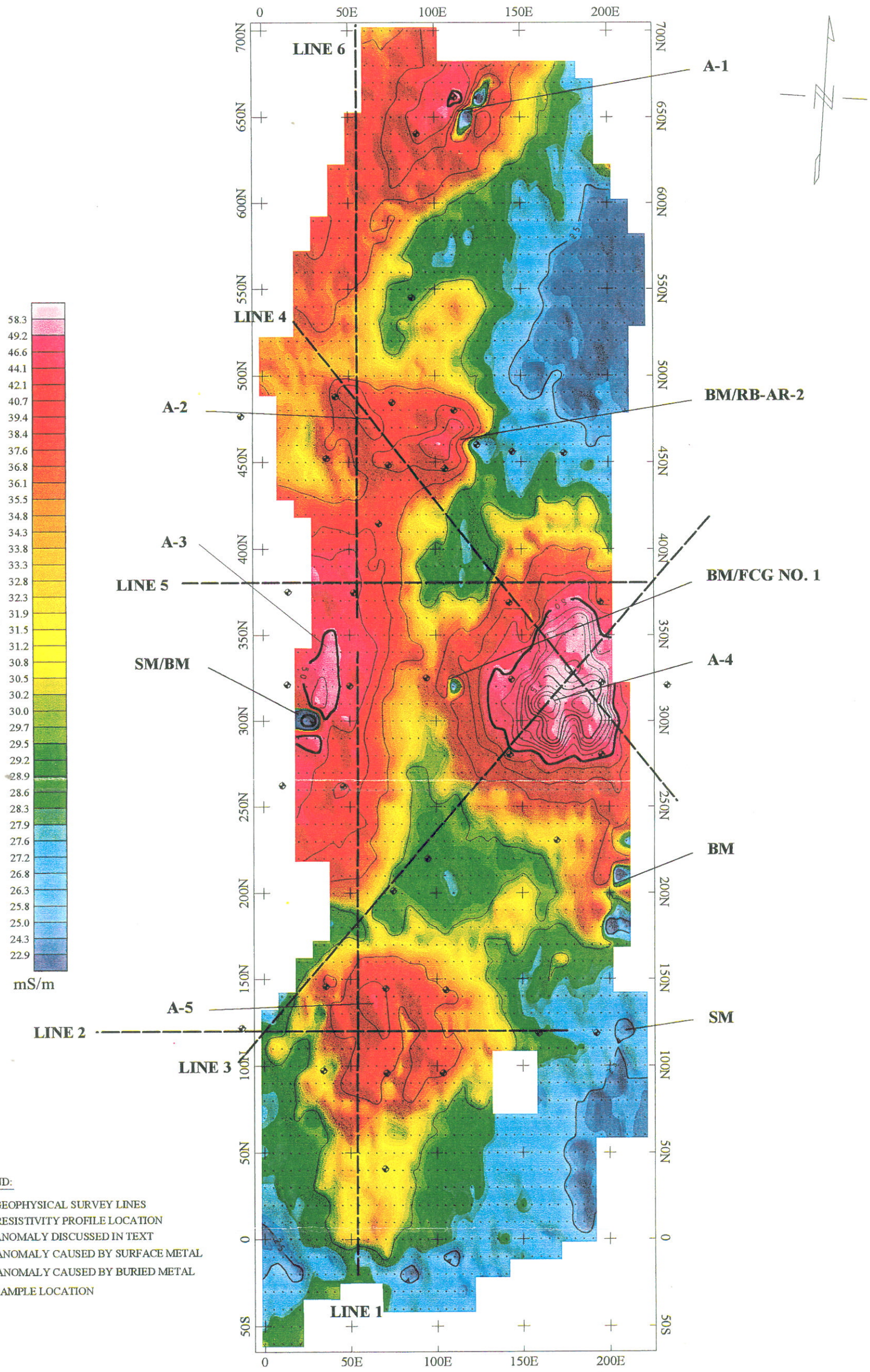
NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\FCG\MAG\FCG_MTC.MAP

Figure B-4

FAWN CREEK GOVERNMENT NO. 1
G-858G TOTAL MAGNETIC FIELD (UPPER SENSOR)
NORTH-SOUTH SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



LEGEND:

- ... GEOPHYSICAL SURVEY LINES
- — RESISTIVITY PROFILE LOCATION
- A-1 ANOMALY DISCUSSED IN TEXT
- SM ANOMALY CAUSED BY SURFACE METAL
- BM ANOMALY CAUSED BY BURIED METAL
- ◐ SAMPLE LOCATION

Scale 1:720

25 0 25 50 75

feet

MINIMUM CONTOUR INTERVAL: 5 milliSiemens per meter

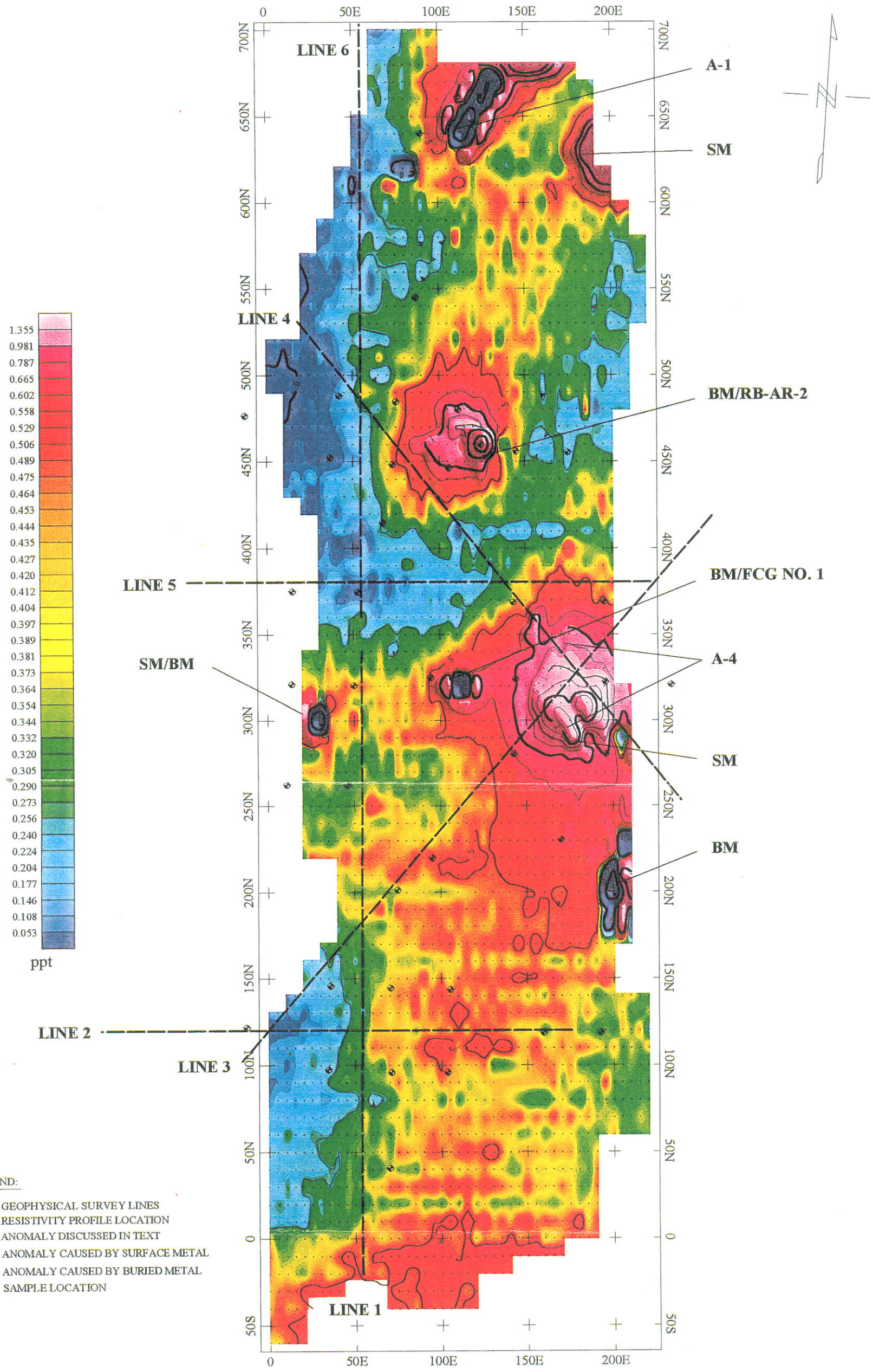
NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\FCG\31\FCG_31_EC.MAP

Figure B-5

FAWN CREEK GOVERNMENT NO. 1
EM31 CONDUCTIVITY (VERTICAL DIPOLE)
EAST-WEST SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



LEGEND:

- ... GEOPHYSICAL SURVEY LINES
- — RESISTIVITY PROFILE LOCATION
- A-1 ANOMALY DISCUSSED IN TEXT
- SM ANOMALY CAUSED BY SURFACE METAL
- BM ANOMALY CAUSED BY BURIED METAL
- ◐ SAMPLE LOCATION

Scale 1:720

25 0 25 50 75

feet

MINIMUM CONTOUR INTERVAL: 0.5 ppt Secondary to Primary Field

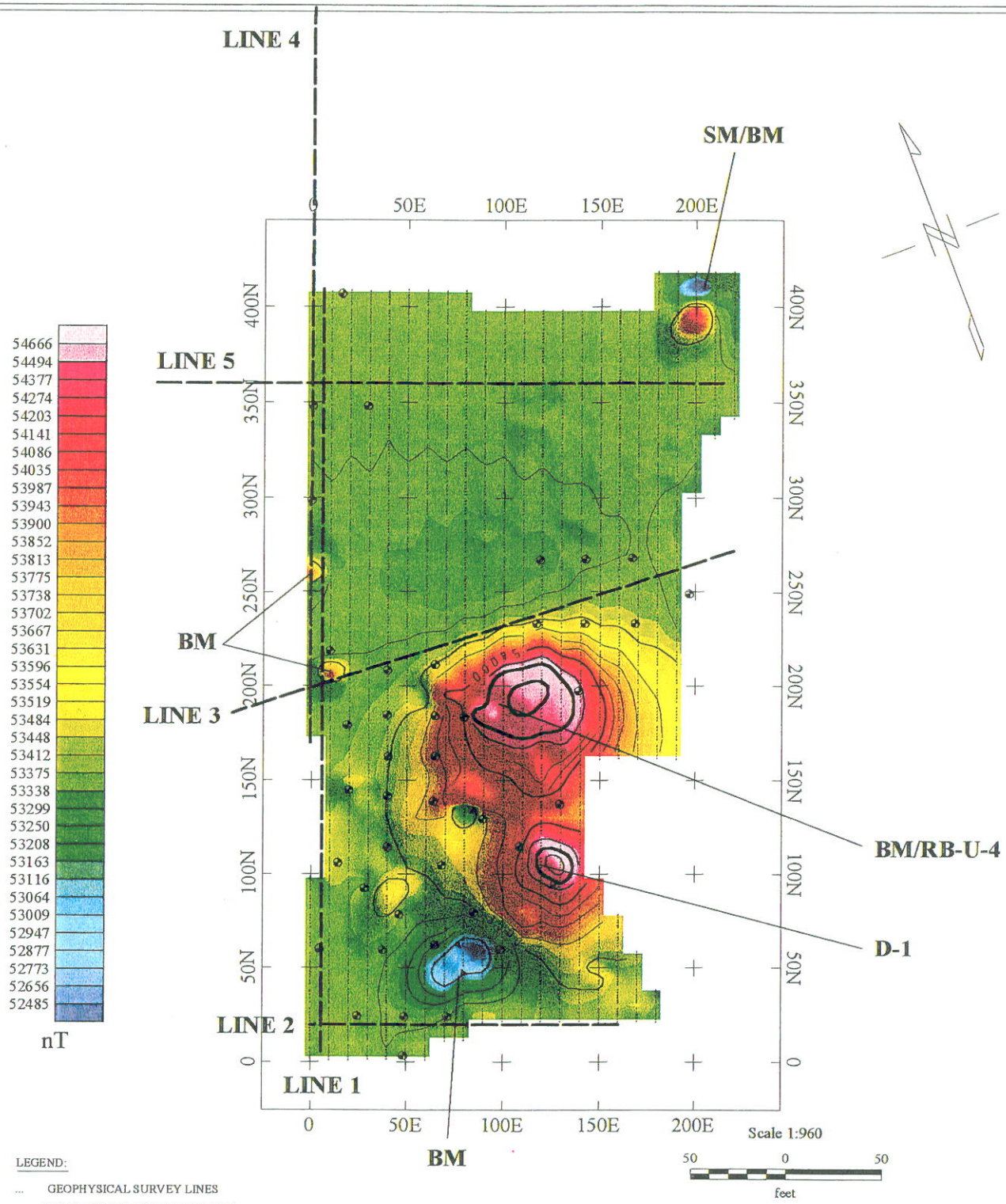
NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\FCGJ1\FCG_31_ELMAP

Figure B-6

FAWN CREEK GOVERNMENT NO. 1
EM31 IN-PHASE COMPONENT (VERTICAL DIPOLE)
EAST-WEST SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



LEGEND:

... GEOPHYSICAL SURVEY LINES

— RESISTIVITY PROFILE LOCATION

A-1 ANOMALY DISCUSSED IN TEXT

SM ANOMALY CAUSED BY SURFACE METAL

BM ANOMALY CAUSED BY BURIED METAL

◉ SAMPLE LOCATION

MINIMUM CONTOUR INTERVAL: 100 nanoTeslas

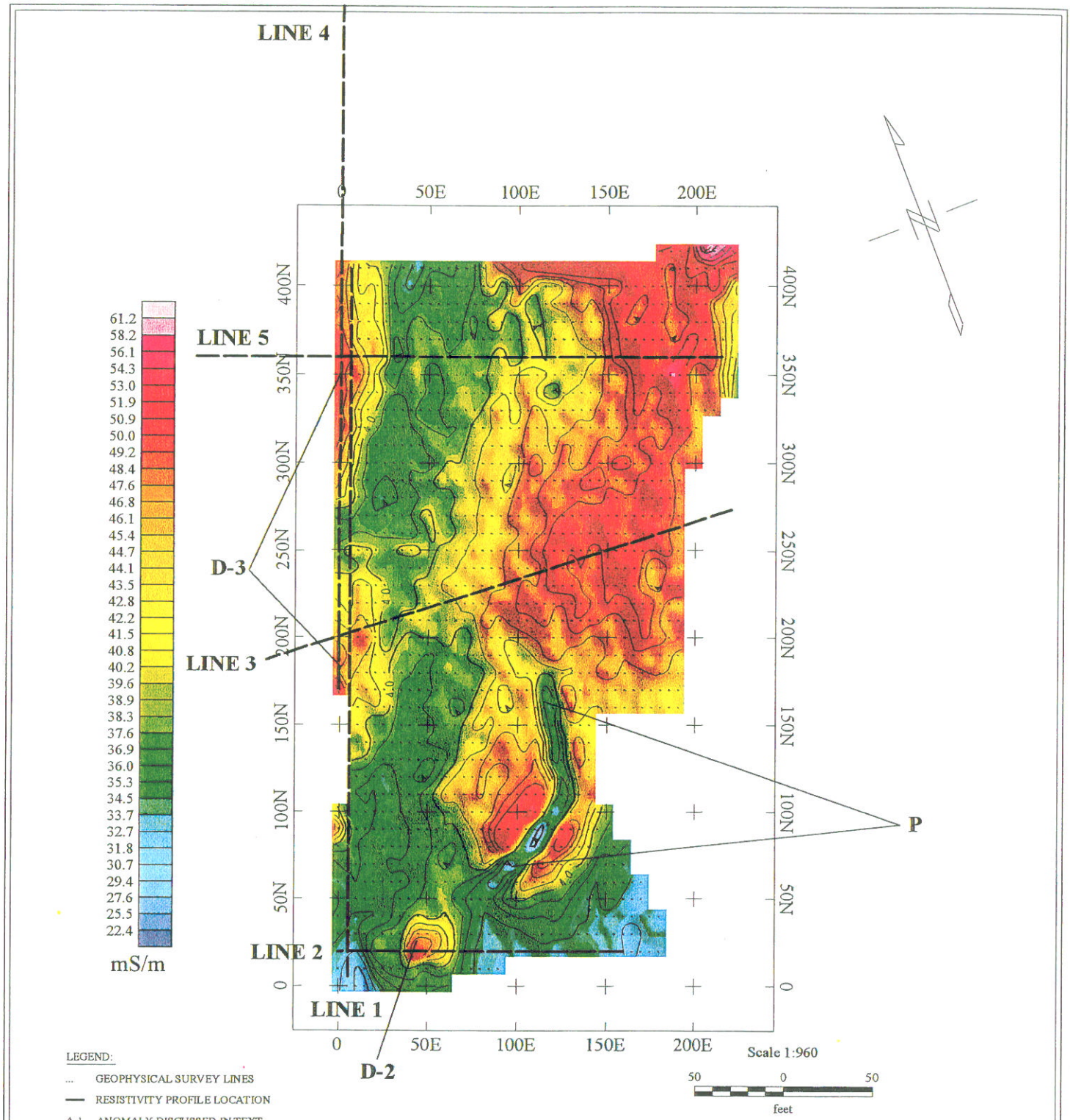
Figure B-7

RB-U-04
G-858G TOTAL MAGNETIC FIELD (UPPER SENSOR)
NORTH-SOUTH SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE

NAME:	DATE:
Ñ Ma	SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\RB4\MAGEO4_MT.MAP



LEGEND:

... GEOPHYSICAL SURVEY LINES

— RESISTIVITY PROFILE LOCATION

A-1 ANOMALY DISCUSSED IN TEXT

SM ANOMALY CAUSED BY SURFACE METAL

BM ANOMALY CAUSED BY BURIED METAL

P ANOMALY CAUSED BY BURIED PIPE/UTILITY

◕ SAMPLE LOCATION

MINIMUM CONTOUR INTERVAL: 2 milliSiemens per meter

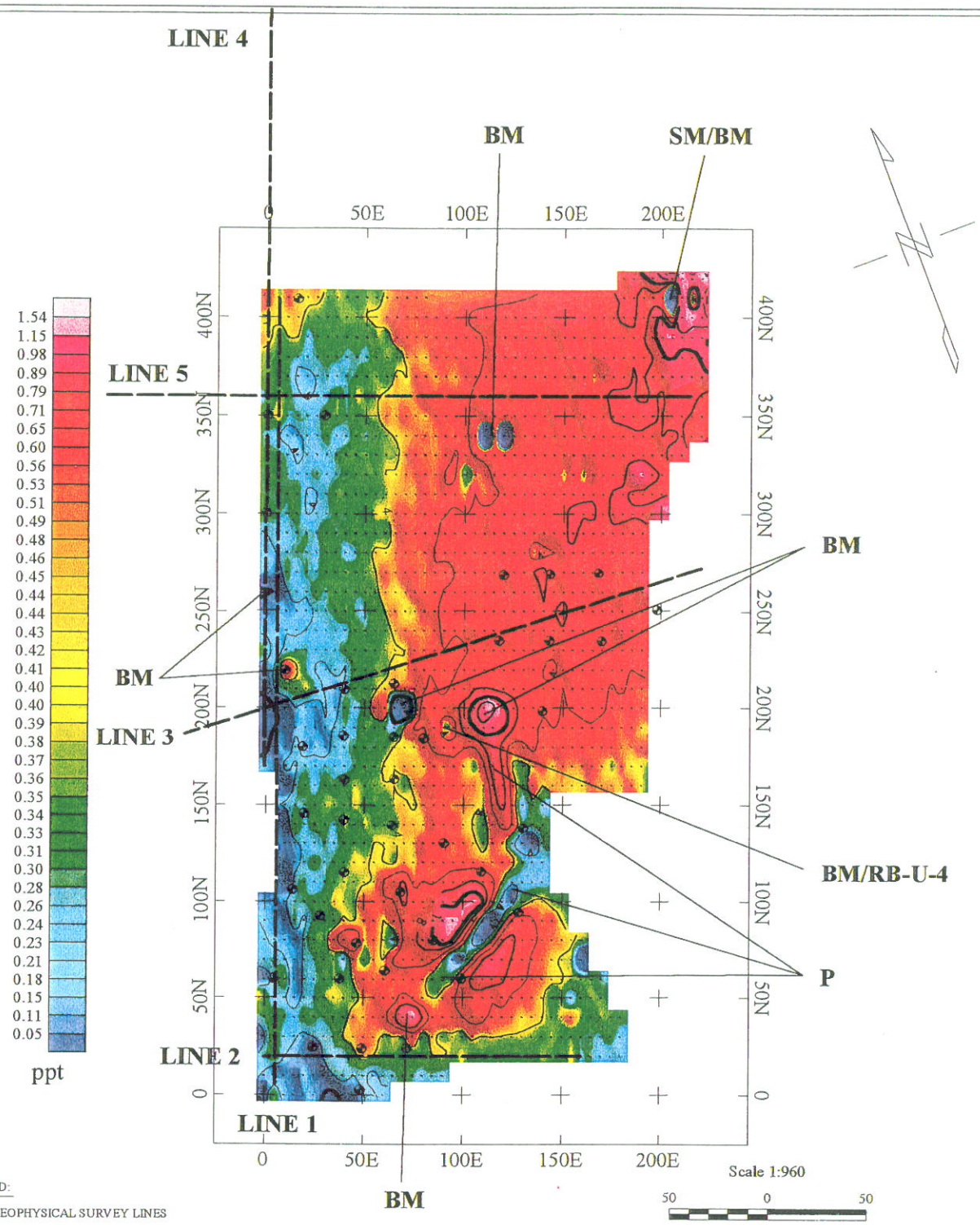
Figure B-8

RB-U-04
EM31 CONDUCTIVITY (VERTICAL DIPOLE)
EAST-WEST SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE

NAME: J. Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\RB4\U1\EO4_EM31_EC.MAP



LEGEND:

... GEOPHYSICAL SURVEY LINES

— RESISTIVITY PROFILE LOCATION

A-1 ANOMALY DISCUSSED IN TEXT

SM ANOMALY CAUSED BY SURFACE METAL

BM ANOMALY CAUSED BY BURIED METAL

P ANOMALY CAUSED BY BURIED PIPE/UTILITY

SAMPLE LOCATION

MINIMUM CONTOUR INTERVAL: 0.2 ppt Secondary to Primary Field

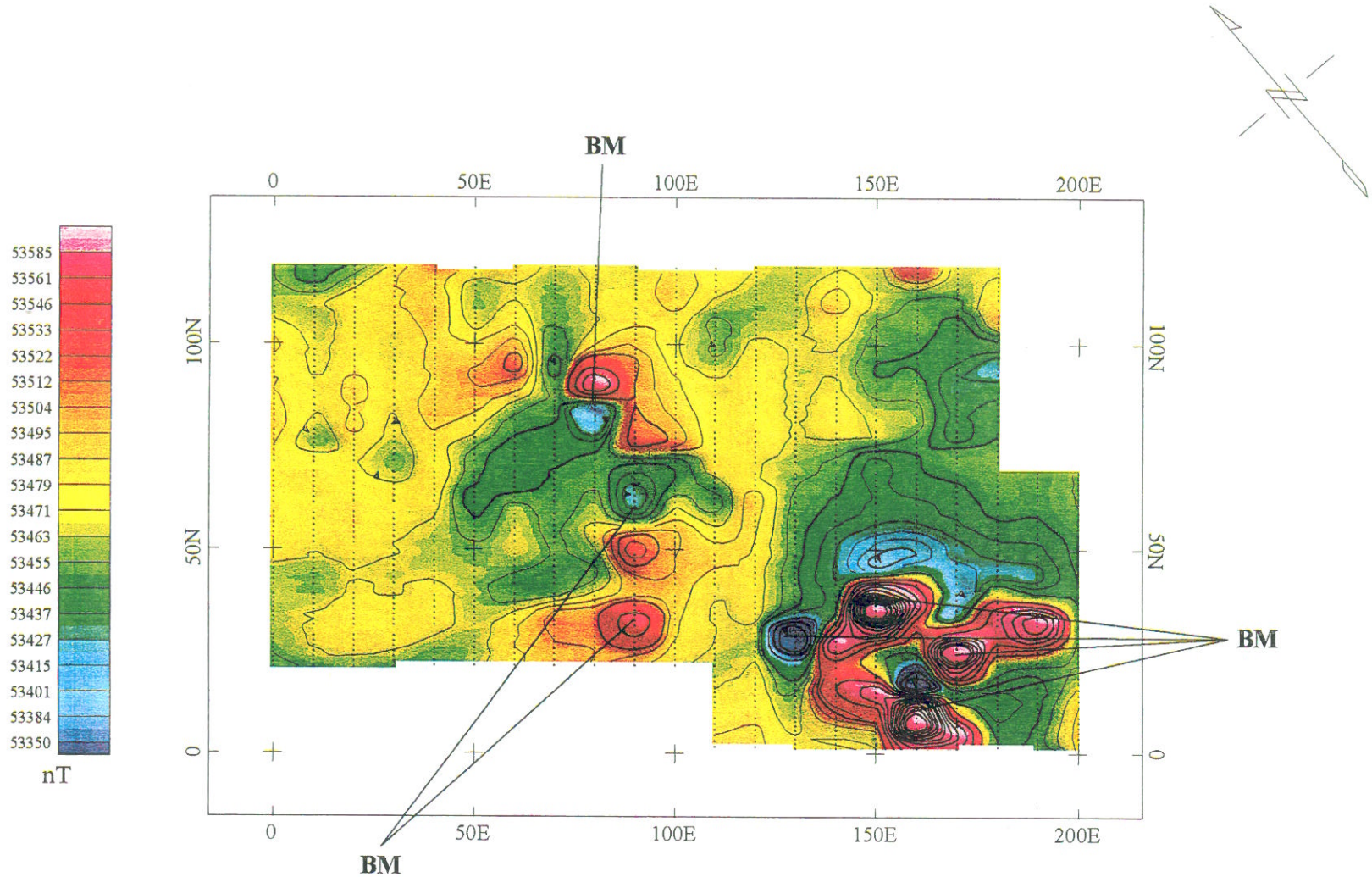
Figure B-9

RB-U-04
EM31 IN-PHASE COMPONENT (VERTICAL DIPOLE)
EAST-WEST SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE

NAME:	DATE:
Ji Ma	SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\RB4\U1\EO4_EM31_EL.MAP



LEGEND:

... GEOPHYSICAL SURVEY LINES

BM ANOMALY CAUSED BY BURIED METAL

Scale 1:480

25 0 25 50

feet

MINIMUM CONTOUR INTERVAL: 10 nanoTeslas

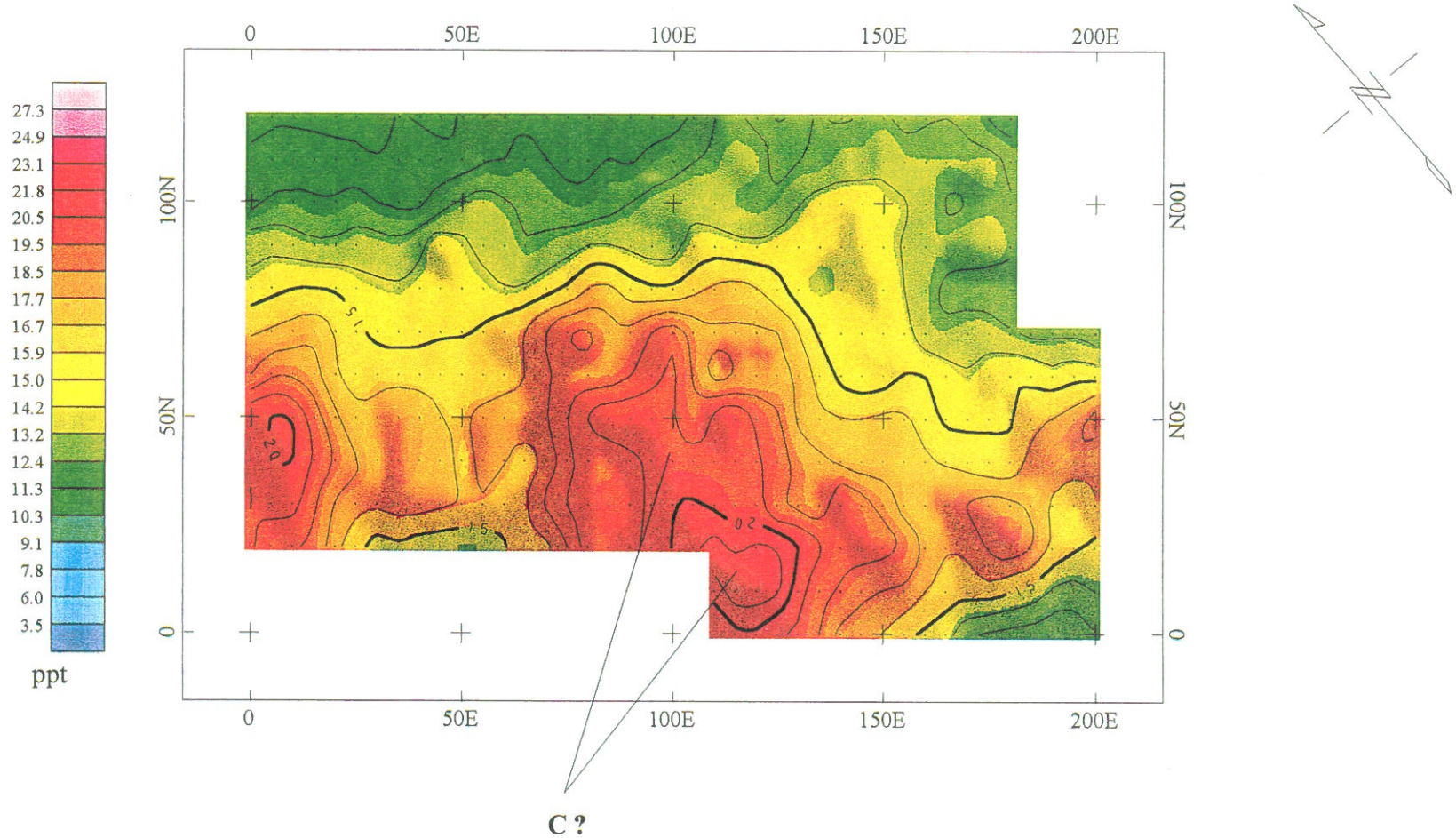
NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\FS\MAG\FS_MTC.MAP

Figure B-10

FLARE STACK
G-858G TOTAL MAGNETIC FIELD (UPPER SENSOR)
NORTH-SOUTH SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



LEGEND:

... GEOPHYSICAL SURVEY LINES

C ANOMALY CAUSED BY BURIED CONCRETE

Scale 1:480

25 0 25 50

feet

MINIMUM CONTOUR INTERVAL: 1 milliSiemens per meter

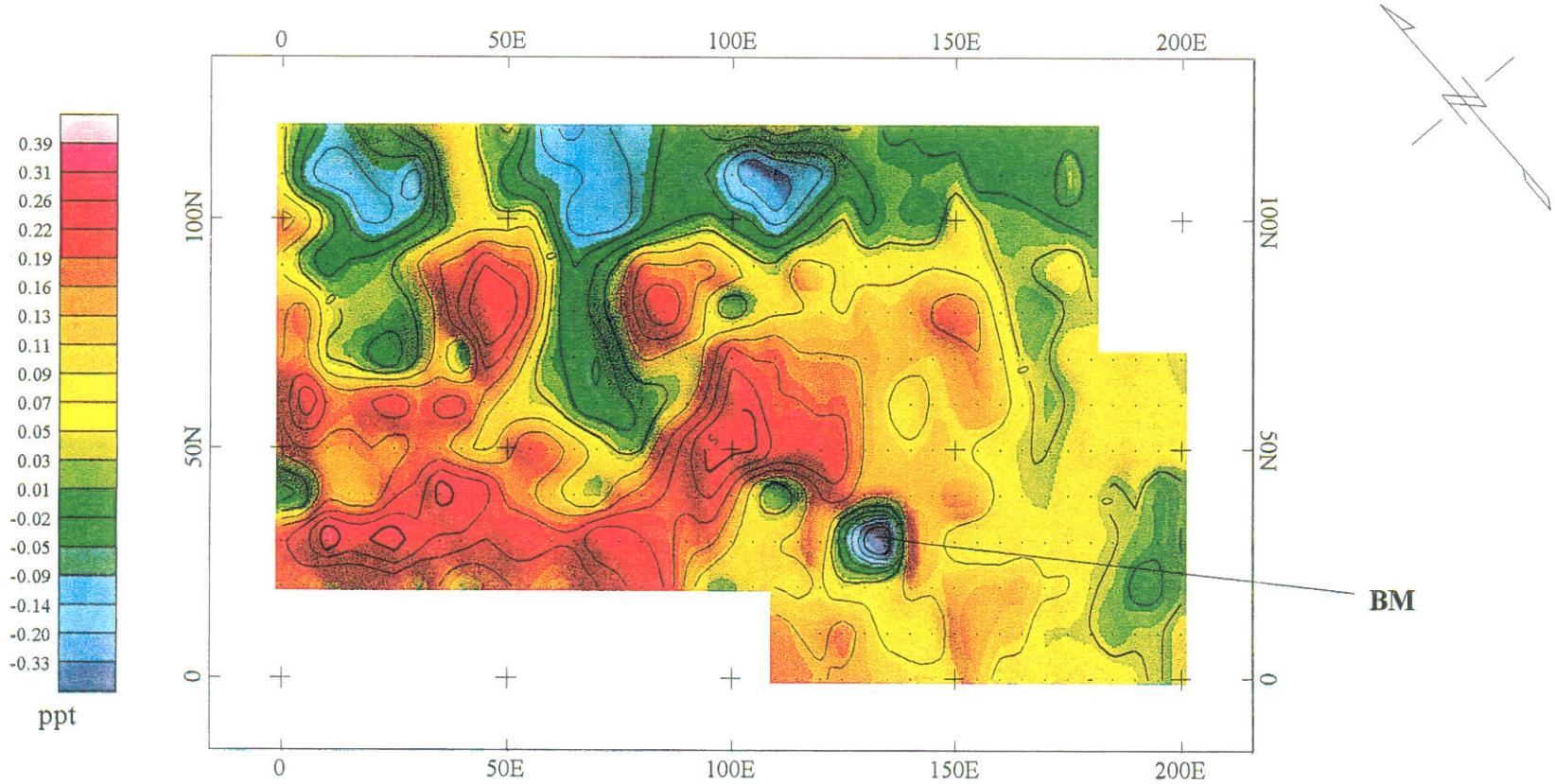
NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\FS\31\FSEJ1C.MAP

Figure B-11

FLARE STACK
EM31 CONDUCTIVITY (VERTICAL DIPOLE)
EAST-WEST SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



LEGEND:

... GEOPHYSICAL SURVEY LINES

BM ANOMALY CAUSED BY BURIED METAL

Scale 1:480

25 0 25 50

feet

MINIMUM CONTOUR INTERVAL: 0.1 ppt Secondary to Primary Field

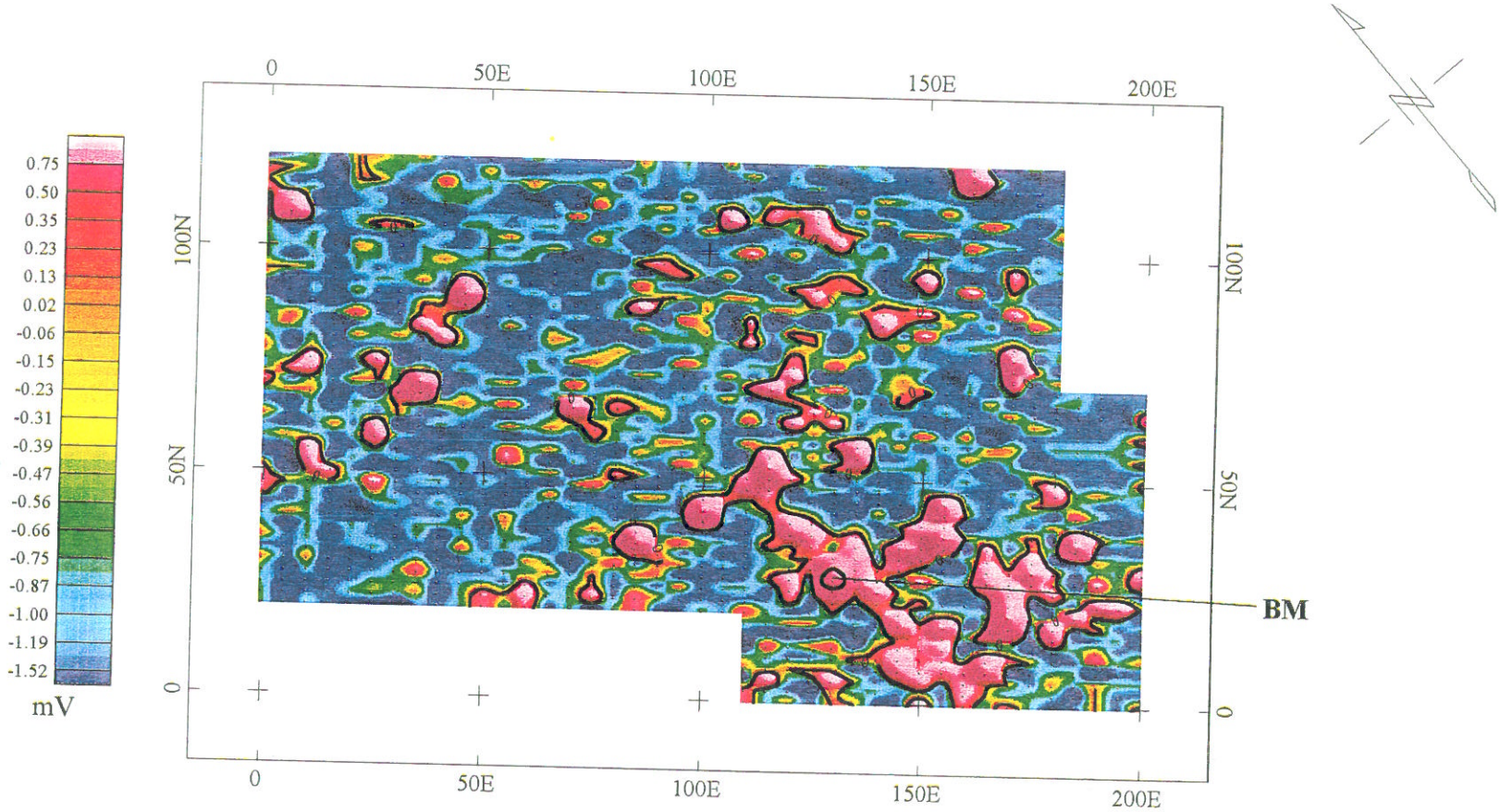
NAME: K Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\FS\31\FSE31.MAP

Figure B-12

FLARE STACK
EM31 IN-PHASE COMPONENT (VERTICAL DIPOLE)
EAST-WEST SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE



LEGEND:

... GEOPHYSICAL SURVEY LINES

BM ANOMALY CAUSED BY BURIED METAL

NAME: Ji Ma	DATE: SEPTEMBER 11, 2000
PROJECT NUMBER: 799419	LOCATION: PROJECTS\RIOBLANCO\FS\MAG\FCGN61.MAP

Scale 1:480

25 0 25 50

feet

MINIMUM CONTOUR INTERVAL: 1 milliVolt

Figure B-13

FLARE STACK
EM61 POTENTIAL DIFFERENCE (BOTTOM COIL)
NORTH-SOUTH SURVEY LINES

RIO BLANCO, COLORADO
U.S. DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION
NEVADA OPERATIONS OFFICE

IT GROUP GEOPHYSICS, KNOXVILLE, TENNESSEE

Appendix C

Rio Blanco Survey Data

The data in this appendix was collected and provided by Kelly Surveying Associates Inc., Englewood, CO, for the U.S. Department of Energy, National Nuclear Security Administration Nevada Operations Office.

Table C.1-1
Survey Locations - Rio Blanco, Colorado, Fawn Creek Site
Kelly Surveying Associates, Inc.
Field Work - December 18-22, 2000
(Page 1 of 7)

Decimal Degrees		Description	Colorado Northern Zone STATE PLANE COORDINATES - 1927 DATUM			Universal Transverse Mercator (UTM) ZONE 12 - NORTH - METERS	
Latitude	Longitude		NORTHING	EASTING	ELEVATION*	NORTHING	EASTING
39.78638388	-108.38264017	GPS BASE 12/19/00	178196.556	1190010.258	7147.651	4407118.571	724132.351
39.78802519	-108.36969350	GEOP Z-0N/0E	178676.332	1193665.998	6656.043	4407333.283	725235.793
39.78782472	-108.36903489	GEOP Z-0N/200E	178597.373	1193848.625	6641.840	4407312.688	725292.852
39.79170878	-108.36768333	GEOP A-0N/220E	179999.127	1194273.894	6635.449	4407747.244	725395.916
39.79392578	-108.36710809	GEOP A-800N/0E	180801.022	1194461.509	6640.396	4407994.792	725437.935
39.79381878	-108.36678229	GEOP A-800N/100E	180759.113	1194551.752	6635.895	4407983.735	725466.185
39.79368784	-108.36646913	GEOP A-800N/200E	180708.607	1194638.163	6631.948	4407969.990	725493.429
39.79356786	-108.36614967	GEOP A-800N/300E	180662.030	1194726.474	6623.222	4407957.477	725521.179
39.78895014	-108.36858262	GEOP B-0N/0E	179002.984	1193988.888	6631.662	4407438.754	725327.911
39.79082897	-108.36801371	GEOP B-100N/60E	179165.804	1194219.701	6626.422	4407648.748	725370.497
39.78941736	-108.36778039	GEOP B-200N/200E	179264.493	1194236.991	6625.761	4407492.640	725395.088
39.78968970	-108.36773023	GEOP B-300N/200E	179681.823	1194170.764	6630.922	4407522.996	725398.495
39.79403112	-108.36525832	GEOP C-20N/10E	180822.608	1194982.251	6601.921	4408011.149	725595.995
39.79392020	-108.36501239	GEOP C-20N/180E	180779.999	1195050.017	6598.180	4407999.457	725617.418
39.79506485	-108.36486484	GEOP C-400N/0E	181195.378	1195104.895	6593.264	4408126.891	725626.309
39.79492194	-108.36456171	GEOP C-400N/100E	181140.604	1195188.351	6589.938	4408111.792	725652.735
39.79478049	-108.36425682	GEOP C-400N/200E	181086.350	1195272.315	6586.491	4408096.860	725679.306
39.79479929	-108.36415937	GEOP C-420N/220E	181100.188	1195302.313	6638.053	4408099.192	725687.590
39.79508806	-108.36703267	GEOP D-0N/110E	181223.471	1194496.349	6748.176	4408124.001	725440.597
39.79492442	-108.36679485	GEOP D-0N/200E	181161.741	1194561.216	6739.491	4408106.436	725461.497
39.79553121	-108.36704503	GEOP D-120N/0E	181384.917	1194498.085	6762.365	4408173.163	725438.090
39.79520574	-108.36656425	GEOP D-120N/180E	181262.069	1194629.282	6738.887	4408138.245	725480.324

Table C.1-1
Survey Locations - Rio Blanco, Colorado, Fawn Creek Site
Kelly Surveying Associates, Inc.
Field Work - December 18-22, 2000
(Page 2 of 7)

Decimal Degrees		Description	Colorado Northern Zone STATE PLANE COORDINATES - 1927 DATUM			Universal Transverse Mercator (UTM) ZONE 12 - NORTH - METERS	
Latitude	Longitude		NORTHING	EASTING	ELEVATION*	NORTHING	EASTING
39.79532380	-108.36727925	GEOP D-20N/0E	181311.531	1194429.869	6761.836	4408149.549	725418.711
39.79506708	-108.36663204	GEOP D-70N/200E	181212.204	1194608.617	6738.844	4408122.683	725474.972
39.78977130	-108.36803503	WELL MARKER FCG1	179296.965	1194152.341	6626.337	4407531.286	725372.125
39.78784174	-108.36905609	MONITOR WELL-TOP OF CASING RBMW01	178603.464	1193842.476	6644.371	4407314.523	725290.981
39.79011890	-108.36773983	MONITOR WELL-TOP OF CASING RBMW02	179420.835	1194239.338	6626.531	4407570.616	725396.270
39.79289158	-108.36653464	MONITOR WELL-TOP OF CASING RBMW03	180419.318	1194610.410	6626.590	4407881.436	725490.422
39.79440731	-108.36489101	MONITOR WELL-TOP OF CASING RBMW04	180955.878	1195089.982	6597.007	4408053.835	725626.219
39.79361599	-108.36643423	EPA WELL RBS03	180682.133	1194647.122	6632.500	4407962.102	725496.653
39.79443438	-108.36497790	WELL MARKER RBU4	180966.877	1195065.739	6595.648	4408056.621	725618.689
39.79360171	-108.36638185	PIPE W01	180676.459	1194661.663	6630.996	4407960.649	725501.185
39.78803283	-108.36966615	BORING RBZ02	178678.862	1193673.770	6655.019	4407334.199	725238.111
39.79327268	-108.36654943	NE COR BRASS TABLET RB-E-01 SGZ	180558.191	1194610.733	6631.644	4407923.702	725487.910
39.79359478	-108.36636542	BORING RBA01	180673.786	1194666.196	6631.276	4407959.921	725502.615
39.79370224	-108.36709020	BORING RBA02	180719.480	1194463.905	6635.972	4407970.023	725440.197
39.79354021	-108.36705455	BORING RBA03	180660.166	1194472.014	6635.191	4407952.126	725443.780
39.79312493	-108.36662755	BORING RBA04	180505.113	1194587.057	6628.062	4407907.105	725481.703
39.79278623	-108.36671305	BORING RBA05	180382.579	1194559.066	6624.828	4407869.291	725475.488
39.79285364	-108.36660560	BORING RBA-06	180406.147	1194590.036	6624.526	4407877.045	725484.469
39.79275612	-108.36666773	BORING RBA07	180371.210	1194571.440	6623.384	4407866.064	725479.467
39.79269117	-108.36673124	BORING RBA08	180348.137	1194552.841	6624.013	4407858.693	725474.241
39.79272712	-108.36683419	BORING RBA09	180362.161	1194524.349	6625.908	4407862.425	725465.307
39.79281359	-108.36678157	BORING RBA10	180393.164	1194540.142	6626.121	4407872.156	725469.530

Table C.1-1
Survey Locations - Rio Blanco, Colorado, Fawn Creek Site
Kelly Surveying Associates, Inc.
Field Work - December 18-22, 2000
(Page 3 of 7)

Decimal Degrees		Description	Colorado Northern Zone STATE PLANE COORDINATES - 1927 DATUM			Universal Transverse Mercator (UTM) ZONE 12 - NORTH - METERS	
Latitude	Longitude		NORTHING	EASTING	ELEVATION*	NORTHING	EASTING
39.79290087	-108.36673174	BORING RBA11	180424.484	1194555.161	6626.390	4407881.969	725473.512
39.79299553	-108.36653875	BORING RBA12	180457.199	1194610.476	6625.562	4407892.965	725489.730
39.79269321	-108.36650033	BORING RBA13	180346.789	1194617.715	6624.012	4407859.502	725494.008
39.79261656	-108.36684917	BORING RBA14	180322.044	1194518.842	6626.338	4407850.114	725464.386
39.79287246	-108.36692213	BORING RBA15	180415.868	1194501.357	6628.449	4407878.336	725457.301
39.79227284	-108.36716538	BORING RBA16	180199.777	1194425.993	6625.741	4407811.162	725438.429
39.79024364	-108.36817283	BORING RBB01	179470.174	1194119.191	6628.593	4407583.372	725358.781
39.79023066	-108.36807062	BORING RBB02	179464.520	1194147.747	6626.594	4407582.188	725367.578
39.79020241	-108.36794801	BORING RBB03	179453.125	1194181.849	6624.339	4407579.362	725378.169
39.79011628	-108.36798603	BORING RBB04	179422.112	1194170.159	6624.484	4407569.705	725375.195
39.79014106	-108.36810787	BORING RBB05	179432.241	1194136.231	6626.869	4407572.149	725364.680
39.79016431	-108.36821589	BORING RBB06	179441.681	1194106.165	6629.533	4407574.457	725355.353
39.79031825	-108.36803014	BORING RBB07	179496.040	1194160.145	6626.983	4407592.013	725370.758
39.79013301	-108.36783997	BORING RBB08	179426.880	1194211.378	6624.194	4407571.930	725387.648
39.79004377	-108.36814700	BORING RBB09	179397.176	1194124.097	6626.646	4407561.250	725361.646
39.79024238	-108.36833897	BORING RBB10	179471.223	1194072.515	6634.685	4407582.814	725344.558
39.78994392	-108.36819644	BORING RBB11	179361.274	1194109.036	6626.142	4407550.042	725357.738
39.78979674	-108.36823851	BORING RBB12	179308.072	1194095.492	6626.246	4407533.598	725354.617
39.78964460	-108.36828554	BORING RBB13	179253.111	1194080.492	6626.432	4407516.591	725351.085
39.78966909	-108.36841046	BORING RBB14	179263.161	1194045.695	6626.804	4407518.995	725340.307
39.78981317	-108.36836760	BORING RBB15	179315.226	1194059.427	6627.944	4407535.097	725343.507
39.78995991	-108.36830898	BORING RBB16	179368.115	1194077.616	6628.859	4407551.533	725348.048

Table C.1-1
Survey Locations - Rio Blanco, Colorado, Fawn Creek Site
Kelly Surveying Associates, Inc.
Field Work - December 18-22, 2000
(Page 4 of 7)

Decimal Degrees		Description	Colorado Northern Zone STATE PLANE COORDINATES - 1927 DATUM			Universal Transverse Mercator (UTM) ZONE 12 - NORTH - METERS	
Latitude	Longitude		NORTHING	EASTING	ELEVATION*	NORTHING	EASTING
39.78978902	-108.36809300	BORING RBB17	179303.942	1194136.267	6625.774	4407533.108	725367.102
39.78987448	-108.36771681	BORING RBB20	179331.641	1194242.931	6625.835	4407543.541	725399.040
39.78975253	-108.36773509	BORING RBB21	179287.412	1194236.363	6625.366	4407529.959	725397.873
39.78963812	-108.36775597	BORING RBB22	179245.950	1194229.154	6625.977	4407517.206	725396.458
39.78965725	-108.36793814	BORING RBB23	179254.564	1194178.214	6626.131	4407518.870	725380.795
39.78976973	-108.36792087	BORING RBB24	179295.358	1194184.388	6625.643	4407531.400	725381.907
39.78989531	-108.36789829	BORING RBB25	179340.872	1194192.206	6625.134	4407545.397	725383.431
39.79002907	-108.36778086	BORING RBB26	179388.504	1194226.760	6624.322	4407560.541	725393.050
39.78974704	-108.36760943	BORING RBB27	179284.272	1194271.594	6626.222	4407529.665	725408.653
39.78951411	-108.36786817	BORING RBB28	179201.822	1194196.185	6626.686	4407503.158	725387.255
39.78932299	-108.36838195	BORING RBB29	179136.903	1194049.635	6628.193	4407480.648	725343.879
39.78931006	-108.36825460	BORING RBB30	179131.038	1194085.251	6628.310	4407479.533	725354.828
39.78929552	-108.36814424	BORING RBB31	179124.744	1194116.074	6627.955	4407478.197	725364.326
39.78917074	-108.36815581	BORING RBB32	179079.422	1194111.358	6629.086	4407464.317	725363.742
39.78917898	-108.36828457	BORING RBB33	179083.592	1194075.290	6629.342	4407464.907	725352.688
39.78919174	-108.36840180	BORING RBB34	179089.300	1194042.516	6629.059	4407466.029	725342.608
39.78945720	-108.36823251	BORING RBB35	179184.408	1194093.183	6627.189	4407495.923	725356.238
39.78921703	-108.36796710	BORING RBB36	179094.563	1194164.904	6628.935	4407469.931	725379.752
39.78903223	-108.36830423	BORING RBB37	179030.344	1194068.044	6630.312	4407448.567	725351.484
39.78927446	-108.36854986	BORING RBB38	179120.756	1194001.902	6629.850	4407474.837	725329.657
39.79069840	-108.36784762	BORING RBB39	179632.783	1194215.878	6626.582	4407634.672	725385.147
39.79066553	-108.36793208	BORING RBB40	179621.581	1194191.768	6627.692	4407630.810	725378.021

Table C.1-1
Survey Locations - Rio Blanco, Colorado, Fawn Creek Site
Kelly Surveying Associates, Inc.
Field Work - December 18-22, 2000
(Page 5 of 7)

Decimal Degrees		Description	Colorado Northern Zone STATE PLANE COORDINATES - 1927 DATUM			Universal Transverse Mercator (UTM) ZONE 12 - NORTH - METERS	
Latitude	Longitude		NORTHING	EASTING	ELEVATION*	NORTHING	EASTING
39.79039611	-108.36799895	BORING RBB41	179524.103	1194169.821	6627.478	4407600.735	725373.175
39.78952268	-108.36814098	BORING RBB42	179207.414	1194119.663	6626.789	4407503.421	725363.864
39.78919848	-108.36784196	BORING RBB43	179086.677	1194199.836	6630.020	4407468.187	725390.531
39.79458988	-108.36473758	BORING RBC01	181021.310	1195135.059	6592.936	4408074.488	725638.761
39.79453774	-108.36463012	BORING RBC02	181001.355	1195164.627	6590.971	4408068.971	725648.133
39.79449345	-108.36453491	BORING RBC03	180984.368	1195190.845	6589.288	4408064.295	725656.431
39.79440761	-108.36460673	BORING RBC04	180953.769	1195169.669	6590.612	4408054.585	725650.562
39.79445028	-108.36469010	BORING RBC05	180970.056	1195146.756	6591.404	4408059.111	725643.283
39.79450904	-108.36479626	BORING RBC06	180992.410	1195117.629	6593.220	4408065.366	725634.000
39.79442840	-108.36450542	BORING RBC07	180960.418	1195198.364	6589.977	4408057.148	725659.169
39.79436757	-108.36475250	BORING RBC08	180940.510	1195128.258	6592.629	4408049.772	725638.210
39.79430382	-108.36508924	BORING RBC09	180920.351	1195032.939	6597.027	4408041.846	725609.582
39.79422762	-108.36506574	BORING RBC10	180892.398	1195038.642	6597.339	4408033.447	725611.843
39.79417393	-108.36504060	BORING RBC11	180872.627	1195045.073	6597.312	4408027.551	725614.172
39.79412264	-108.36514505	BORING RBC12	180854.899	1195015.138	6599.118	4408021.594	725605.396
39.79420254	-108.36516784	BORING RBC13	180884.193	1195009.675	6599.222	4408030.406	725603.183
39.79426604	-108.36518479	BORING RBC14	180907.465	1195005.660	6599.000	4408037.412	725601.523
39.79425051	-108.36497020	BORING RBC15	180899.868	1195065.743	6595.952	4408036.229	725619.950
39.79405028	-108.36505941	BORING RBC16	180827.782	1195038.337	6598.316	4408013.778	725612.965
39.79417529	-108.36527525	BORING RBC17	180875.248	1194979.189	6602.124	4408027.110	725594.074
39.79436202	-108.36515900	BORING RBC18	180942.174	1195014.030	6598.640	4408048.131	725603.418
39.79409684	-108.36539949	BORING RBC19	180847.811	1194943.374	6604.074	4408018.088	725583.691

Table C.1-1
Survey Locations - Rio Blanco, Colorado, Fawn Creek Site
Kelly Surveying Associates, Inc.
Field Work - December 18-22, 2000
(Page 6 of 7)

Decimal Degrees		Description	Colorado Northern Zone STATE PLANE COORDINATES - 1927 DATUM			Universal Transverse Mercator (UTM) ZONE 12 - NORTH - METERS	
Latitude	Longitude		NORTHING	EASTING	ELEVATION*	NORTHING	EASTING
39.79411511	-108.36526292	BORING RBC20	180853.225	1194981.944	6602.265	4408020.460	725595.326
39.79407091	-108.36534169	BORING RBC21	180837.847	1194959.303	6603.570	4408015.355	725588.725
39.79405088	-108.36543202	BORING RBC22	180831.376	1194933.698	6605.989	4408012.905	725581.055
39.79412371	-108.36548116	BORING RBC23	180858.334	1194920.753	6606.074	4408020.865	725576.609
39.79419244	-108.36538596	BORING RBC24	180882.494	1194948.297	6604.061	4408028.735	725584.537
39.79423944	-108.36530663	BORING RBC25	180898.884	1194971.130	6601.739	4408034.152	725591.177
39.79508262	-108.36485016	BORING RBC26	181201.713	1195109.228	6593.456	4408128.900	725627.509
39.79495894	-108.36496453	BORING RBC27	181157.723	1195075.655	6593.570	4408114.883	725618.119
39.79482612	-108.36505229	BORING RBC28	181110.164	1195049.447	6594.899	4408099.918	725611.038
39.79491083	-108.36485257	BORING RBC29	181139.194	1195106.532	6592.510	4408109.825	725627.864
39.79462664	-108.36516605	BORING RBC31	181038.573	1195015.157	6596.515	4408077.487	725601.949
39.79453814	-108.36523577	BORING RBC32	181006.985	1194994.538	6599.088	4408067.487	725596.268
39.79444094	-108.36527521	BORING RBC33	180971.956	1194982.318	6599.951	4408056.598	725593.208
39.79450100	-108.36512942	BORING RBC34	180992.502	1195023.970	6596.829	4408063.633	725605.497
39.79436753	-108.36539774	BORING RBC35	180946.341	1194947.046	6603.979	4408048.140	725582.956
39.79422783	-108.36545975	APRX.LOC.BORING(NOT FND) RBC36	180896.046	1194927.990	6606.805	4408032.477	725578.103
39.79444099	-108.36517282	BORING RBC37	180971.048	1195011.076	6597.795	4408056.863	725601.976
39.79446982	-108.36504772	BORING RBC38	180980.412	1195046.547	6596.315	4408060.379	725612.594
39.79455993	-108.36508845	BORING RBC39	181013.582	1195036.168	6595.775	4408070.278	725608.813
39.79440369	-108.36510180	BORING RBC40	180956.824	1195030.583	6597.162	4408052.901	725608.180
39.79453132	-108.36500636	BORING RBC41	181002.424	1195058.886	6595.432	4408067.309	725615.936
39.79445150	-108.36501256	BORING RBC42	180973.422	1195056.207	6595.777	4408058.433	725615.666

Table C.1-1
Survey Locations - Rio Blanco, Colorado, Fawn Creek Site
Kelly Surveying Associates, Inc.
Field Work - December 18-22, 2000
(Page 7 of 7)

Decimal Degrees		Description	Colorado Northern Zone STATE PLANE COORDINATES - 1927 DATUM			Universal Transverse Mercator (UTM) ZONE 12 - NORTH - METERS	
Latitude	Longitude		NORTHING	EASTING	ELEVATION*	NORTHING	EASTING
39.79440142	-108.36521564	BORING RBC43	180957.031	1194998.586	6599.294	4408052.362	725598.439
39.79433865	-108.36527391	BORING RBC44	180934.707	1194981.482	6600.853	4408045.247	725593.654
39.79430752	-108.36535634	APRX.LOC.BORING(NOT FND) RBC45	180924.121	1194957.968	6603.463	4408041.584	725586.697
39.79523974	-108.36687014	OLD WELL RBD-01	180663.481	1194634.603	6631.573	4407956.191	725493.195
39.79356370	-108.36647661	SOIL SAMPLE RBD01	181277.220	1194543.775	6751.025	4408141.249	725454.018
39.79515466	-108.36688697	SOIL SAMPLE RBD02	181246.398	1194538.050	6748.897	4408131.762	725452.856
39.79508892	-108.36689432	SOIL SAMPLE RBD03	181222.529	1194535.214	6747.048	4408124.445	725452.441
39.79511443	-108.36699293	SOIL SAMPLE RBD04	181232.713	1194507.819	6749.371	4408127.029	725443.913
39.79518527	-108.36696475	SOIL SAMPLE RBD05	181258.246	1194516.565	6751.309	4408134.963	725446.095
39.79524787	-108.36694533	SOIL SAMPLE RBD06	181280.861	1194522.756	6753.113	4408141.962	725447.554
39.79534289	-108.36687537	SOIL SAMPLE RBD07	181314.819	1194543.521	6753.356	4408152.686	725453.234
39.79510589	-108.36678083	SOIL SAMPLE RBD08	181227.679	1194567.286	6745.373	4408126.615	725462.104
39.79502417	-108.36694692	SOIL SAMPLE RBD09	181199.436	1194519.679	6745.297	4408117.125	725448.148
39.79522299	-108.36706488	SOIL SAMPLE RBD10	181272.886	1194488.888	6753.955	4408138.898	725437.397
39.78784089	-108.36905746	TOP CONC. PAD RBMW01	178603.759	1193842.873	6642.226	4407314.426	725290.866
39.79011956	-108.36773972	TOP CONC. PAD RBMW02	179421.073	1194239.379	6624.281	4407570.689	725396.278
39.79289197	-108.36653470	TOP CONC. PAD RBMW03	180419.459	1194610.397	6624.397	4407881.479	725490.415
39.79440635	-108.36489041	TOP CONC. PAD RBMW04	180956.234	1195089.826	6594.777	4408053.729	725626.273

Appendix D

Chemical Quality Control Summary Report for the Rio Blanco Site, Colorado

D.1.0 Chemical Quality Control Summary Report for the Rio Blanco Site, New Mexico

Investigative and waste characterization sampling of soil and water was performed in support of the Rio Blanco Site Corrective Action Investigation from August 14 through September 24, 2000, with additional groundwater sampling occurring on July 17, 2002. This CQCSR presents the analytical results and an evaluation of the completeness and quality of the chemical data associated with samples collected at the following areas:

- RB-E-01 Area
- RB-AR-2 Area
- RB-U-4 Area
- Flare Stack Area
- Upgradient Area
- Waste characterization samples

D.2.0 Data Collection, Data Management, and Quality Control Procedures

This section provides details on the general sample collection, data management, and quality control procedures used during the sample collection effort.

D.2.1 Sample Collection and Analysis Procedures

The scope of work and general sample handling procedures used during this project for sample collection and analysis are presented in the Work Plan (DOE/NV, 2000).

The following types of samples were collected:

- Soil borings
- Groundwater
- Surface soil
- Waste characterization samples

The following is a list of analytical methods used during this project for chemical analysis:

- VOCs by Method SW-846 Method 8260B
- SVOCs by SW-846 Method 8270C
- TPH DRO by Method 8015B-D modified
- Total Metals by Method 6000/7000 Series
- TCLP RCRA Metals by Method 1311/6000 Series

D.2.2 Field Quality Assurance/Quality Control Procedures

Quality control samples were collected, labeled, handled, and shipped to the laboratory in accordance with internal procedures and the Quality Assurance Project Plan (QAPP) located in Appendix B of the Work Plan (DOE/NV, 2000).

The field QA/QC sample requirements are as follow:

- Field QC duplicates were collected at a frequency of 1 sample per 20 field samples collected.
- Extra volume was collected every 20 samples and submitted to the laboratory to perform full laboratory QC.

The field samples and associated field QA/QC samples collected at each site are identified in the Master Sample Log (see Table E.1-1 in Appendix E).

The actual sampling locations are shown in the main document. Sample collection logs, chain-of-custody documents, Records of Technical Change, and other field documentation are kept in the project files and are available upon request.

D.2.3 Contracted Analytical Laboratories

Laboratory analysis was provided by Paragon Analytics Inc. of Fort Collins, Colorado.

D.2.4 Sample Handling and Custody Procedures

Field samples were collected, chilled immediately (either in a cooler with ice or in the sample refrigerator), packed in coolers, and transported to the overnight courier drop-off point in Rifle, Colorado, for overnight shipment to the laboratory. Sample custody was maintained and documented on the chain-of-custody form from the time the samples were collected, sealed in the coolers, delivered to the overnight courier, to the time they were checked in at the laboratory. Any deviations from these sample handling and custody procedures are reported in Section D.3.0 of this document.

All chain-of-custody documentation, including custody records, analysis request, sample collection logs, cooler and refrigerator temperature logs, and cooler receipt forms associated with the collection of soil samples and other matrices are maintained in the project files.

D.2.5 Equipment Calibration and Maintenance

An HNU Model PI-101 photoionization detector was used to screen samples for the presence of volatile organic compounds. The HNU was calibrated daily using 100 parts per million isobutylene gas. Daily maintenance included cleaning the probe and charging the battery. Instrument response was checked periodically during the day using the span gas.

D.2.6 Quality Assurance Objectives

Data uses and DQOs of the Rio Blanco surface and shallow subsurface evaluation are included in Section 3.0 of the Work Plan (see Table 3-1) (DOE/NV, 2000).

D.2.7 Procedures for Data Quality Evaluation

Data quality evaluations focus on deviations from expected QC activities, problems encountered, and the acceptability of the methodologies used. Sample integrity is based on information provided on the sample receipt forms, the custody documents, project-specific laboratory QC checklists, statements in the laboratory case narratives, field notes, cooler and refrigerator temperature logs, and custody documents. The evaluation of the analytical data with respect to project- and method-specific quality objectives was performed using the results of laboratory method blank analyses, laboratory control samples (LCSs), matrix spike analyses, and surrogate recoveries, where applicable. Quality control requirements such as matrix spike precision and accuracy limits and method reporting limits are determined by Paragon Analytics' in-house statistical studies and are presented in Paragon's Laboratory Quality Assurance Plan.

Field duplicate (FD) data were used to evaluate the precision of field sample collection methods. During data validation, FD relative percent difference (RPD) results were not used to qualify data. Laboratory duplicate results were used during validation to qualify data using precision.

Following sample analysis, the laboratory prepared one data package per respective laboratory job. The key factors in the data quality review and validation procedures are highlighted in Section D.3.0 of this document.

D.2.7.1 Laboratory Data Quality Evaluation

The procedures used to evaluate and validate analytical data were described in the QAPP (see Section B.6.4.3.3, Appendix B, of the Work Plan). A project-specific data validation checklist was used to ensure the consistency and completeness of the data validation procedure. The data review was performed by reference to the following documents:

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

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

Based on the guidance provided in these documents, professional judgment, and the QC limits presented in the QAPP (see Table B.2-1, "Laboratory Chemical, Toxicity Characteristic Leaching Procedure, and Radiochemistry Analytical Requirements for Rio Blanco," of the QAPP [DOE/NV, 2000]), data that meet acceptance limits for all laboratory and field QC and were not qualified and should be considered usable as reported. Data with low impact QC problems should be considered usable for this project, with qualifications. Data with high impact QC problems were qualified as rejected.

D.2.7.2 Field Data Quality Evaluation

The QA and QC samples were collected to assess the quality of the field-sampling activities. These QA/QC field samples include duplicates, trip blanks, field blanks, and equipment rinsate blanks. The evaluation of these samples was based on completeness of data, results of blank analyses, and RPDs of FD results. Although precision alone was not used to qualify data, the evaluation criteria (i.e., RPD) used for FDs during inorganic data validation was +/- 35 percent for soil and +/- 20 percent for water. Professional judgement was used to evaluate impacts of duplicate precision on the usability of data.

The field QC duplicates were placed in the same type of containers as the associated field samples and analyzed in the same manner. Soil sample fractions analyzed for volatile organics were collected without homogenization, while the remaining fractions for other parameters were thoroughly homogenized prior to collection.

D.2.8 Data Management

Laboratory data collection, data reduction, and data handling procedures are discussed in the QAPP (see Section B.6.4.1 of the QAPP).

Analytical results are stored in project files in hard copy formats. Hard copy data packs for each laboratory job were validated, and qualifiers were recorded on the data pack (equivalent to the Contract Laboratory Program Form I). Data validation packets documenting the analytical review procedures and results of the data evaluation were created for each data package corresponding to a sample delivery group.

Analytical results were transferred electronically from the laboratory information management system into an ASCI or Microsoft® Excel file and transferred to Microsoft® Access for managing and storage. Spreadsheets created for the analytical tables (see Appendix E) were imported into an Microsoft® Excel format from the Microsoft® Access database to create a results summary spreadsheet. All analytical results spreadsheets were created electronically using Microsoft® Excel spreadsheets to store, filter, and format data for end data use. No manual data entry was required to create result tables, with the following exception. Information provided in the "Screening Values," "Source," and "Hit" columns of Table E.2-2, Table E.3-2, and Table E.4-2 were manually entered following the Microsoft® Access data dump into Microsoft® Excel.

Field duplicate RPDs were calculated and reported in a separate Microsoft® Excel spreadsheet format using data from the summary spreadsheet. The QA/QC backup data such as surrogate, LCS, and matrix spike recovery data are contained in the raw "hard copy" data packages in the project files.

D.3.0 Sampling, Analysis, and Quality Control Results

This section describes the proposed sampling at each site, reports any deviations from the work plan or the QAPP, and includes a description of the quality review on a site-specific basis. Positive hit analytical results with validation qualifiers and quality control tables are also referenced in this section. Supporting information such as the field activity daily log, chain-of-custody documentation, cooler receipt forms, and laboratory case narratives are maintained in project files.

D.3.1 Investigative Soil Samples

Investigative soil samples were collected from four areas of concern including RB-E-01, RB-AR-2, RB-U-4, and the Flare Stack. The scope of work for soil sample collection was to determine the nature and extent (i.e., horizontal and vertical) of contamination at the site in the areas of concern identified in the work plan.

D.3.1.1 Proposed Sample Collection and Analytical Requirements

All soil samples were to be analyzed for Target Compound List (TCL) VOCs by Method 8260B, SVOCs by Method 8270C, TPH DRO by Method 8015B modified, and Total RCRA metals by Method 6010B/7471A.

D.3.1.2 Actual Sampling and Analysis

A total of 286 confirmatory soil samples and 17 FDs were collected during the investigative sampling effort.

Table E.2-1 lists all 286 confirmatory samples sorted by date along with QA/QC samples and parameters analyzed. Table E.2-2 lists detected parameters and screening values selected from several applicable and or relevant and appropriate requirements.

D.3.1.3 Deviations from Sample Handling and Custody Procedures

Rinsate and field blanks were collected using distilled water in place of deionized water based on availability. A source blank was collected and submitted for the same analyses as the soil samples.

Sample intervals for direct-push sampling were changed from 5 to 4 ft to match the direct-push equipment's standard sample collection length. Lexan liner sleeves were used for soil sample borings because of their inert properties.

D.3.1.4 Data Quality Evaluation

Data quality was evaluated based on field technical and laboratory analytical requirements. Data validation qualifiers assigned to investigative soil samples are presented in Table E.2-2 in the column with the heading: "Qualifier." All data collected from the investigative soil samples are usable based on the QC criteria outlined in Section D.2.7, with the exception of data qualified with "R" in the "Qualifier" column. Table E.2-3 summarizes FD RPD results for all detected parameters. Table E.2-4 lists rejected results sorted by chemical name.

In the field, all the soil samples collected were judged to have been valid representative samples and compliant with EPA-recommended criteria for sample preservation and sample packaging.

Twenty-three soil samples were re-collected and submitted for VOCs analysis under the same sample identification number as the original. This was necessary due to holding time or preservation problems during shipment and storage at the laboratory. No data qualification was required. The original samples analyses were canceled.

Table E.2-4 lists all investigative soil sample results (by sample per analyte) which were qualified by validation as rejected ("R" flag). The only data rejected was SVOC analysis data by EPA Method 8270. Qualification of these results was required for selected samples based on laboratory contract noncompliance and analytical method performance.

D.3.1.5 Data Completeness and Representativeness

Completeness was calculated for the investigative soil sample data based on the number of analyses performed, minus the number of analyses rejected during validation, divided by the number of analyses performed. All investigative soil samples were collected in accordance with the approved Work Plan (DOE/NV, 2000) from specified depth intervals within an approved and appropriate grid system.

A total of 287 samples were analyzed for 71 analytes by Method 8270C for a total of 20,377 data points. Of these, 212 data points were rejected. The calculated completeness is 99 percent for EPA Method 8270C data. This, averaged with a 100 percent completeness for the TPH, metals, and VOCs analysis, gives an over all completeness of 99 percent for investigative soil sample data.

No problems were encountered in the analytical methods used on the investigative soil samples with regard to the analysis for the COPCs for the Rio Blanco Site.

No QA/QC changes were necessary for the analytical methods used on the investigative soil samples.

D.3.1.6 Summary and Conclusions

A completeness of 99 percent was achieved for investigative soil analytical data. The data meet specified QC criteria, and any exceptions or qualifications are noted in Section D.3.1.4. The data points that have been qualified "J" by validation are estimated and should be considered usable for the purposes of this project.

Data quality objectives have been met for the investigative soil sampling as demonstrated by the evaluation of field sampling activity and laboratory analytical performance.

D.3.2 Groundwater Samples

Two rounds of groundwater sampling took place, the first on September 24, 2000, and the second on July 17, 2002. During each round of sampling a total of four groundwater samples and one duplicate were collected from the monitoring wells in accordance with the Work Plan.

D.3.2.1 Proposed Sample Collection and Analytical Requirements

Proposed well installation was dependent on the location and depth of soil contamination as specified in the Field Instructions, Section 4.7.

D.3.2.2 Actual Sampling and Analysis

Four monitoring wells were installed from September 19 through 21, 2000. Groundwater samples collected on September 24, 2000, and July 17, 2002, were analyzed for TCL VOCs by

Method 8260B, SVOCs by Method 8270C, TPH DRO by Method 8015B modified, and total RCRA metals by Method 6010B/7470A.

Table E.3-1 lists all samples collected by sample identification number along with QA/QC samples and parameters analyzed. Table E.3-2 lists detected parameters and screening values.

D.3.2.3 Deviations from Sample Handling and Custody Procedures

All groundwater samples were collected in accordance with the Work Plan.

D.3.2.4 Data Quality Evaluation

Data quality was evaluated based on field technical and laboratory analytical requirements. Data validation qualifiers assigned to groundwater samples are presented in Table E.3-2 in the column with the heading: "Qualifier." Table E.3-3 summarizes FD RPD results for all detected parameters. Table E.3-4 lists rejected results sorted by chemical name. All data collected from the groundwater samples are usable based on the QC criteria outlined in Section D.2.7, with the exception of data qualified with "R" in the "Qualifiers" column.

In the field, all the groundwater samples collected were judged to have been valid representative samples compliant with EPA-recommended criteria for sample preservation and packaging.

The only data qualified as rejected "R" from the groundwater sampling was for acetone (from the 2002 sampling event). Acetone is not a COPC in groundwater or soil.

Field duplicate RPD results for chromium and lead ranged from 0 to 26 percent in the 2000 data, and 77 to 123 percent in the 2002 data.

D.3.2.5 Data Completeness and Representativeness

A total of 5 sample data points (acetone in 2002 samples) from the groundwater sample analysis were rejected. The calculated completeness is greater than 99 percent.

Several VOCs (i.e., bromodichlormethane, dibromochloromethane, and chloroform) from a family of chemicals known as trihalomethanes were detected in the groundwater samples collected in 2000.

These VOCs were not anticipated to be found in groundwater and were not listed in the Work Plan (DOE/NV, 2000) as COPCs. The current reporting limit for trihalomethanes by Method 8260B is 5 micrograms per liter (µg/L). This reporting limit (5 µg/L) is greater than the screening level (e.g., 0.13 µg/L for dibromochloromethane) that was selected during the risk assessment. As a result, the method reporting limit for these compounds does not meet the data requirements. The trihalomethane data has been qualified "J" as estimated since the detected value was below the reporting limit. These estimated values have been used as input for the risk assessment. These compounds were not detected in the groundwater samples collected in 2002; however, the reporting limit was again above the screening level.

No QA/QC changes were necessary for the analytical methods used.

D.3.2.6 Summary and Conclusions

The data meet specified QC criteria, and any exceptions or qualifications are noted in Section D.3.1.4. The data points that have been qualified "J" by validation are estimated and should be considered usable for the purposes of this project.

The data quality objectives for groundwater sampling have been met for all COPCs.

D.3.3 Upgradient Soil Analysis

A total of seven soil samples and one duplicate were collected from the two borings at the Upgradient Area.

D.3.3.1 Proposed Sample Collection and Analytical Requirements

At least two upgradient soil sample locations were to be sampled at several depths and analyzed for VOCs by Method 8260B, SVOCs by Method 8270C, TPH DRO by Method 8015B modified, and total RCRA metals by Method 6010B/7471A.

D.3.3.2 Actual Sampling and Analysis

A total of seven soil samples and one FD were collected from the two upgradient borings. Table E.4-1 lists all samples collected by sample identification number along with QA/QC samples and parameters analyzed. Table E.4-2 lists detected parameters and screening values.

D.3.3.3 Deviations from Sample Handling and Custody Procedures

See deviations noted in Section D.3.1.3.

D.3.3.4 Data Quality Evaluation

Data quality was evaluated based on field technical and laboratory analytical requirements. Data validation qualifiers assigned upgradient soil samples are listed in Table E.4-2 in the column with the heading: "Qualifier." All data collected from the upgradient soil samples are usable based on the QC criteria outlined in Section D.2.7. Table E.4-3 summarizes field RPD results for all detected parameters.

In the field, all upgradient soil samples collected were judged to have been valid representative samples compliant with EPA-recommended criteria for sample preservation, sample packaging, and shipment.

Upgradient soil sample results by Method 8260B showed positive detects for several VOCs that were not anticipated to be present in an "upgradient" background sample. Further investigation of one particular VOC, dichlorodifluoromethane, showed that the laboratory reported this result as "suspect" in the case narrative. Paragon Analytics attributed it to possible laboratory contamination that may have occurred when a refrigerator was being repaired and leaked refrigerant in the metals laboratory. Other "anthropogenic" compounds were detected in upgradient soil samples which are known laboratory contaminants including acetone, carbon disulfide, and 2-butanone.

D.3.3.5 Summary and Conclusions

The data quality objectives for upgradient soil sampling have been met for all contaminants of potential concern.

D.3.4 Blank Sample Analysis

Quality control blanks collected during this project included trip blanks, equipment rinsate blanks, source blanks, and field blanks. Table E.6-1 provides blank information sorted by the blank type (i.e., field, rinse) and then by date. Table E.6-2 lists all of the positive detects of contaminants found in blanks. The table is sorted by parameter and then by result in ascending order.

A comparison of the trip blank results to the rinse, field, and source blank results shows that trip blank contamination consisted of methylene chloride only, which was not found in any of the other blank types. A reasonable conclusion is that methylene chloride contamination originates from the trip blank source (i.e., the laboratory).

The field, rinse, and source blanks contained several common laboratory contaminants (e.g., acetone, 2-butanone, 2-hexanone, bis[2-ethylhexylphthalate]), but the source does not appear to be from the laboratory. These contaminants were not found in the trip blanks provided from the lab.

As discussed in Section D.3.1.3 of this report, distilled water purchased from the local supermarket was used in place of deionized water for equipment and field blanks. A reasonable conclusion is that these contaminants are present in the blank source water, or contamination is entering the samples during preparation in the field.

Contaminants found in the blanks were not COPCs for this project. The concentrations present in blanks and corresponding samples were well below screening levels for drinking water standards.

D.4.0 References

U.S. Department of Energy, Nevada Operations Office. 2000. *Site Characterization Work Plan for the Rio Blanco Site, Colorado*, DOE/NV-607. Las Vegas, NV.

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

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

Appendix E

Analytical Results

(118 Pages)

E.1.0 Analytical Tables

The following table are contained within this appendix.

Table E.1-1 Master Sample Log (9 Pages)

Table E.2-1 Investigative Soil Sample Listing Analysis and QA/QC Cross Reference (8 Pages)

Table E.2-2 Investigative Soil Sample Results Summary of Positive Detects and Screening Values (38 Pages)

Table E.2-3 Investigative Soil Sample Field Duplicate RPD Results (3 Pages)

Table E.2-4 Investigative Soil Sample Summary of Rejected Results (5 Pages)

Table E.3-1 Groundwater Sample Listing Analysis and QA/QC Cross Reference (1 Page)

Table E.3-2 Groundwater Sample Results Summary of Positive Detects and Screening Values (2 Pages)

Table E.3-3 Groundwater Field Duplicate RPD Results (1 Page)

Table E.3-4 Groundwater Sample Summary of Rejected Results (1 Page)

Table E.4-1 Upgradient Soil Sample Listing Analysis Summary and QA/QC Cross Reference (1 Page)

Table E.4-2 Upgradient Soil Sample Results Summary of Positive Detects and Screening Values (1 Page)

Table E.4-3 Upgradient Soil Sample Field Duplicate RPD Results (1 Page)

Table E.5-1 Waste Management Sample Listing (1 Page)

Table E.5-2 Waste Management Analysis Results Summary of Positive Detects and RCRA TCLP Values (1 Page)

Table E.6-1 Blank Sample Listing and Analysis Summary (3 Pages)

Table E.6-2 Blank Sample Results Summary of Positive Detects (2 Pages)

Table E.6-3 Blank Sample Results Summary of Rejected Results (1 Page)

Table E.7-1 Investigative Soil Sample Results Summary of Positive Detects for Radiological COPCs (35 Pages)

Table E.7-2 Water Sample Results Summary of Positive Detects for Radiological COPCs (1 Page)

Table E.7-3 Rejected Results for Radiological Analysis of Soil and Water Samples (1 Page)

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
08/14/00	RBA010005		X	X	X	X	X	X		
08/14/00	RBA011620		X	X	X	X	X	X		
08/14/00	RBA020004		X	X	X	X	X	X		
08/14/00	RBA020408		X	X	X	X	X	X		
08/14/00	RBT001	TRIP BLANK	X							
08/15/00	RBA030005		X	X	X	X	X	X		
08/15/00	RBA030508		X	X	X	X	X	X		
08/15/00	RBA040005		X	X	X	X	X	X		
08/15/00	RBA040812		X	X	X	X	X	X		
08/15/00	RBA042630		X	X	X	X	X	X		
08/15/00	RBA050005		X	X	X	X	X	X		
08/15/00	RBA051620		X	X	X	X	X	X		
08/15/00	RBA052630		X	X	X	X	X	X		
08/15/00	RBA060005		X	X	X	X	X	X		
08/15/00	RBA061620		X	X	X	X	X	X		
08/15/00	RBA062630		X	X	X	X	X	X		
08/16/00	RBA070005		X	X	X	X	X	X		
08/16/00	RBA070812		X	X	X	X	X	X		
08/16/00	RBA070812	WASTE MAN.							X	
08/16/00	RBA072630		X	X	X	X	X	X		
08/16/00	RBM012630	Dup. of RBA072630	X	X	X	X	X	X		
08/16/00	RBA080005	MS/MSD	X	X	X	X	X	X		
08/16/00	RBA081216		X	X	X	X	X	X		
08/16/00	RBA082630		X	X	X	X	X	X		
08/16/00	RBT0002	TRIP BLANK	X							
08/16/00	RBA090005		X	X	X	X	X	X		
08/16/00	RBA091216		X	X	X	X	X	X		
08/16/00	RBA092630		X	X	X	X	X	X		
08/16/00	RBA100005		X	X	X	X	X	X		
08/16/00	RBA100812		X	X	X	X	X	X		
08/16/00	RBA102630		X	X	X	X	X	X		
08/16/00	RBT003	TRIP BLANK	X							
08/17/00	RBT0004	SOURCE BLANK	X	X	X	X	X	X		
08/17/00	RBT0005	RINSE BLANK	X	X	X	X	X	X		
08/17/00	RBT0006	TRIP BLANK	X							
08/17/00	RBT0007	FIELD BLANK	X	X	X	X	X	X		
08/17/00	RBA110005		X	X	X	X	X	X		
08/17/00	RBA110812		X	X	X	X	X	X		
08/17/00	RBA112630		X	X	X	X	X	X		
08/17/00	RBA120005		X	X	X	X	X	X		
08/17/00	RBA121620		X	X	X	X	X	X		
08/17/00	RBA122630		X	X	X	X	X	X		
08/17/00	RBA130005		X	X	X	X	X	X		
08/17/00	RBA131216		X	X	X	X	X	X		
08/17/00	RBA132630		X	X	X	X	X	X		
08/17/00	RBA140005		X	X	X	X	X	X		
08/17/00	RBA141216		X	X	X	X	X	X		
08/17/00	RBA142630		X	X	X	X	X	X		
08/17/00	RBT0008	TRIP BLANK	X							
08/20/00	RBA150005		X	X	X	X	X	X		
08/20/00	RBA151216	MS/MSD	X	X	X	X	X	X		
08/20/00	RBA151620		X	X	X	X	X	X		

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
08/20/00	RBA160005		X	X	X	X	X	X		
08/20/00	RBA160508		X	X	X	X	X	X		
08/20/00	RBM020005	Dup. of RBA150005	X	X	X	X	X	X		
08/20/00	RBB010005		X	X	X	X	X	X		
08/20/00	RBB011216		X	X	X	X	X	X		
08/20/00	RBB011216	WASTE MAN.							X	
08/20/00	RBB012428		X	X	X	X	X	X		
08/20/00	RBB012830		X	X	X	X	X	X		
08/20/00	RBT0009	TRIP BLANK	X							
08/21/00	RBT0010	RINSE BLANK	X	X	X	X	X	X		
08/21/00	RBT0011	FIELD BLANK	X	X	X	X	X	X		
08/21/00	RBT0012	TRIP BLANK	X							
08/21/00	RBT0013	TRIP BLANK	X							
08/21/00	RBB020005		X	X	X	X	X	X		
08/21/00	RBB020508		X	X	X	X	X	X		
08/21/00	RBB022428		X	X	X	X	X	X		
08/21/00	RBB030005		X	X	X	X	X	X		
08/21/00	RBB030508		X	X	X	X	X	X		
08/21/00	RBB032428		X	X	X	X	X	X		
08/21/00	RBB040005		X	X	X	X	X	X		
08/21/00	RBB040508		X	X	X	X	X	X		
08/21/00	RBB042630		X	X	X	X	X	X		
08/21/00	RBB050005		X	X	X	X	X	X		
08/21/00	RBB050508		X	X	X	X	X	X		
08/21/00	RBB052630		X	X	X	X	X	X		
08/21/00	RBT0014	TRIP BLANK	X							
08/22/00	RBT0015	TRIP BLANK	X							
08/22/00	RBB060005		X	X	X	X	X	X		
08/22/00	RBB061620		X	X	X	X	X	X		
08/22/00	RBB062630		X	X	X	X	X	X		
08/22/00	RBB070005		X	X	X	X	X	X		
08/22/00	RBB070508		X	X	X	X	X	X		
08/22/00	RBB072630		X	X	X	X	X	X		
08/22/00	RBB080005		X	X	X	X	X	X		
08/22/00	RBB080812		X	X	X	X	X	X		
08/22/00	RBB082630		X	X	X	X	X	X		
08/22/00	RBT016	TRIP BLANK	X							
08/23/00	RBT017	TRIP BLANK	X							
08/23/00	RBB090005	MS/MSD	X	X	X	X	X	X		
08/23/00	RBB090508		X	X	X	X	X	X		
08/23/00	RBM030508	Dup. of RBB090508	X	X	X	X	X	X		
08/23/00	RBB092630		X	X	X	X	X	X		
08/23/00	RBB100005		X	X	X	X	X	X		
08/23/00	RBB100812		X	X	X	X	X	X		
08/23/00	RBB102024		X	X	X	X	X	X		
08/23/00	RBT018	TRIP BLANK	X							
08/23/00	RBB110005		X	X	X	X	X	X		
08/23/00	RBB110508		X	X	X	X	X	X		
08/23/00	RBB112024		X	X	X	X	X	X		
08/23/00	RBB120005		X	X	X	X	X	X		
08/23/00	RBB120812		X	X	X	X	X	X		
08/23/00	RBB122024		X	X	X	X	X	X		

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
08/23/00	RBB130005		X	X	X	X	X	X		
08/23/00	RBB130508		X	X	X	X	X	X		
08/23/00	RBB132024		X	X	X	X	X	X		
08/24/00	RBT019	TRIP BLANK	X							
08/24/00	RBT020	FIELD BLANK	X	X	X	X	X	X		
08/24/00	RBT021	RINSE BLANK	X	X	X	X	X	X		
08/24/00	RBB140005		X	X	X	X	X	X		
08/24/00	RBB140508		X	X	X	X	X	X		
08/24/00	RBB142024		X	X	X	X	X	X		
08/24/00	RBB150005		X	X	X	X	X	X		
08/24/00	RBB150005	WASTE MAN.							X	
08/24/00	RBB150508		X	X	X	X	X	X		
08/24/00	RBB152024		X	X	X	X	X	X		
08/24/00	RBB160005	MS/MSD	X	X	X	X	X	X		
08/24/00	RBB161620		X	X	X	X	X	X		
08/24/00	RBM041620	Dup. of RBB161620	X	X	X	X	X	X		
08/24/00	RBB162428		X	X	X	X	X	X		
08/24/00	RBT022	TRIP BLANK	X							
08/24/00	RBT023	TRIP BLANK	X							
08/24/00	RBB200005		X	X	X	X	X	X		
08/24/00	RBB200812		X	X	X	X	X	X		
08/24/00	RBB202428		X	X	X	X	X	X		
08/25/00	RBB210005		X	X	X	X	X	X		
08/25/00	RBB210508		X	X	X	X	X	X		
08/25/00	RBB210812		X	X	X	X	X	X		
08/25/00	RBB212428		X	X	X	X	X	X		
08/25/00	RBB220005		X	X	X	X	X	X		
08/25/00	RBB220508		X	X	X	X	X	X		
08/25/00	RBB222428		X	X	X	X	X	X		
08/25/00	RBB230005		X	X	X	X	X	X		
08/25/00	RBB230508		X	X	X	X	X	X		
08/25/00	RBB232428		X	X	X	X	X	X		
08/25/00	RBT024	TRIP BLANK	X							
08/25/00	RBT025	TRIP BLANK	X							
08/25/00	RBT026	FIELD BLANK	X	X	X	X	X	X		
08/25/00	RBT027	RINSE BLANK	X	X	X	X	X	X		
08/25/00	RBB240005	MS/MSD	X	X	X	X	X	X		
08/25/00	RBB240508		X	X	X	X	X	X		
08/25/00	RBB240508	WASTE MAN.							X	
08/25/00	RBB242428		X	X	X	X	X	X		
08/25/00	RBM052428	Dup. of RBB242428	X	X	X	X	X	X		
08/27/00	RBT028	TRIP BLANK	X							
08/27/00	RBB250005		X	X	X	X	X	X		
08/27/00	RBB250508		X	X	X	X	X	X		
08/27/00	RBB252428		X	X	X	X	X	X		
08/27/00	RBB260005		X	X	X	X	X	X		
08/27/00	RBB260508		X	X	X	X	X	X		
08/27/00	RBB260812		X	X	X	X	X	X		
08/27/00	RBB270005		X	X	X	X	X	X		
08/27/00	RBB270508		X	X	X	X	X	X		
08/27/00	RBB272428		X	X	X	X	X	X		
08/27/00	RBT029	TRIP BLANK	X							

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
08/27/00	RBB280005		X	X	X	X	X	X		
08/27/00	RBM060005	Dup. of RBB280005	X	X	X	X	X	X		
08/27/00	RBB280508		X	X	X	X	X	X		
08/27/00	RBB281216		X	X	X	X	X	X		
08/27/00	RBB290005		X	X	X	X	X	X		
08/27/00	RBB290812	MS/MSD	X	X	X	X	X	X		
08/27/00	RBB292428		X	X	X	X	X	X		
08/28/00	RBB170005		X	X	X	X	X	X		
08/28/00	RBB170508		X	X	X	X	X	X		
08/28/00	RBB171216		X	X	X	X	X	X		
08/28/00	RBB300005		X	X	X	X	X	X		
08/28/00	RBB300508		X	X	X	X	X	X		
08/28/00	RBB300508	WASTE MAN.							X	
08/28/00	RBB302428		X	X	X	X	X	X		
08/28/00	RBB310005		X	X	X	X	X	X		
08/28/00	RBB310812		X	X	X	X	X	X		
08/28/00	RBB312428		X	X	X	X	X	X		
08/28/00	RBT030	TRIP BLANK	X							
08/28/00	RBT031	FIELD BLANK	X	X	X	X	X	X		
08/28/00	RBT032	RINSE BLANK	X	X	X	X	X	X		
08/28/00	RBT033	TRIP BLANK	X							
08/28/00	RBB320005		X	X	X	X	X	X		
08/28/00	RBB320508	MS/MSD	X	X	X	X	X	X		
08/28/00	RBB322428		X	X	X	X	X	X		
08/28/00	RBM062428	Dup. of RBB322428	X	X	X	X	X	X		
08/28/00	RBB330005		X	X	X	X	X	X		
08/28/00	RBB330508		X	X	X	X	X	X		
08/28/00	RBB332428		X	X	X	X	X	X		
08/28/00	RBT034	TRIP BLANK	X							
08/29/00	RBT035	TRIP BLANK	X							
08/29/00	RBB340005		X	X	X	X	X	X		
08/29/00	RBB340508		X	X	X	X	X	X		
08/29/00	RBB342428		X	X	X	X	X	X		
08/29/00	RBB350005		X	X	X	X	X	X		
08/29/00	RBB350508		X	X	X	X	X	X		
08/29/00	RBB352428		X	X	X	X	X	X		
08/29/00	RBB360005	MS/MSD	X	X	X	X	X	X		
08/29/00	RBB360812		X	X	X	X	X	X		
08/29/00	RBB362428		X	X	X	X	X	X		
08/29/00	RBM072428	Dup. of RBB362428	X	X	X	X	X	X		
08/29/00	RBT036	TRIP BLANK	X							
08/29/00	RBB370005		X	X	X	X	X	X		
08/29/00	RBB370508		X	X	X	X	X	X		
08/29/00	RBB372428		X	X	X	X	X	X		
08/29/00	RBB380005		X	X	X	X	X	X		
08/29/00	RBB382024		X	X	X	X	X	X		
08/29/00	RBB382428		X	X	X	X	X	X		
08/29/00	RBT037	TRIP BLANK	X							
08/29/00	RBT038	RINSE BLANK	X	X	X	X	X	X		
08/29/00	RBT039	FIELD BLANK	X	X	X	X	X	X		
08/30/00	RBT040	TRIP BLANK	X							
08/30/00	RBB390005		X	X	X	X	X	X		

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
08/30/00	RBB390508	WASTE MAN.							X	
08/30/00	RBB390508		X	X	X	X	X	X		
08/30/00	RBB390812		X	X	X	X	X	X		
08/30/00	RBA010005		X							
08/30/00	RBT041	TRIP BLANK	X							
08/30/00	RBA011620	MS/MSD	X							
08/30/00	RBA020004		X							
08/30/00	RBM080004	Dup. of RBA072630	X							
08/30/00	RBA020408		X							
08/30/00	RBA030005		X							
08/30/00	RBA030508		X							
08/30/00	RBA040005		X							
08/30/00	RBA041620		X							
08/30/00	RBA042630		X							
09/05/00	RBT042	TRIP BLANK	X							
09/05/00	RBT043	TRIP BLANK	X							
09/05/00	RBT044	RINSE BLANK	X	X	X	X	X	X		
09/05/00	RBT045	FIELD BLANK	X	X	X	X	X	X		
09/05/00	RBD010001		X	X	X	X	X	X		
09/05/00	RBD020001		X	X	X	X	X	X		
09/05/00	RBD030001		X	X	X	X	X	X		
09/05/00	RBD040001		X	X	X	X	X	X		
09/05/00	RBD050001		X	X	X	X	X	X		
09/05/00	RBD050001	WASTE MAN.							X	
09/05/00	RBD060001		X	X	X	X	X	X		
09/05/00	RBD070001		X	X	X	X	X	X		
09/05/00	RBD080001		X	X	X	X	X	X		
09/05/00	RBD090001	MS/MSD	X	X	X	X	X	X		
09/05/00	RBD100001		X	X	X	X	X	X		
09/05/00	RBM090001	Dup. of RBD100001	X	X	X	X	X	X		
09/06/00	RBT046	TRIP BLANK	X							
09/06/00	RBT047	FIELD BLANK	X	X	X	X	X	X		
09/06/00	RBT048	RINSE BLANK	X	X	X	X	X	X		
09/06/00	RBA050005		X							
09/06/00	RBA051620		X							
09/06/00	RBT049	TRIP BLANK	X							
09/06/00	RBA052630		X							
09/06/00	RBA060005		X							
09/06/00	RBA061620	MS/MSD	X							
09/06/00	RBA062630		X							
09/06/00	RBT050	TRIP BLANK	X							
09/06/00	RBA070005		X							
09/06/00	RBA070812		X							
09/06/00	RBA072630		X							
09/06/00	RBM012630	Dup. of RBA072630	X							
09/06/00	RBA080005		X							
09/06/00	RBA081216		X							
09/06/00	RBA082630		X							
09/07/00	RBT051	TRIP BLANK	X							
09/07/00	RBC020005		X	X	X	X	X	X		
09/07/00	RBC020509		X	X	X	X	X	X		
09/07/00	RBC020509	WASTE MAN.							X	

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
09/07/00	RBC021314		X	X	X	X	X	X		
09/07/00	RBC021620		X	X	X	X	X	X		
09/07/00	RBC010005		X	X	X	X	X	X		
09/07/00	RBC011216		X	X	X	X	X	X		
09/07/00	RBC030005	MS/MSD	X	X	X	X	X	X		
09/07/00	RBC031216		X	X	X	X	X	X		
09/07/00	RBM101216	Dup. of RBC031216	X	X	X	X	X	X		
09/07/00	RBC040005		X	X	X	X	X	X		
09/07/00	RBC041216		X	X	X	X	X	X		
09/07/00	RBT052	TRIP BLANK	X							
09/07/00	RBC050005		X	X	X	X	X	X		
09/07/00	RBC051216		X	X	X	X	X	X		
09/07/00	RBC060005		X	X	X	X	X	X		
09/07/00	RBC061216		X	X	X	X	X	X		
09/07/00	RBC070005		X	X	X	X	X	X		
09/07/00	RBC071216		X	X	X	X	X	X		
09/07/00	RBC080005		X	X	X	X	X	X		
09/07/00	RBC081216		X	X	X	X	X	X		
09/08/00	RBT053	TRIP BLANK	X							
09/08/00	RBT054	FIELD BLANK	X	X	X	X	X	X		
09/08/00	RBT055	RINSE BLANK	X	X	X	X	X	X		
09/08/00	RBC090005		X	X	X	X	X	X		
09/08/00	RBC091620		X	X	X	X	X	X		
09/08/00	RBT056	TRIP BLANK	X							
09/08/00	RBC100005		X	X	X	X	X	X		
09/08/00	RBC100509		X	X	X	X	X	X		
09/08/00	RBC100509	WASTE MAN.							X	
09/08/00	RBC101620		X	X	X	X	X	X		
09/08/00	RBC110005		X	X	X	X	X	X		
09/08/00	RBC111620		X	X	X	X	X	X		
09/08/00	RBC120005		X	X	X	X	X	X		
09/08/00	RBC121620		X	X	X	X	X	X		
09/08/00	RBC130005		X	X	X	X	X	X		
09/08/00	RBC131620	MS/MSD	X	X	X	X	X	X		
09/08/00	RBM110005	Dup. of RBC130005	X	X	X	X	X	X		
09/08/00	RBC140005		X	X	X	X	X	x		
09/08/00	RBC141620		X	X	X	X	X	X		
09/08/00	RBT057	TRIP BLANK	X							
09/09/00	RBT059	FIELD BLANK	X	X	X	X	X	X		
09/09/00	RBT060	RINSE BLANK	X	X	X	X	X	X		
09/09/00	RBT058	TRIP BLANK	X							
09/09/00	RBC150005		X	X	X	X	X	X		
09/09/00	RBC151620		X	X	X	X	X	X		
09/09/00	RBC160005		X	X	X	X	X	X		
09/09/00	RBC161620		X	X	X	X	X	X		
09/09/00	RBC170005		X	X	X	X	X	X		
09/09/00	RBC171216		X	X	X	X	X	X		
09/09/00	RBC171216	WASTE MAN.							X	
09/09/00	RBC172428		X	X	X	X	X	X		
09/09/00	RBT061	TRIP BLANK	X							
09/09/00	RBC180005		X	X	X	X	X	X		
09/09/00	RBC181620		X	X	X	X	X	X		

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
09/09/00	RBT062	TRIP BLANK	X							
09/09/00	RBC190005		X	X	X	X	X	X		
09/09/00	RBC190913		X	X	X	X	X	X		
09/09/00	RBC192024		X	X	X	X	X	X		
09/09/00	RBC200005		X	X	X	X	X	X		
09/09/00	RBC202024		X	X	X	X	X	X		
09/09/00	RBC210005	MS/MSD	X	X	X	X	X	X		
09/09/00	RBC212024		X	X	X	X	X	X		
09/09/00	RBM122024	Dup. of RBC212024	X	X	X	X	X	X		
09/09/00	RBC220005		X	X	X	X	X	X		
09/09/00	RBC222024		X	X	X	X	X	X		
09/10/00	RBT063	TRIP BLANK	X							
09/10/00	RBT064	RINSE BLANK	X	X	X	X	X	X		
09/10/00	RBT065	FIELD BLANK	X	X	X	X	X	X		
09/10/00	RBT066	TRIP BLANK	X							
09/10/00	RBC230005		X	X	X	X	X	X		
09/10/00	RBC232024		X	X	X	X	X	X		
09/10/00	RBM132024	Dup. of RBC232024	X	X	X	X	X	X		
09/10/00	RBC240005		X	X	X	X	X	X		
09/10/00	RBC241620		X	X	X	X	X	X		
09/10/00	RBC242428		X	X	X	X	X	X		
09/10/00	RBC250005		X	X	X	X	X	X		
09/10/00	RBC252024		X	X	X	X	X	X		
09/10/00	RBC252024	WASTE MAN.							X	
09/10/00	RBC270005		X	X	X	X	X	X		
09/10/00	RBC271620		X	X	X	X	X	X		
09/10/00	RBC260005		X	X	X	X	X	X		
09/10/00	RBC261620		X	X	X	X	X	X		
09/10/00	RBT067	TRIP BLANK	X							
09/10/00	RBC280005		X	X	X	X	X	X		
09/10/00	RBC281620		X	X	X	X	X	X		
09/10/00	RBC290005		X	X	X	X	X	X		
09/10/00	RBC291620		X	X	X	X	X	X		
09/10/00	RBC320005		X	X	X	X	X	X		
09/10/00	RBC321620		X	X	X	X	X	X		
09/10/00	RBC321620	WASTE MAN.							X	
09/11/00	RBT068	TRIP BLANK	X							
09/11/00	RBT070	RINSE BLANK	X	X	X	X	X	X		
09/11/00	RBT071	FIELD BLANK	X	X	X	X	X	X		
09/11/00	RBC310005		X	X	X	X	X	X		
09/11/00	RBC311620		X	X	X	X	X	X		
09/11/00	RBC330005		X	X	X	X	X	X		
09/11/00	RBC331620		X	X	X	X	X	X		
09/11/00	RBC340005		X	X	X	X	X	X		
09/11/00	RBC340509		X	X	X	X	X	X		
09/11/00	RBC340509	WASTE MAN.							X	
09/11/00	RBC341620		X	X	X	X	X	X		
09/11/00	RBC350005		X	X	X	X	X	X		
09/11/00	RBC351620		X	X	X	X	X	X		
09/11/00	RBC360005	MS/MSD	X	X	X	X	X	X		
09/11/00	RBC361620		X	X	X	X	X	X		
09/11/00	RBM141620	Dup. of RBC361620	X	X	X	X	X	X		

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
09/11/00	RBT069	TRIP BLANK	X							
09/11/00	RBC370005		X	X	X	X	X	X		
09/11/00	RBC370812		X	X	X	X	X	X		
09/11/00	RBC380005		X	X	X	X	X	X		
09/11/00	RBC371620		X	X	X	X	X	X		
09/11/00	RBC380509		X	X	X	X	X	X		
09/11/00	RBC381216		X	X	X	X	X	X		
09/11/00	RBC390005		X	X	X	X	X	X		
09/11/00	RBC391216		X	X	X	X	X	X		
09/11/00	RBC400005		X	X	X	X	X	X		
09/11/00	RBC400812		X	X	X	X	X	X		
09/11/00	RBT072	TRIP BLANK	X							
09/12/00	RBT073	TRIP BLANK	X							
09/12/00	RBT074	RINSE BLANK	X	X	X	X	X	X		
09/12/00	RBT075	FIELD BLANK	X	X	X	X	X	X		
09/12/00	RBT076	TRIP BLANK	X							
09/12/00	RBC410005		X	X	X	X	X	X		
09/12/00	RBC411216		X	X	X	X	X	X		
09/12/00	RBC420005		X	X	X	X	X	X		
09/12/00	RBC421216		X	X	X	X	X	X		
09/12/00	RBC430005	MS/MSD	X	X	X	X	X	X		
09/12/00	RBC431216		X	X	X	X	X	X		
09/12/00	RBC432024		X	X	X	X	X	X		
09/12/00	RBM152024	Dup. of RBC432024	X	X	X	X	X	X		
09/12/00	RBC440005		X	X	X	X	X	X		
09/12/00	RBC441216		X	X	X	X	X	X		
09/12/00	RBC441620		X	X	X	X	X	X		
09/12/00	RBC450005		X	X	X	X	X	X		
09/12/00	RBC451216		X	X	X	X	X	X		
09/12/00	RBT077	TRIP BLANK	X							
09/12/00	RBB420005		X	X	X	X	X	X		
09/12/00	RBB421620		X	X	X	X	X	X		
09/12/00	RBB430005		X	X	X	X	X	X		
09/12/00	RBB431216		X	X	X	X	X	X		
09/12/00	RBB410005		X	X	X	X	X	X		
09/12/00	RBB411216		X	X	X	X	X	X		
09/12/00	RBB400005		X	X	X	X	X	X		
09/12/00	RBB401216		X	X	X	X	X	X		
09/13/00	RBT078	TRIP BLANK	X							
09/13/00	RBT079	RINSE BLANK	X	X	X	X	X	X		
09/13/00	RBT080	FIELD BLANK	X	X	X	X	X	X		
09/13/00	RBT081	RINSE BLANK	X	X	X	X	X	X		
09/13/00	RBT082	FIELD BLANK	X	X	X	X	X	X		
09/18/00	RBT083	TRIP BLANK	X							
09/18/00	RBT084	RINSE BLANK	X	X	X	X	X	X		
09/18/00	RBT085	FIELD BLANK	X	X	X	X	X	X		
09/18/00	RBT086	TRIP BLANK	X							
09/18/00	RBZ020005		X	X	X	X	X	X		
09/18/00	RBZ022025		X	X	X	X	X	X		
09/18/00	RBZ023034		X	X	X	X	X	X		
09/18/00	RBZ025560		X	X	X	X	X	X		
09/19/00	RBZ010005	MS/MSD	X	X	X	X	X	X		

Table E.1-1
Master Sample Log

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
09/19/00	RBZ012025		X	X	X	X	X	X		
09/19/00	RBZ013539		X	X	X	X	X	X		
09/19/00	RBM162025	Dup. of RBZ012025	X	X	X	X	X	X		
09/19/00	RBT087	TRIP BLANK	X							
09/20/00	RBT088	TRIP BLANK	X							
09/20/00	RBT089	FIELD BLANK	X	X	X	X	X	X		
09/20/00	RBT090	RINSE BLANK	X	X	X	X	X	X		
09/20/00	RBB440005		X	X	X	X	X	X		
09/20/00	RBB442025		X	X	X	X	X	X		
09/20/00	RBB442530		X	X	X	X	X	X		
09/20/00	RBT091	TRIP BLANK	X							
09/20/00	RBB443539		X	X	X	X	X	X		
09/20/00	RBT092	TRIP BLANK	X							
09/20/00	RBC460005	MS/MSD	X	X	X	X	X	X		
09/20/00	RBC461215		X	X	X	X	X	X		
09/20/00	RBM171215	Dup. of RBC461215	X	X	X	X	X	X		
09/20/00	RBC462025		X	X	X	X	X	X		
09/20/00	RBC462530		X	X	X	X	X	X		
09/21/00	RBT093	TRIP BLANK	X							
09/21/00	RBA170005		X	X	X	X	X	X		
09/21/00	RBA172025		X	X	X	X	X	X		
09/21/00	RBA173035		X	X	X	X	X	X		
09/21/00	RBA174549		X	X	X	X	X	X		
09/24/00	RBT094	TRIP BLANK	X							
09/24/00	RBMW0101	MS/MSD	X	X	X	X	X	X		X
09/24/00	RBMW0201		X	X	X	X	X	X		X
09/24/00	RBMW0301		X	X	X	X	X	X		X
09/24/00	RBMW0401		X	X	X	X	X	X		X
09/24/00	RBM1801	Dup. of RBMW0201	X	X	X	X	X	X		X
09/24/00	RBT095	RINSE BLANK	X	X	X	X	X	X		X
09/24/00	RBT096	FIELD BLANK	X	X	X	X	X	X		X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
08/14/00	RBA010005	RB-E-01		X	X	X	X	X	X
08/14/00	RBA011620	RB-E-01		X	X	X	X	X	X
08/14/00	RBA020004	RB-E-01		X	X	X	X	X	X
08/14/00	RBA020408	RB-E-01		X	X	X	X	X	X
08/15/00	RBA030005	RB-E-01		X	X	X	X	X	X
08/15/00	RBA030508	RB-E-01		X	X	X	X	X	X
08/15/00	RBA040005	RB-E-01		X	X	X	X	X	X
08/15/00	RBA040812	RB-E-01		X	X	X	X	X	X
08/15/00	RBA042630	RB-E-01		X	X	X	X	X	X
08/15/00	RBA050005	RB-E-01		X	X	X	X	X	X
08/15/00	RBA051620	RB-E-01		X	X	X	X	X	X
08/15/00	RBA052630	RB-E-01		X	X	X	X	X	X
08/15/00	RBA060005	RB-E-01		X	X	X	X	X	X
08/15/00	RBA061620	RB-E-01		X	X	X	X	X	X
08/15/00	RBA062630	RB-E-01		X	X	X	X	X	X
08/16/00	RBA070005	RB-E-01		X	X	X	X	X	X
08/16/00	RBA070812	RB-E-01		X	X	X	X	X	X
08/16/00	RBA072630	RB-E-01		X	X	X	X	X	X
08/16/00	RBA080005	RB-E-01	MS/MSD	X	X	X	X	X	X
08/16/00	RBA081216	RB-E-01		X	X	X	X	X	X
08/16/00	RBA082630	RB-E-01		X	X	X	X	X	X
08/16/00	RBA090005	RB-E-01		X	X	X	X	X	X
08/16/00	RBA091216	RB-E-01		X	X	X	X	X	X
08/16/00	RBA092630	RB-E-01		X	X	X	X	X	X
08/16/00	RBA100005	RB-E-01		X	X	X	X	X	X
08/16/00	RBA100812	RB-E-01		X	X	X	X	X	X
08/16/00	RBA102630	RB-E-01		X	X	X	X	X	X
08/17/00	RBA110005	RB-E-01		X	X	X	X	X	X
08/17/00	RBA110812	RB-E-01		X	X	X	X	X	X
08/17/00	RBA112630	RB-E-01		X	X	X	X	X	X
08/17/00	RBA120005	RB-E-01		X	X	X	X	X	X
08/17/00	RBA121620	RB-E-01		X	X	X	X	X	X
08/17/00	RBA122630	RB-E-01		X	X	X	X	X	X
08/17/00	RBA130005	RB-E-01		X	X	X	X	X	X
08/17/00	RBA131216	RB-E-01		X	X	X	X	X	X
08/17/00	RBA132630	RB-E-01		X	X	X	X	X	X
08/17/00	RBA140005	RB-E-01		X	X	X	X	X	X
08/17/00	RBA141216	RB-E-01		X	X	X	X	X	X
08/17/00	RBA142630	RB-E-01		X	X	X	X	X	X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
08/20/00	RBA150005	RB-E-01		X	X	X	X	X	X
08/20/00	RBA151216	RB-E-01	MS/MSD	X	X	X	X	X	X
08/20/00	RBA151620	RB-E-01		X	X	X	X	X	X
08/20/00	RBA160005	RB-E-01		X	X	X	X	X	X
08/20/00	RBA160508	RB-E-01		X	X	X	X	X	X
08/20/00	RBB010005	RB-AR-2		X	X	X	X	X	X
08/20/00	RBB011216	RB-AR-2		X	X	X	X	X	X
08/20/00	RBB012428	RB-AR-2		X	X	X	X	X	X
08/20/00	RBB012830	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB020005	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB020508	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB022428	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB030005	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB030508	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB032428	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB040005	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB040508	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB042630	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB050005	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB050508	RB-AR-2		X	X	X	X	X	X
08/21/00	RBB052630	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB060005	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB061620	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB062630	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB070005	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB070508	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB072630	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB080005	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB080812	RB-AR-2		X	X	X	X	X	X
08/22/00	RBB082630	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB090005	RB-AR-2	MS/MSD	X	X	X	X	X	X
08/23/00	RBB090508	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB092630	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB100005	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB100812	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB102024	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB110005	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB110508	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB112024	RB-AR-2		X	X	X	X	X	X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
08/23/00	RBB120005	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB120812	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB122024	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB130005	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB130508	RB-AR-2		X	X	X	X	X	X
08/23/00	RBB132024	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB140005	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB140508	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB142024	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB150005	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB150508	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB152024	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB160005	RB-AR-2	MS/MSD	X	X	X	X	X	X
08/24/00	RBB161620	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB162428	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB200005	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB200812	RB-AR-2		X	X	X	X	X	X
08/24/00	RBB202428	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB210005	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB210508	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB210812	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB212428	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB220005	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB220508	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB222428	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB230005	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB230508	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB232428	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB240005	RB-AR-2	MS/MSD	X	X	X	X	X	X
08/25/00	RBB240508	RB-AR-2		X	X	X	X	X	X
08/25/00	RBB242428	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB250005	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB250508	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB252428	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB260005	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB260508	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB260812	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB270005	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB270508	RB-AR-2		X	X	X	X	X	X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
08/27/00	RBB272428	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB280005	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB280508	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB281216	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB290005	RB-AR-2		X	X	X	X	X	X
08/27/00	RBB290812	RB-AR-2	MS/MSD	X	X	X	X	X	X
08/27/00	RBB292428	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB170005	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB170508	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB171216	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB300005	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB300508	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB302428	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB310005	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB310812	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB312428	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB320005	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB320508	RB-AR-2	MS/MSD	X	X	X	X	X	X
08/28/00	RBB322428	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB330005	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB330508	RB-AR-2		X	X	X	X	X	X
08/28/00	RBB332428	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB340005	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB340508	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB342428	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB350005	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB350508	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB352428	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB360005	RB-AR-2	MS/MSD	X	X	X	X	X	X
08/29/00	RBB360812	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB362428	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB370005	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB370508	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB372428	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB380005	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB382024	RB-AR-2		X	X	X	X	X	X
08/29/00	RBB382428	RB-AR-2		X	X	X	X	X	X
08/30/00	RBB390005	RB-AR-2		X	X	X	X	X	X
08/30/00	RBB390508	RB-AR-2		X	X	X	X	X	X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
08/30/00	RBB390812	RB-AR-2		X	X	X	X	X	X
08/30/00	RBA010005	RB-E-01		X					
08/30/00	RBA011620	RB-E-01	MS/MSD	X					
08/30/00	RBA020004	RB-E-01		X					
08/30/00	RBA020408	RB-E-01		X					
08/30/00	RBA030005	RB-E-01		X					
08/30/00	RBA030508	RB-E-01		X					
08/30/00	RBA040005	RB-E-01		X					
08/30/00	RBA041620	RB-E-01		X					
08/30/00	RBA042630	RB-E-01		X					
09/05/00	RBD010001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD020001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD030001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD040001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD050001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD060001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD070001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD080001	Flare Stack		X	X	X	X	X	X
09/05/00	RBD090001	Flare Stack	MS/MSD	X	X	X	X	X	X
09/05/00	RBD100001	Flare Stack		X	X	X	X	X	X
09/06/00	RBA050005	RB-E-01		X					
09/06/00	RBA051620	RB-E-01		X					
09/06/00	RBA052630	RB-E-01		X					
09/06/00	RBA060005	RB-E-01		X					
09/06/00	RBA061620	RB-E-01	MS/MSD	X					
09/06/00	RBA062630	RB-E-01		X					
09/06/00	RBA070005	RB-E-01		X					
09/06/00	RBA070812	RB-E-01		X					
09/06/00	RBA072630	RB-E-01		X					
09/06/00	RBA080005	RB-E-01		X					
09/06/00	RBA081216	RB-E-01		X					
09/06/00	RBA082630	RB-E-01		X					
09/07/00	RBC020005	RB-U-4		X	X	X	X	X	X
09/07/00	RBC020509	RB-U-4		X	X	X	X	X	X
09/07/00	RBC021314	RB-U-4		X	X	X	X	X	X
09/07/00	RBC021620	RB-U-4		X	X	X	X	X	X
09/07/00	RBC010005	RB-U-4		X	X	X	X	X	X
09/07/00	RBC011216	RB-U-4		X	X	X	X	X	X
09/07/00	RBC030005	RB-U-4	MS/MSD	X	X	X	X	X	X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
09/07/00	RBC031216	RB-U-4		X	X	X	X	X	X
09/07/00	RBC040005	RB-U-4		X	X	X	X	X	X
09/07/00	RBC041216	RB-U-4		X	X	X	X	X	X
09/07/00	RBC050005	RB-U-4		X	X	X	X	X	X
09/07/00	RBC051216	RB-U-4		X	X	X	X	X	X
09/07/00	RBC060005	RB-U-4		X	X	X	X	X	X
09/07/00	RBC061216	RB-U-4		X	X	X	X	X	X
09/07/00	RBC070005	RB-U-4		X	X	X	X	X	X
09/07/00	RBC071216	RB-U-4		X	X	X	X	X	X
09/07/00	RBC080005	RB-U-4		X	X	X	X	X	X
09/07/00	RBC081216	RB-U-4		X	X	X	X	X	X
09/08/00	RBC090005	RB-U-4		X	X	X	X	X	X
09/08/00	RBC091620	RB-U-4		X	X	X	X	X	X
09/08/00	RBC100005	RB-U-4		X	X	X	X	X	X
09/08/00	RBC100509	RB-U-4		X	X	X	X	X	X
09/08/00	RBC101620	RB-U-4		X	X	X	X	X	X
09/08/00	RBC110005	RB-U-4		X	X	X	X	X	X
09/08/00	RBC111620	RB-U-4		X	X	X	X	X	X
09/08/00	RBC120005	RB-U-4		X	X	X	X	X	X
09/08/00	RBC121620	RB-U-4		X	X	X	X	X	X
09/08/00	RBC130005	RB-U-4		X	X	X	X	X	X
09/08/00	RBC131620	RB-U-4	MS/MSD	X	X	X	X	X	X
09/08/00	RBC140005	RB-U-4		X	X	X	X	X	x
09/08/00	RBC141620	RB-U-4		X	X	X	X	X	X
09/09/00	RBC150005	RB-U-4		X	X	X	X	X	X
09/09/00	RBC151620	RB-U-4		X	X	X	X	X	X
09/09/00	RBC160005	RB-U-4		X	X	X	X	X	X
09/09/00	RBC161620	RB-U-4		X	X	X	X	X	X
09/09/00	RBC170005	RB-U-4		X	X	X	X	X	X
09/09/00	RBC171216	RB-U-4		X	X	X	X	X	X
09/09/00	RBC172428	RB-U-4		X	X	X	X	X	X
09/09/00	RBC180005	RB-U-4		X	X	X	X	X	X
09/09/00	RBC181620	RB-U-4		X	X	X	X	X	X
09/09/00	RBC190005	RB-U-4		X	X	X	X	X	X
09/09/00	RBC190913	RB-U-4		X	X	X	X	X	X
09/09/00	RBC192024	RB-U-4		X	X	X	X	X	X
09/09/00	RBC200005	RB-U-4		X	X	X	X	X	X
09/09/00	RBC202024	RB-U-4		X	X	X	X	X	X
09/09/00	RBC210005	RB-U-4	MS/MSD	X	X	X	X	X	X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
09/09/00	RBC212024	RB-U-4		X	X	X	X	X	X
09/09/00	RBC220005	RB-U-4		X	X	X	X	X	X
09/09/00	RBC222024	RB-U-4		X	X	X	X	X	X
09/10/00	RBC230005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC232024	RB-U-4		X	X	X	X	X	X
09/10/00	RBC240005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC241620	RB-U-4		X	X	X	X	X	X
09/10/00	RBC242428	RB-U-4		X	X	X	X	X	X
09/10/00	RBC250005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC252024	RB-U-4		X	X	X	X	X	X
09/10/00	RBC270005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC271620	RB-U-4		X	X	X	X	X	X
09/10/00	RBC260005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC261620	RB-U-4		X	X	X	X	X	X
09/10/00	RBC280005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC281620	RB-U-4		X	X	X	X	X	X
09/10/00	RBC290005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC291620	RB-U-4		X	X	X	X	X	X
09/10/00	RBC320005	RB-U-4		X	X	X	X	X	X
09/10/00	RBC321620	RB-U-4		X	X	X	X	X	X
09/11/00	RBC310005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC311620	RB-U-4		X	X	X	X	X	X
09/11/00	RBC330005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC331620	RB-U-4		X	X	X	X	X	X
09/11/00	RBC340005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC340509	RB-U-4		X	X	X	X	X	X
09/11/00	RBC341620	RB-U-4		X	X	X	X	X	X
09/11/00	RBC350005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC351620	RB-U-4		X	X	X	X	X	X
09/11/00	RBC360005	RB-U-4	MS/MSD	X	X	X	X	X	X
09/11/00	RBC361620	RB-U-4		X	X	X	X	X	X
09/11/00	RBC370005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC370812	RB-U-4		X	X	X	X	X	X
09/11/00	RBC380005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC371620	RB-U-4		X	X	X	X	X	X
09/11/00	RBC380509	RB-U-4		X	X	X	X	X	X
09/11/00	RBC381216	RB-U-4		X	X	X	X	X	X
09/11/00	RBC390005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC391216	RB-U-4		X	X	X	X	X	X

Table E.2-1
Investigative Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	Area	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
09/11/00	RBC400005	RB-U-4		X	X	X	X	X	X
09/11/00	RBC400812	RB-U-4		X	X	X	X	X	X
09/12/00	RBC410005	RB-U-4		X	X	X	X	X	X
09/12/00	RBC411216	RB-U-4		X	X	X	X	X	X
09/12/00	RBC420005	RB-U-4		X	X	X	X	X	X
09/12/00	RBC421216	RB-U-4		X	X	X	X	X	X
09/12/00	RBC430005	RB-U-4	MS/MSD	X	X	X	X	X	X
09/12/00	RBC431216	RB-U-4		X	X	X	X	X	X
09/12/00	RBC432024	RB-U-4		X	X	X	X	X	X
09/12/00	RBC440005	RB-U-4		X	X	X	X	X	X
09/12/00	RBC441216	RB-U-4		X	X	X	X	X	X
09/12/00	RBC441620	RB-U-4		X	X	X	X	X	X
09/12/00	RBC450005	RB-U-4		X	X	X	X	X	X
09/12/00	RBC451216	RB-U-4		X	X	X	X	X	X
09/12/00	RBB420005	RB-AR-2		X	X	X	X	X	X
09/12/00	RBB421620	RB-AR-2		X	X	X	X	X	X
09/12/00	RBB430005	RB-AR-2		X	X	X	X	X	X
09/12/00	RBB431216	RB-AR-2		X	X	X	X	X	X
09/12/00	RBB410005	RB-AR-2		X	X	X	X	X	X
09/12/00	RBB411216	RB-AR-2		X	X	X	X	X	X
09/12/00	RBB400005	RB-AR-2		X	X	X	X	X	X
09/12/00	RBB401216	RB-AR-2		X	X	X	X	X	X
09/20/00	RBB440005	RB-AR-2		X	X	X	X	X	X
09/20/00	RBB442025	RB-AR-2		X	X	X	X	X	X
09/20/00	RBB442530	RB-AR-2		X	X	X	X	X	X
09/20/00	RBB443539	RB-AR-2		X	X	X	X	X	X
09/20/00	RBC460005	RB-U-4	MS/MSD	X	X	X	X	X	X
09/20/00	RBC461215	RB-U-4		X	X	X	X	X	X
09/20/00	RBC462025	RB-U-4		X	X	X	X	X	X
09/20/00	RBC462530	RB-U-4		X	X	X	X	X	X
09/21/00	RBA170005	RB-E-01		X	X	X	X	X	X
09/21/00	RBA172025	RB-E-01		X	X	X	X	X	X
09/21/00	RBA173035	RB-E-01		X	X	X	X	X	X
09/21/00	RBA174549	RB-E-01		X	X	X	X	X	X

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC141620	1,1,1-TRICHLOROETHANE	3.2	630,000	EPA Reg 9 PRG		UG/KG	J	6.8	EPA8260
RBC240005	1,2,4-TRIMETHYLBENZENE	1.4	52,000	EPA Reg 9 PRG		UG/KG	J	5.3	EPA8260
RBC190913	1,2,4-TRIMETHYLBENZENE	6	52,000	EPA Reg 9 PRG		UG/KG	J	6.5	EPA8260
RBC441216	1,2,4-TRIMETHYLBENZENE	34	52,000	EPA Reg 9 PRG		UG/KG		6.8	EPA8260
RBB210812	1,2,4-TRIMETHYLBENZENE	53	52,000	EPA Reg 9 PRG		UG/KG		6.6	EPA8260
RBA091216	1,2,4-TRIMETHYLBENZENE	57	52,000	EPA Reg 9 PRG		UG/KG	J	5.9	EPA8260
RBC431216	1,2,4-TRIMETHYLBENZENE	85	52,000	EPA Reg 9 PRG		UG/KG		8.8	EPA8260
RBC171216	1,2,4-TRIMETHYLBENZENE	6200	52,000	EPA Reg 9 PRG		UG/KG	J	32	EPA8260
RBB210812	1,2-DICHLOROETHANE	12	350	EPA Reg 9 PRG		UG/KG		6.6	EPA8260
RBC190913	1,3,5-TRIMETHYLBENZENE	4.2	21,000	EPA Reg 9 PRG		UG/KG	J	6.5	EPA8260
RBC441216	1,3,5-TRIMETHYLBENZENE	11	21,000	EPA Reg 9 PRG		UG/KG		6.8	EPA8260
RBA091216	1,3,5-TRIMETHYLBENZENE	19	21,000	EPA Reg 9 PRG		UG/KG	J	5.9	EPA8260
RBC431216	1,3,5-TRIMETHYLBENZENE	21	21,000	EPA Reg 9 PRG		UG/KG		8.8	EPA8260
RBC171216	1,3,5-TRIMETHYLBENZENE	1800	21,000	EPA Reg 9 PRG		UG/KG	J	32	EPA8260
RBC241620	2,4-DICHLOROPHENOL	3100	180,000	EPA Reg 9 PRG		UG/KG		480	EPA8270
RBC021314	2-BUTANONE	3.4	7,300,000	EPA Reg 9 PRG		UG/KG	J	28	EPA8260
RBC061216	2-BUTANONE	13	7,300,000	EPA Reg 9 PRG		UG/KG	J	27	EPA8260
RBB372428	2-BUTANONE	17	7,300,000	EPA Reg 9 PRG		UG/KG	J	30	EPA8260
RBC271620	2-BUTANONE	17	7,300,000	EPA Reg 9 PRG		UG/KG	J	31	EPA8260
RBB442025	2-BUTANONE	19	7,300,000	EPA Reg 9 PRG		UG/KG	J	24	EPA8260
RBB443539	2-BUTANONE	20	7,300,000	EPA Reg 9 PRG		UG/KG	J	34	EPA8260
RBC041216	2-BUTANONE	20	7,300,000	EPA Reg 9 PRG		UG/KG	J	27	EPA8260
RBA102630	2-BUTANONE	23	7,300,000	EPA Reg 9 PRG		UG/KG	J	23	EPA8260
RBC331620	2-BUTANONE	28	7,300,000	EPA Reg 9 PRG		UG/KG	J	30	EPA8260
RBC261620	2-BUTANONE	37	7,300,000	EPA Reg 9 PRG		UG/KG	B	29	EPA8260
RBM072428	2-BUTANONE	41	7,300,000	EPA Reg 9 PRG		UG/KG	B	28	EPA8260
RBB382024	2-BUTANONE	42	7,300,000	EPA Reg 9 PRG		UG/KG		27	EPA8260
RBC151620	2-BUTANONE	44	7,300,000	EPA Reg 9 PRG		UG/KG		30	EPA8260
RBB212428	2-BUTANONE	47	7,300,000	EPA Reg 9 PRG		UG/KG	B	32	EPA8260
RBC341620	2-BUTANONE	48	7,300,000	EPA Reg 9 PRG		UG/KG	B	28	EPA8260
RBC252024	2-BUTANONE	59	7,300,000	EPA Reg 9 PRG		UG/KG		25	EPA8260
RBB122024	2-BUTANONE	150	7,300,000	EPA Reg 9 PRG		UG/KG	B	31	EPA8260
RBA102630	2-HEXANONE	11	NA			UG/KG	J	23	EPA8260
RBA110005	2-HEXANONE	64	NA			UG/KG	J	21	EPA8260
RBC441620	2-METHYLNAPHTHALENE	190	NA			UG/KG	J	430	EPA8270
RBB012428	2-METHYLNAPHTHALENE	270	NA			UG/KG	J	490	EPA8270
RBC431216	2-METHYLNAPHTHALENE	310	NA			UG/KG	J	580	EPA8270
RBC340005	2-METHYLNAPHTHALENE	900	NA			UG/KG		360	EPA8270
RBC370812	2-METHYLNAPHTHALENE	950	NA			UG/KG	J	2100	EPA8270
RBC241620	2-METHYLNAPHTHALENE	1100	NA			UG/KG		480	EPA8270
RBB020508	2-METHYLNAPHTHALENE	1200	NA			UG/KG	J	1700	EPA8270
RBB210812	2-METHYLNAPHTHALENE	1400	NA			UG/KG		440	EPA8270
RBB200812	2-METHYLNAPHTHALENE	1600	NA			UG/KG		460	EPA8270
RBB061620	2-METHYLNAPHTHALENE	8200	NA			UG/KG		1800	EPA8270
RBB011216	2-METHYLNAPHTHALENE	79000	NA			UG/KG	J	19000	EPA8270
RBB040508	4-METHYL-2-PENTANONE	3.7	790,000	EPA Reg 9 PRG		UG/KG	J	23	EPA8260
RBA102630	4-METHYL-2-PENTANONE	11	790,000	EPA Reg 9 PRG		UG/KG	J	23	EPA8260
RBA080005	ACETONE	8.8	1,600,000	EPA Reg 9 PRG		UG/KG	J	22	EPA8260
RBB030508	ACETONE	9.1	1,600,000	EPA Reg 9 PRG		UG/KG	J	23	EPA8260
RBB130508	ACETONE	9.9	1,600,000	EPA Reg 9 PRG		UG/KG	J	24	EPA8260
RBM041620	ACETONE	9.9	1,600,000	EPA Reg 9 PRG		UG/KG	J	24	EPA8260
RBB161620	ACETONE	10	1,600,000	EPA Reg 9 PRG		UG/KG	J	24	EPA8260
RBB162428	ACETONE	10	1,600,000	EPA Reg 9 PRG		UG/KG	J	27	EPA8260
RBB170508	ACETONE	13	1,600,000	EPA Reg 9 PRG		UG/KG	J	22	EPA8260
RBB012830	ACETONE	15	1,600,000	EPA Reg 9 PRG		UG/KG	J	31	EPA8260
RBC040005	ACETONE	15	1,600,000	EPA Reg 9 PRG		UG/KG	J	23	EPA8260
RBM132024	ACETONE	15	1,600,000	EPA Reg 9 PRG		UG/KG	J	26	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC140005	ACETONE	17	1,600,000	EPA Reg 9 PRG		UG/KG	J	22	EPA8260
RBC031216	ACETONE	19	1,600,000	EPA Reg 9 PRG		UG/KG	J	26	EPA8260
RBC212024	ACETONE	19	1,600,000	EPA Reg 9 PRG		UG/KG	J	27	EPA8260
RBB430005	ACETONE	20	1,600,000	EPA Reg 9 PRG		UG/KG	J	22	EPA8260
RBC091620	ACETONE	20	1,600,000	EPA Reg 9 PRG		UG/KG	J	28	EPA8260
RBC232024	ACETONE	20	1,600,000	EPA Reg 9 PRG		UG/KG	J	26	EPA8260
RBC021620	ACETONE	22	1,600,000	EPA Reg 9 PRG		UG/KG	J	30	EPA8260
RBC121620	ACETONE	22	1,600,000	EPA Reg 9 PRG		UG/KG	J	25	EPA8260
RBC071216	ACETONE	23	1,600,000	EPA Reg 9 PRG		UG/KG	J	28	EPA8260
RBC291620	ACETONE	23	1,600,000	EPA Reg 9 PRG		UG/KG	J	32	EPA8260
RBC371620	ACETONE	23	1,600,000	EPA Reg 9 PRG		UG/KG	J	27	EPA8260
RBB012428	ACETONE	24	1,600,000	EPA Reg 9 PRG		UG/KG	J	29	EPA8260
RBC432024	ACETONE	26	1,600,000	EPA Reg 9 PRG		UG/KG	J	36	EPA8260
RBC370812	ACETONE	27	1,600,000	EPA Reg 9 PRG		UG/KG		25	EPA8260
RBB382428	ACETONE	28	1,600,000	EPA Reg 9 PRG		UG/KG	J	32	EPA8260
RBC130005	ACETONE	28	1,600,000	EPA Reg 9 PRG		UG/KG		22	EPA8260
RBB062630	ACETONE	29	1,600,000	EPA Reg 9 PRG		UG/KG	J	31	EPA8260
RBB112024	ACETONE	30	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBB222428	ACETONE	31	1,600,000	EPA Reg 9 PRG		UG/KG		31	EPA8260
RBB032428	ACETONE	32	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBC281620	ACETONE	33	1,600,000	EPA Reg 9 PRG		UG/KG	J	39	EPA8260
RBM162025	ACETONE	33	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBC131620	ACETONE	35	1,600,000	EPA Reg 9 PRG		UG/KG		27	EPA8260
RBM122024	ACETONE	37	1,600,000	EPA Reg 9 PRG		UG/KG		27	EPA8260
RBB152024	ACETONE	38	1,600,000	EPA Reg 9 PRG		UG/KG		26	EPA8260
RBC242428	ACETONE	42	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBB242428	ACETONE	46	1,600,000	EPA Reg 9 PRG		UG/KG		27	EPA8260
RBC141620	ACETONE	46	1,600,000	EPA Reg 9 PRG		UG/KG		27	EPA8260
RBC271620	ACETONE	46	1,600,000	EPA Reg 9 PRG		UG/KG		31	EPA8260
RBB142024	ACETONE	48	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBM062428	ACETONE	48	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBC321620	ACETONE	50	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBB322428	ACETONE	53	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBB352428	ACETONE	53	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBB332428	ACETONE	54	1,600,000	EPA Reg 9 PRG		UG/KG		31	EPA8260
RBB082630	ACETONE	58	1,600,000	EPA Reg 9 PRG		UG/KG		30	EPA8260
RBC311620	ACETONE	60	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBC172428	ACETONE	62	1,600,000	EPA Reg 9 PRG		UG/KG		30	EPA8260
RBB252428	ACETONE	63	1,600,000	EPA Reg 9 PRG		UG/KG		27	EPA8260
RBC181620	ACETONE	65	1,600,000	EPA Reg 9 PRG		UG/KG		26	EPA8260
RBC462530	ACETONE	72	1,600,000	EPA Reg 9 PRG		UG/KG	J	41	EPA8260
RBB232428	ACETONE	75	1,600,000	EPA Reg 9 PRG		UG/KG		33	EPA8260
RBM052428	ACETONE	75	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBB342428	ACETONE	77	1,600,000	EPA Reg 9 PRG		UG/KG		31	EPA8260
RBB442025	ACETONE	79	1,600,000	EPA Reg 9 PRG		UG/KG		24	EPA8260
RBC202024	ACETONE	87	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBB372428	ACETONE	88	1,600,000	EPA Reg 9 PRG		UG/KG		30	EPA8260
RBC041216	ACETONE	96	1,600,000	EPA Reg 9 PRG		UG/KG		27	EPA8260
RBB202428	ACETONE	97	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBB132024	ACETONE	100	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBB442530	ACETONE	100	1,600,000	EPA Reg 9 PRG		UG/KG		33	EPA8260
RBC331620	ACETONE	100	1,600,000	EPA Reg 9 PRG		UG/KG		30	EPA8260
RBB292428	ACETONE	110	1,600,000	EPA Reg 9 PRG		UG/KG		30	EPA8260
RBB312428	ACETONE	110	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBB042630	ACETONE	120	1,600,000	EPA Reg 9 PRG		UG/KG	J	34	EPA8260
RBB362428	ACETONE	120	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBC261620	ACETONE	120	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB272428	ACETONE	130	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBB302428	ACETONE	130	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBC111620	ACETONE	130	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBC161620	ACETONE	130	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBC431216	ACETONE	130	1,600,000	EPA Reg 9 PRG		UG/KG		35	EPA8260
RBC341620	ACETONE	140	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBC171216	ACETONE	150	1,600,000	EPA Reg 9 PRG		UG/KG		130	EPA8260
RBB443539	ACETONE	160	1,600,000	EPA Reg 9 PRG		UG/KG		34	EPA8260
RBC151620	ACETONE	180	1,600,000	EPA Reg 9 PRG		UG/KG		30	EPA8260
RBC252024	ACETONE	200	1,600,000	EPA Reg 9 PRG		UG/KG		25	EPA8260
RBM072428	ACETONE	210	1,600,000	EPA Reg 9 PRG		UG/KG		28	EPA8260
RBB212428	ACETONE	230	1,600,000	EPA Reg 9 PRG		UG/KG		32	EPA8260
RBB122024	ACETONE	690	1,600,000	EPA Reg 9 PRG		UG/KG		31	EPA8260
RBB382024	ACETONE	2900	1,600,000	EPA Reg 9 PRG		UG/KG	J	27	EPA8260
RBB011216	ANTHRACENE	9100	18,400,000	CDLE Tier 1		UG/KG	J	19000	EPA8270
RBD020001	ARSENIC	2	41	COGCC		MG/KG		1.1	EPA6010
RBB162428	ARSENIC	2.7	41	COGCC		MG/KG		1.4	EPA6010
RBC202024	ARSENIC	2.9	41	COGCC		MG/KG		1.4	EPA6010
RBC432024	ARSENIC	3	41	COGCC		MG/KG		1.8	EPA6010
RBC331620	ARSENIC	3.1	41	COGCC		MG/KG		1.5	EPA6010
RBC192024	ARSENIC	3.2	41	COGCC		MG/KG		1.4	EPA6010
RBC091620	ARSENIC	3.3	41	COGCC		MG/KG	J	1.4	EPA6010
RBC212024	ARSENIC	3.3	41	COGCC		MG/KG		1.3	EPA6010
RBB122024	ARSENIC	3.4	41	COGCC		MG/KG		1.5	EPA6010
RBB232428	ARSENIC	3.4	41	COGCC		MG/KG		1.6	EPA6010
RBA131216	ARSENIC	3.5	41	COGCC		MG/KG		1.1	EPA6010
RBC161620	ARSENIC	3.5	41	COGCC		MG/KG		1.4	EPA6010
RBC451216	ARSENIC	3.5	41	COGCC		MG/KG		1.3	EPA6010
RBC351620	ARSENIC	3.6	41	COGCC		MG/KG		1.2	EPA6010
RBC441216	ARSENIC	3.6	41	COGCC		MG/KG		1.4	EPA6010
RBA040812	ARSENIC	3.7	41	COGCC		MG/KG		1.1	EPA6010
RBA170005	ARSENIC	3.7	41	COGCC		MG/KG		1.1	EPA6010
RBA130005	ARSENIC	3.8	41	COGCC		MG/KG		1.1	EPA6010
RBA050005	ARSENIC	3.9	41	COGCC		MG/KG		1	EPA6010
RBA052630	ARSENIC	3.9	41	COGCC		MG/KG		1.2	EPA6010
RBA072630	ARSENIC	3.9	41	COGCC		MG/KG		1.2	EPA6010
RBA100812	ARSENIC	3.9	41	COGCC		MG/KG		1.1	EPA6010
RBA110812	ARSENIC	3.9	41	COGCC		MG/KG	J	1.1	EPA6010
RBA172025	ARSENIC	3.9	41	COGCC		MG/KG		1.1	EPA6010
RBB080812	ARSENIC	3.9	41	COGCC		MG/KG		1.1	EPA6010
RBC011216	ARSENIC	3.9	41	COGCC		MG/KG		1.3	EPA6010
RBC111620	ARSENIC	3.9	41	COGCC		MG/KG	J	1.4	EPA6010
RBC172428	ARSENIC	3.9	41	COGCC		MG/KG		1.5	EPA6010
RBC222024	ARSENIC	3.9	41	COGCC		MG/KG		1.3	EPA6010
RBC261620	ARSENIC	3.9	41	COGCC		MG/KG		1.4	EPA6010
RBC281620	ARSENIC	3.9	41	COGCC		MG/KG		2	EPA6010
RBC460005	ARSENIC	3.9	41	COGCC		MG/KG		1.1	EPA6010
RBA020408	ARSENIC	4	41	COGCC		MG/KG		1.1	EPA6010
RBA120005	ARSENIC	4	41	COGCC		MG/KG	J	1	EPA6010
RBA173035	ARSENIC	4	41	COGCC		MG/KG		1.4	EPA6010
RBB390005	ARSENIC	4	41	COGCC		MG/KG		1.1	EPA6010
RBB401216	ARSENIC	4	41	COGCC		MG/KG		1.2	EPA6010
RBM162025	ARSENIC	4	41	COGCC		MG/KG		1.4	EPA6010
RBA011620	ARSENIC	4.1	41	COGCC		MG/KG		1.1	EPA6010
RBM012630	ARSENIC	4.1	41	COGCC		MG/KG		1.2	EPA6010
RBM152024	ARSENIC	4.1	41	COGCC		MG/KG		1.8	EPA6010
RBA030508	ARSENIC	4.2	41	COGCC		MG/KG		1.1	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBA070005	ARSENIC	4.2	41	COGCC		MG/KG		1.1	EPA6010
RBA081216	ARSENIC	4.2	41	COGCC		MG/KG		1.1	EPA6010
RBA090005	ARSENIC	4.2	41	COGCC		MG/KG		1.1	EPA6010
RBC010005	ARSENIC	4.2	41	COGCC		MG/KG		1.1	EPA6010
RBC060005	ARSENIC	4.2	41	COGCC		MG/KG		1.1	EPA6010
RBA020004	ARSENIC	4.3	41	COGCC		MG/KG		1.1	EPA6010
RBA042630	ARSENIC	4.3	41	COGCC		MG/KG		1.1	EPA6010
RBA080005	ARSENIC	4.3	41	COGCC		MG/KG		1.1	EPA6010
RBA132630	ARSENIC	4.3	41	COGCC		MG/KG		1.2	EPA6010
RBA174549	ARSENIC	4.3	41	COGCC		MG/KG		1.4	EPA6010
RBB431216	ARSENIC	4.3	41	COGCC		MG/KG		1.2	EPA6010
RBA040005	ARSENIC	4.4	41	COGCC		MG/KG		1.1	EPA6010
RBA121620	ARSENIC	4.4	41	COGCC		MG/KG	J	1.1	EPA6010
RBA140005	ARSENIC	4.4	41	COGCC		MG/KG		1.1	EPA6010
RBA160508	ARSENIC	4.4	41	COGCC		MG/KG		1.1	EPA6010
RBB130508	ARSENIC	4.4	41	COGCC		MG/KG		1.2	EPA6010
RBB132024	ARSENIC	4.4	41	COGCC		MG/KG		1.5	EPA6010
RBB342428	ARSENIC	4.4	41	COGCC		MG/KG		1.5	EPA6010
RBB350508	ARSENIC	4.4	41	COGCC		MG/KG		1.2	EPA6010
RBC310005	ARSENIC	4.4	41	COGCC		MG/KG		1.1	EPA6010
RBC350005	ARSENIC	4.4	41	COGCC		MG/KG		1.1	EPA6010
RBM041620	ARSENIC	4.4	41	COGCC		MG/KG		1.2	EPA6010
RBA060005	ARSENIC	4.5	41	COGCC		MG/KG		1.1	EPA6010
RBA102630	ARSENIC	4.5	41	COGCC		MG/KG		1.2	EPA6010
RBB092630	ARSENIC	4.5	41	COGCC		MG/KG		1.4	EPA6010
RBB442025	ARSENIC	4.5	41	COGCC		MG/KG		1.2	EPA6010
RBC250005	ARSENIC	4.5	41	COGCC		MG/KG		1.1	EPA6010
RBC391216	ARSENIC	4.5	41	COGCC		MG/KG		1.4	EPA6010
RBA070812	ARSENIC	4.6	41	COGCC		MG/KG		1.1	EPA6010
RBA100005	ARSENIC	4.6	41	COGCC		MG/KG		1.1	EPA6010
RBA110005	ARSENIC	4.6	41	COGCC		MG/KG	J	1.1	EPA6010
RBB160005	ARSENIC	4.6	41	COGCC		MG/KG		1.1	EPA6010
RBB362428	ARSENIC	4.6	41	COGCC		MG/KG		1.4	EPA6010
RBC051216	ARSENIC	4.6	41	COGCC		MG/KG		1.3	EPA6010
RBC232024	ARSENIC	4.6	41	COGCC		MG/KG		1.3	EPA6010
RBC441620	ARSENIC	4.6	41	COGCC		MG/KG		1.3	EPA6010
RBA061620	ARSENIC	4.7	41	COGCC		MG/KG		1.1	EPA6010
RBA062630	ARSENIC	4.7	41	COGCC		MG/KG		1.1	EPA6010
RBA122630	ARSENIC	4.7	41	COGCC		MG/KG	J	1.2	EPA6010
RBB082630	ARSENIC	4.7	41	COGCC		MG/KG		1.5	EPA6010
RBB171216	ARSENIC	4.7	41	COGCC		MG/KG		1.2	EPA6010
RBC041216	ARSENIC	4.7	41	COGCC		MG/KG		1.4	EPA6010
RBC311620	ARSENIC	4.7	41	COGCC		MG/KG		1.4	EPA6010
RBC420005	ARSENIC	4.7	41	COGCC		MG/KG		1.1	EPA6010
RBD030001	ARSENIC	4.7	41	COGCC		MG/KG		1.1	EPA6010
RBM072428	ARSENIC	4.7	41	COGCC		MG/KG		1.4	EPA6010
RBM122024	ARSENIC	4.7	41	COGCC		MG/KG		1.3	EPA6010
RBM132024	ARSENIC	4.7	41	COGCC		MG/KG		1.3	EPA6010
RBA092630	ARSENIC	4.8	41	COGCC		MG/KG		1.2	EPA6010
RBB112024	ARSENIC	4.8	41	COGCC		MG/KG		1.4	EPA6010
RBB400005	ARSENIC	4.8	41	COGCC		MG/KG		1.1	EPA6010
RBC101620	ARSENIC	4.8	41	COGCC		MG/KG	J	1.3	EPA6010
RBC130005	ARSENIC	4.8	41	COGCC		MG/KG	J	1.1	EPA6010
RBC180005	ARSENIC	4.8	41	COGCC		MG/KG		1.1	EPA6010
RBC320005	ARSENIC	4.8	41	COGCC		MG/KG		1.1	EPA6010
RBC440005	ARSENIC	4.8	41	COGCC		MG/KG		1.1	EPA6010
RBM052428	ARSENIC	4.8	41	COGCC		MG/KG		1.4	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBM171215	ARSENIC	4.8	41	COGCC		MG/KG		1.3	EPA6010
RBA030005	ARSENIC	4.9	41	COGCC		MG/KG		1.1	EPA6010
RBB272428	ARSENIC	4.9	41	COGCC		MG/KG		1.5	EPA6010
RBC100005	ARSENIC	4.9	41	COGCC		MG/KG	J	1.1	EPA6010
RBC120005	ARSENIC	4.9	41	COGCC		MG/KG	J	1.1	EPA6010
RBC140005	ARSENIC	4.9	41	COGCC		MG/KG		1.1	EPA6010
RBC160005	ARSENIC	4.9	41	COGCC		MG/KG		1.1	EPA6010
RBC252024	ARSENIC	4.9	41	COGCC		MG/KG		1.2	EPA6010
RBC390005	ARSENIC	4.9	41	COGCC		MG/KG		1.1	EPA6010
RBC400005	ARSENIC	4.9	41	COGCC		MG/KG		1.1	EPA6010
RBC450005	ARSENIC	4.9	41	COGCC		MG/KG		1.1	EPA6010
RBB070508	ARSENIC	5	41	COGCC		MG/KG		1.2	EPA6010
RBB312428	ARSENIC	5	41	COGCC		MG/KG		1.5	EPA6010
RBB430005	ARSENIC	5	41	COGCC		MG/KG		1.1	EPA6010
RBC020005	ARSENIC	5	41	COGCC		MG/KG		1.1	EPA6010
RBC081216	ARSENIC	5	41	COGCC		MG/KG		1.4	EPA6010
RBC151620	ARSENIC	5	41	COGCC		MG/KG		1.5	EPA6010
RBC360005	ARSENIC	5	41	COGCC		MG/KG		1.1	EPA6010
RBC400812	ARSENIC	5	41	COGCC		MG/KG		1.2	EPA6010
RBD040001	ARSENIC	5	41	COGCC		MG/KG		1.1	EPA6010
RBD060001	ARSENIC	5	41	COGCC		MG/KG		1.1	EPA6010
RBM101216	ARSENIC	5	41	COGCC		MG/KG		1.4	EPA6010
RBA010005	ARSENIC	5.1	41	COGCC		MG/KG		1.1	EPA6010
RBA051620	ARSENIC	5.1	41	COGCC		MG/KG		1.1	EPA6010
RBB030508	ARSENIC	5.1	41	COGCC		MG/KG		1.2	EPA6010
RBB110508	ARSENIC	5.1	41	COGCC		MG/KG		1.2	EPA6010
RBB142024	ARSENIC	5.1	41	COGCC		MG/KG		1.5	EPA6010
RBB170005	ARSENIC	5.1	41	COGCC		MG/KG		1.1	EPA6010
RBB281216	ARSENIC	5.1	41	COGCC		MG/KG		1.2	EPA6010
RBC080005	ARSENIC	5.1	41	COGCC		MG/KG		1.2	EPA6010
RBC270005	ARSENIC	5.1	41	COGCC		MG/KG		1.1	EPA6010
RBC370005	ARSENIC	5.1	41	COGCC		MG/KG		1.1	EPA6010
RBC410005	ARSENIC	5.1	41	COGCC		MG/KG		1.1	EPA6010
RBD010001	ARSENIC	5.1	41	COGCC		MG/KG		1.1	EPA6010
RBA141216	ARSENIC	5.2	41	COGCC		MG/KG		1.2	EPA6010
RBB050508	ARSENIC	5.2	41	COGCC		MG/KG		1.1	EPA6010
RBB250508	ARSENIC	5.2	41	COGCC		MG/KG		1.1	EPA6010
RBB252428	ARSENIC	5.2	41	COGCC		MG/KG		1.3	EPA6010
RBC021620	ARSENIC	5.2	41	COGCC		MG/KG		1.5	EPA6010
RBC050005	ARSENIC	5.2	41	COGCC		MG/KG		1.1	EPA6010
RBC121620	ARSENIC	5.2	41	COGCC		MG/KG	J	1.3	EPA6010
RBC170005	ARSENIC	5.2	41	COGCC		MG/KG		1.1	EPA6010
RBC421216	ARSENIC	5.2	41	COGCC		MG/KG		1.3	EPA6010
RBC462530	ARSENIC	5.2	41	COGCC		MG/KG		2	EPA6010
RBD070001	ARSENIC	5.2	41	COGCC		MG/KG		1.1	EPA6010
RBM090001	ARSENIC	5.2	41	COGCC		MG/KG		1.1	EPA6010
RBA082630	ARSENIC	5.3	41	COGCC		MG/KG		1.2	EPA6010
RBB100812	ARSENIC	5.3	41	COGCC		MG/KG		1.1	EPA6010
RBB242428	ARSENIC	5.3	41	COGCC		MG/KG		1.4	EPA6010
RBB280005	ARSENIC	5.3	41	COGCC		MG/KG		1.2	EPA6010
RBB372428	ARSENIC	5.3	41	COGCC		MG/KG		1.5	EPA6010
RBB390508	ARSENIC	5.3	41	COGCC		MG/KG		1.2	EPA6010
RBB410005	ARSENIC	5.3	41	COGCC		MG/KG		1.1	EPA6010
RBC200005	ARSENIC	5.3	41	COGCC		MG/KG		1.1	EPA6010
RBC210005	ARSENIC	5.3	41	COGCC		MG/KG		1.1	EPA6010
RBC260005	ARSENIC	5.3	41	COGCC		MG/KG		1.1	EPA6010
RBC321620	ARSENIC	5.3	41	COGCC		MG/KG		1.4	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC340005	ARSENIC	5.3	41	COGCC		MG/KG		1.1	EPA6010
RBC430005	ARSENIC	5.3	41	COGCC		MG/KG		1.1	EPA6010
RBM110005	ARSENIC	5.3	41	COGCC		MG/KG	J	1.1	EPA6010
RBM141620	ARSENIC	5.3	41	COGCC		MG/KG		1.2	EPA6010
RBA142630	ARSENIC	5.4	41	COGCC		MG/KG		1.2	EPA6010
RBB020005	ARSENIC	5.4	41	COGCC		MG/KG		1.1	EPA6010
RBB161620	ARSENIC	5.4	41	COGCC		MG/KG		1.2	EPA6010
RBB200005	ARSENIC	5.4	41	COGCC		MG/KG		1.1	EPA6010
RBB322428	ARSENIC	5.4	41	COGCC		MG/KG		1.4	EPA6010
RBC110005	ARSENIC	5.4	41	COGCC		MG/KG	J	1.1	EPA6010
RBC190005	ARSENIC	5.4	41	COGCC		MG/KG		1.1	EPA6010
RBD080001	ARSENIC	5.4	41	COGCC		MG/KG		1.1	EPA6010
RBD100001	ARSENIC	5.4	41	COGCC		MG/KG		1.1	EPA6010
RBM060005	ARSENIC	5.4	41	COGCC		MG/KG		1.2	EPA6010
RBB012830	ARSENIC	5.5	41	COGCC		MG/KG		1.6	EPA6010
RBB050005	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBC090005	ARSENIC	5.5	41	COGCC		MG/KG	J	1.1	EPA6010
RBC230005	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBC240005	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBC280005	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBC330005	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBC461215	ARSENIC	5.5	41	COGCC		MG/KG		1.3	EPA6010
RBD090001	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBM020005	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBA091216	ARSENIC	5.6	41	COGCC		MG/KG		1.2	EPA6010
RBA112630	ARSENIC	5.6	41	COGCC		MG/KG	J	1.1	EPA6010
RBB030005	ARSENIC	5.6	41	COGCC		MG/KG		1.1	EPA6010
RBB032428	ARSENIC	5.6	41	COGCC		MG/KG		1.4	EPA6010
RBB110005	ARSENIC	5.6	41	COGCC		MG/KG		1.1	EPA6010
RBB152024	ARSENIC	5.6	41	COGCC		MG/KG		1.3	EPA6010
RBB170508	ARSENIC	5.6	41	COGCC		MG/KG		1.1	EPA6010
RBC070005	ARSENIC	5.6	41	COGCC		MG/KG		1.2	EPA6010
RBB011216	ARSENIC	5.7	41	COGCC		MG/KG		1.9	EPA6010
RBB042630	ARSENIC	5.7	41	COGCC		MG/KG		1.7	EPA6010
RBB072630	ARSENIC	5.7	41	COGCC		MG/KG		1.3	EPA6010
RBB150005	ARSENIC	5.7	41	COGCC		MG/KG		1.1	EPA6010
RBB220005	ARSENIC	5.7	41	COGCC		MG/KG		1.1	EPA6010
RBB220508	ARSENIC	5.7	41	COGCC		MG/KG		1.2	EPA6010
RBB260005	ARSENIC	5.7	41	COGCC		MG/KG		1.1	EPA6010
RBB280508	ARSENIC	5.7	41	COGCC		MG/KG		1.2	EPA6010
RBB360005	ARSENIC	5.7	41	COGCC		MG/KG		1.1	EPA6010
RBB382428	ARSENIC	5.7	41	COGCC		MG/KG		1.6	EPA6010
RBD050001	ARSENIC	5.7	41	COGCC		MG/KG		1.1	EPA6010
RBA160005	ARSENIC	5.8	41	COGCC		MG/KG		1.1	EPA6010
RBB040508	ARSENIC	5.8	41	COGCC		MG/KG		1.1	EPA6010
RBB370005	ARSENIC	5.8	41	COGCC		MG/KG		1.2	EPA6010
RBB380005	ARSENIC	5.8	41	COGCC		MG/KG		1.1	EPA6010
RBC150005	ARSENIC	5.8	41	COGCC		MG/KG		1.1	EPA6010
RBC190913	ARSENIC	5.8	41	COGCC		MG/KG		1.3	EPA6010
RBC220005	ARSENIC	5.8	41	COGCC		MG/KG		1.1	EPA6010
RBC242428	ARSENIC	5.8	41	COGCC		MG/KG		1.4	EPA6010
RBC341620	ARSENIC	5.8	41	COGCC		MG/KG		1.4	EPA6010
RBB012428	ARSENIC	5.9	41	COGCC		MG/KG		1.5	EPA6010
RBB060005	ARSENIC	5.9	41	COGCC		MG/KG		1.1	EPA6010
RBB070005	ARSENIC	5.9	41	COGCC		MG/KG		1.1	EPA6010
RBB120005	ARSENIC	5.9	41	COGCC		MG/KG		1.2	EPA6010
RBB210005	ARSENIC	5.9	41	COGCC		MG/KG		1.1	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC181620	ARSENIC	5.9	41	COGCC		MG/KG		1.3	EPA6010
RBB210508	ARSENIC	6	41	COGCC		MG/KG		1.2	EPA6010
RBB370508	ARSENIC	6	41	COGCC		MG/KG		1.2	EPA6010
RBB420005	ARSENIC	6	41	COGCC		MG/KG		1.1	EPA6010
RBC371620	ARSENIC	6	41	COGCC		MG/KG		1.3	EPA6010
RBC380005	ARSENIC	6	41	COGCC		MG/KG		1.1	EPA6010
RBB352428	ARSENIC	6.1	41	COGCC		MG/KG		1.4	EPA6010
RBB443539	ARSENIC	6.1	41	COGCC		MG/KG		1.7	EPA6010
RBC141620	ARSENIC	6.1	41	COGCC		MG/KG		1.4	EPA6010
RBC271620	ARSENIC	6.1	41	COGCC		MG/KG		1.6	EPA6010
RBC431216	ARSENIC	6.1	41	COGCC		MG/KG		1.8	EPA6010
RBA150005	ARSENIC	6.2	41	COGCC		MG/KG		1.1	EPA6010
RBB090508	ARSENIC	6.2	41	COGCC		MG/KG		1.2	EPA6010
RBB212428	ARSENIC	6.2	41	COGCC		MG/KG		1.6	EPA6010
RBB222428	ARSENIC	6.2	41	COGCC		MG/KG		1.6	EPA6010
RBB350005	ARSENIC	6.2	41	COGCC		MG/KG		1.2	EPA6010
RBB440005	ARSENIC	6.2	41	COGCC		MG/KG		1.1	EPA6010
RBC071216	ARSENIC	6.2	41	COGCC		MG/KG		1.4	EPA6010
RBA151216	ARSENIC	6.3	41	COGCC		MG/KG		1.1	EPA6010
RBB040005	ARSENIC	6.3	41	COGCC		MG/KG		1.1	EPA6010
RBC171216	ARSENIC	6.3	41	COGCC		MG/KG		1.3	EPA6010
RBC361620	ARSENIC	6.3	41	COGCC		MG/KG		1.2	EPA6010
RBB080005	ARSENIC	6.4	41	COGCC		MG/KG		1.1	EPA6010
RBB382024	ARSENIC	6.4	41	COGCC		MG/KG		1.4	EPA6010
RBC031216	ARSENIC	6.4	41	COGCC		MG/KG		1.3	EPA6010
RBB010005	ARSENIC	6.5	41	COGCC		MG/KG		1.1	EPA6010
RBB052630	ARSENIC	6.5	41	COGCC		MG/KG		1.4	EPA6010
RBB130005	ARSENIC	6.5	41	COGCC		MG/KG		1.1	EPA6010
RBB292428	ARSENIC	6.5	41	COGCC		MG/KG		1.5	EPA6010
RBC040005	ARSENIC	6.5	41	COGCC		MG/KG		1.2	EPA6010
RBB290005	ARSENIC	6.6	41	COGCC		MG/KG		1.1	EPA6010
RBM030508	ARSENIC	6.6	41	COGCC		MG/KG		1.2	EPA6010
RBB090005	ARSENIC	6.7	41	COGCC		MG/KG		1.2	EPA6010
RBB260812	ARSENIC	6.7	41	COGCC		MG/KG		1.1	EPA6010
RBB360812	ARSENIC	6.7	41	COGCC		MG/KG		1.2	EPA6010
RBC021314	ARSENIC	6.7	41	COGCC		MG/KG		1.4	EPA6010
RBC290005	ARSENIC	6.7	41	COGCC		MG/KG		1.1	EPA6010
RBB100005	ARSENIC	6.8	41	COGCC		MG/KG		1.1	EPA6010
RBB320005	ARSENIC	6.8	41	COGCC		MG/KG		1.2	EPA6010
RBB421620	ARSENIC	6.8	41	COGCC		MG/KG		1.3	EPA6010
RBC411216	ARSENIC	6.8	41	COGCC		MG/KG		1.3	EPA6010
RBB022428	ARSENIC	6.9	41	COGCC		MG/KG		1.4	EPA6010
RBB332428	ARSENIC	6.9	41	COGCC		MG/KG		1.5	EPA6010
RBC131620	ARSENIC	6.9	41	COGCC		MG/KG	J	1.4	EPA6010
RBC291620	ARSENIC	6.9	41	COGCC		MG/KG		1.6	EPA6010
RBB320508	ARSENIC	7.0	41	COGCC		MG/KG		1.2	EPA6010
RBB061620	ARSENIC	7.2	41	COGCC		MG/KG		1.4	EPA6010
RBB240005	ARSENIC	7.2	41	COGCC		MG/KG		1.2	EPA6010
RBB240508	ARSENIC	7.2	41	COGCC		MG/KG		1.2	EPA6010
RBB330005	ARSENIC	7.2	41	COGCC		MG/KG		1.2	EPA6010
RBC241620	ARSENIC	7.2	41	COGCC		MG/KG		1.4	EPA6010
RBC462025	ARSENIC	7.2	41	COGCC		MG/KG		1.6	EPA6010
RBB062630	ARSENIC	7.3	41	COGCC		MG/KG		1.5	EPA6010
RBC100509	ARSENIC	7.3	41	COGCC		MG/KG	J	1.1	EPA6010
RBB390812	ARSENIC	7.4	41	COGCC		MG/KG		1.2	EPA6010
RBM062428	ARSENIC	7.4	41	COGCC		MG/KG		1.4	EPA6010
RBB202428	ARSENIC	7.5	41	COGCC		MG/KG		1.4	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB230508	ARSENIC	7.5	41	COGCC		MG/KG		1.2	EPA6010
RBB270005	ARSENIC	7.5	41	COGCC		MG/KG		1.1	EPA6010
RBB290812	ARSENIC	7.6	41	COGCC		MG/KG		1.1	EPA6010
RBB102024	ARSENIC	7.7	41	COGCC		MG/KG		1.2	EPA6010
RBB411216	ARSENIC	7.7	41	COGCC		MG/KG		1.2	EPA6010
RBC020509	ARSENIC	7.7	41	COGCC		MG/KG		1.3	EPA6010
RBC061216	ARSENIC	7.7	41	COGCC		MG/KG		1.3	EPA6010
RBB302428	ARSENIC	8.0	41	COGCC		MG/KG		1.4	EPA6010
RBB250005	ARSENIC	8.2	41	COGCC		MG/KG		1.1	EPA6010
RBB310005	ARSENIC	8.3	41	COGCC		MG/KG		1.2	EPA6010
RBB210812	ARSENIC	8.7	41	COGCC		MG/KG		1.3	EPA6010
RBB300005	ARSENIC	8.8	41	COGCC		MG/KG		1.2	EPA6010
RBB330508	ARSENIC	9.0	41	COGCC		MG/KG		1.2	EPA6010
RBB140508	ARSENIC	9.1	41	COGCC		MG/KG		1.2	EPA6010
RBB310812	ARSENIC	9.1	41	COGCC		MG/KG		1.2	EPA6010
RBB140005	ARSENIC	9.2	41	COGCC		MG/KG		1.1	EPA6010
RBB150508	ARSENIC	9.4	41	COGCC		MG/KG		1.2	EPA6010
RBC340509	ARSENIC	9.6	41	COGCC		MG/KG		1.2	EPA6010
RBB300508	ARSENIC	9.7	41	COGCC		MG/KG		1.2	EPA6010
RBB442530	ARSENIC	9.7	41	COGCC		MG/KG		1.7	EPA6010
RBB200812	ARSENIC	10	41	COGCC		MG/KG		1.4	EPA6010
RBB340005	ARSENIC	10	41	COGCC		MG/KG		1.2	EPA6010
RBB120812	ARSENIC	11	41	COGCC		MG/KG		1.2	EPA6010
RBB270508	ARSENIC	11	41	COGCC		MG/KG		1.1	EPA6010
RBC030005	ARSENIC	11	41	COGCC		MG/KG		1.2	EPA6010
RBC381216	ARSENIC	11	41	COGCC		MG/KG		1.2	EPA6010
RBA151620	ARSENIC	12	41	COGCC		MG/KG		1.1	EPA6010
RBB020508	ARSENIC	12	41	COGCC		MG/KG		1.3	EPA6010
RBB260508	ARSENIC	12	41	COGCC		MG/KG		1.2	EPA6010
RBC370812	ARSENIC	13	41	COGCC		MG/KG		1.2	EPA6010
RBB230005	ARSENIC	14	41	COGCC		MG/KG		1.2	EPA6010
RBC380509	ARSENIC	18	41	COGCC		MG/KG		1.1	EPA6010
RBB340508	ARSENIC	19	41	COGCC		MG/KG		1.2	EPA6010
RBD020001	BARIUM	100	180,000	COGCC		MG/KG		11	EPA6010
RBC281620	BARIUM	120	180,000	COGCC		MG/KG		20	EPA6010
RBC331620	BARIUM	160	180,000	COGCC		MG/KG		15	EPA6010
RBM152024	BARIUM	160	180,000	COGCC		MG/KG		18	EPA6010
RBC291620	BARIUM	180	180,000	COGCC		MG/KG		16	EPA6010
RBC432024	BARIUM	180	180,000	COGCC		MG/KG		18	EPA6010
RBC462530	BARIUM	180	180,000	COGCC		MG/KG	J	20	EPA6010
RBC271620	BARIUM	200	180,000	COGCC		MG/KG		16	EPA6010
RBC172428	BARIUM	210	180,000	COGCC		MG/KG		15	EPA6010
RBC242428	BARIUM	210	180,000	COGCC		MG/KG		14	EPA6010
RBC451216	BARIUM	220	180,000	COGCC		MG/KG		13	EPA6010
RBA131216	BARIUM	230	180,000	COGCC		MG/KG		11	EPA6010
RBC311620	BARIUM	230	180,000	COGCC		MG/KG		14	EPA6010
RBC020005	BARIUM	260	180,000	COGCC		MG/KG		11	EPA6010
RBC081216	BARIUM	260	180,000	COGCC		MG/KG		14	EPA6010
RBC351620	BARIUM	260	180,000	COGCC		MG/KG		12	EPA6010
RBD050001	BARIUM	260	180,000	COGCC		MG/KG		11	EPA6010
RBC010005	BARIUM	270	180,000	COGCC		MG/KG		11	EPA6010
RBC232024	BARIUM	270	180,000	COGCC		MG/KG		13	EPA6010
RBB302428	BARIUM	280	180,000	COGCC		MG/KG		14	EPA6010
RBB342428	BARIUM	280	180,000	COGCC		MG/KG		15	EPA6010
RBB372428	BARIUM	280	180,000	COGCC		MG/KG		15	EPA6010
RBC130005	BARIUM	280	180,000	COGCC		MG/KG		11	EPA6010
RBC252024	BARIUM	280	180,000	COGCC		MG/KG		12	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC341620	BARIUM	280	180,000	COGCC		MG/KG		14	EPA6010
RBB142024	BARIUM	290	180,000	COGCC		MG/KG	J	15	EPA6010
RBB171216	BARIUM	290	180,000	COGCC		MG/KG		12	EPA6010
RBB312428	BARIUM	290	180,000	COGCC		MG/KG		15	EPA6010
RBB322428	BARIUM	290	180,000	COGCC		MG/KG		14	EPA6010
RBB350508	BARIUM	290	180,000	COGCC		MG/KG		12	EPA6010
RBC080005	BARIUM	290	180,000	COGCC		MG/KG		12	EPA6010
RBC160005	BARIUM	290	180,000	COGCC		MG/KG		11	EPA6010
RBC222024	BARIUM	290	180,000	COGCC		MG/KG		13	EPA6010
RBC240005	BARIUM	290	180,000	COGCC		MG/KG		11	EPA6010
RBC260005	BARIUM	290	180,000	COGCC		MG/KG		11	EPA6010
RBC270005	BARIUM	290	180,000	COGCC		MG/KG		11	EPA6010
RBC340005	BARIUM	290	180,000	COGCC		MG/KG		11	EPA6010
RBA120005	BARIUM	300	180,000	COGCC		MG/KG	J	10	EPA6010
RBA160508	BARIUM	300	180,000	COGCC		MG/KG		11	EPA6010
RBB102024	BARIUM	300	180,000	COGCC		MG/KG		12	EPA6010
RBB170508	BARIUM	300	180,000	COGCC		MG/KG		11	EPA6010
RBB232428	BARIUM	300	180,000	COGCC		MG/KG		16	EPA6010
RBB332428	BARIUM	300	180,000	COGCC		MG/KG		15	EPA6010
RBB411216	BARIUM	300	180,000	COGCC		MG/KG		12	EPA6010
RBC170005	BARIUM	300	180,000	COGCC		MG/KG		11	EPA6010
RBC250005	BARIUM	300	180,000	COGCC		MG/KG		11	EPA6010
RBC321620	BARIUM	300	180,000	COGCC		MG/KG		14	EPA6010
RBC370812	BARIUM	300	180,000	COGCC		MG/KG		12	EPA6010
RBC380005	BARIUM	300	180,000	COGCC		MG/KG		11	EPA6010
RBC380509	BARIUM	300	180,000	COGCC		MG/KG		11	EPA6010
RBC461215	BARIUM	300	180,000	COGCC		MG/KG	J	13	EPA6010
RBM072428	BARIUM	300	180,000	COGCC		MG/KG		14	EPA6010
RBA070005	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBA082630	BARIUM	310	180,000	COGCC		MG/KG		12	EPA6010
RBB122024	BARIUM	310	180,000	COGCC		MG/KG		15	EPA6010
RBB132024	BARIUM	310	180,000	COGCC		MG/KG		15	EPA6010
RBB290812	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBC111620	BARIUM	310	180,000	COGCC		MG/KG		14	EPA6010
RBC150005	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBC220005	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBC290005	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBC320005	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBC410005	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBC450005	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBD030001	BARIUM	310	180,000	COGCC		MG/KG		11	EPA6010
RBM132024	BARIUM	310	180,000	COGCC		MG/KG		13	EPA6010
RBA142630	BARIUM	320	180,000	COGCC		MG/KG		12	EPA6010
RBB012830	BARIUM	320	180,000	COGCC		MG/KG		16	EPA6010
RBB052630	BARIUM	320	180,000	COGCC		MG/KG		14	EPA6010
RBB140508	BARIUM	320	180,000	COGCC		MG/KG	J	12	EPA6010
RBB160005	BARIUM	320	180,000	COGCC		MG/KG	J	11	EPA6010
RBB170005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBB200812	BARIUM	320	180,000	COGCC		MG/KG		14	EPA6010
RBB310812	BARIUM	320	180,000	COGCC		MG/KG		12	EPA6010
RBB330508	BARIUM	320	180,000	COGCC		MG/KG		12	EPA6010
RBB442530	BARIUM	320	180,000	COGCC		MG/KG		17	EPA6010
RBC021314	BARIUM	320	180,000	COGCC		MG/KG		14	EPA6010
RBC040005	BARIUM	320	180,000	COGCC		MG/KG		12	EPA6010
RBC071216	BARIUM	320	180,000	COGCC		MG/KG		14	EPA6010
RBC090005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBC100005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC100509	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBC140005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBC180005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBC190005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBC202024	BARIUM	320	180,000	COGCC		MG/KG		14	EPA6010
RBC212024	BARIUM	320	180,000	COGCC		MG/KG		13	EPA6010
RBC280005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBC350005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBC440005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBD100001	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBM012630	BARIUM	320	180,000	COGCC		MG/KG		12	EPA6010
RBM090001	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBA040812	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBA130005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBB042630	BARIUM	330	180,000	COGCC		MG/KG		17	EPA6010
RBB100812	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBB150005	BARIUM	330	180,000	COGCC		MG/KG	J	11	EPA6010
RBB162428	BARIUM	330	180,000	COGCC		MG/KG	J	14	EPA6010
RBB240508	BARIUM	330	180,000	COGCC		MG/KG		12	EPA6010
RBB260812	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBB281216	BARIUM	330	180,000	COGCC		MG/KG		12	EPA6010
RBB300508	BARIUM	330	180,000	COGCC		MG/KG		12	EPA6010
RBB382428	BARIUM	330	180,000	COGCC		MG/KG		16	EPA6010
RBC060005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC110005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC120005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC161620	BARIUM	330	180,000	COGCC		MG/KG		14	EPA6010
RBC192024	BARIUM	330	180,000	COGCC		MG/KG		14	EPA6010
RBC210005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC230005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC261620	BARIUM	330	180,000	COGCC		MG/KG		14	EPA6010
RBC310005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC360005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC370005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC390005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBC400005	BARIUM	330	180,000	COGCC		MG/KG		11	EPA6010
RBM101216	BARIUM	330	180,000	COGCC		MG/KG		14	EPA6010
RBM122024	BARIUM	330	180,000	COGCC		MG/KG		13	EPA6010
RBA020408	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBA030005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBA070812	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBA080005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBA150005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBB032428	BARIUM	340	180,000	COGCC		MG/KG		14	EPA6010
RBB100005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBB120812	BARIUM	340	180,000	COGCC		MG/KG		12	EPA6010
RBB161620	BARIUM	340	180,000	COGCC		MG/KG	J	12	EPA6010
RBB320508	BARIUM	340	180,000	COGCC		MG/KG		12	EPA6010
RBB382024	BARIUM	340	180,000	COGCC		MG/KG		14	EPA6010
RBB390005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBB440005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBC011216	BARIUM	340	180,000	COGCC		MG/KG		13	EPA6010
RBC030005	BARIUM	340	180,000	COGCC		MG/KG		12	EPA6010
RBC041216	BARIUM	340	180,000	COGCC		MG/KG		14	EPA6010
RBC091620	BARIUM	340	180,000	COGCC		MG/KG		14	EPA6010
RBC200005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBC361620	BARIUM	340	180,000	COGCC		MG/KG		12	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC420005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBD090001	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBM020005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBM141620	BARIUM	340	180,000	COGCC		MG/KG		12	EPA6010
RBM171215	BARIUM	340	180,000	COGCC		MG/KG	J	13	EPA6010
RBA010005	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBA020004	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBA072630	BARIUM	350	180,000	COGCC		MG/KG		12	EPA6010
RBA110812	BARIUM	350	180,000	COGCC		MG/KG	J	11	EPA6010
RBA112630	BARIUM	350	180,000	COGCC		MG/KG	J	11	EPA6010
RBA121620	BARIUM	350	180,000	COGCC		MG/KG	J	11	EPA6010
RBA172025	BARIUM	350	180,000	COGCC		MG/KG	J	11	EPA6010
RBA173035	BARIUM	350	180,000	COGCC		MG/KG	J	14	EPA6010
RBB080812	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBB092630	BARIUM	350	180,000	COGCC		MG/KG		14	EPA6010
RBB140005	BARIUM	350	180,000	COGCC		MG/KG	J	11	EPA6010
RBB210005	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBB220005	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBB272428	BARIUM	350	180,000	COGCC		MG/KG		15	EPA6010
RBB362428	BARIUM	350	180,000	COGCC		MG/KG		14	EPA6010
RBB380005	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBC031216	BARIUM	350	180,000	COGCC		MG/KG		13	EPA6010
RBC050005	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBC101620	BARIUM	350	180,000	COGCC		MG/KG		13	EPA6010
RBC121620	BARIUM	350	180,000	COGCC		MG/KG		13	EPA6010
RBC190913	BARIUM	350	180,000	COGCC		MG/KG		13	EPA6010
RBC340509	BARIUM	350	180,000	COGCC		MG/KG		12	EPA6010
RBC371620	BARIUM	350	180,000	COGCC		MG/KG		13	EPA6010
RBC400812	BARIUM	350	180,000	COGCC		MG/KG		12	EPA6010
RBC430005	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBD010001	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBM062428	BARIUM	350	180,000	COGCC		MG/KG		14	EPA6010
RBM110005	BARIUM	350	180,000	COGCC		MG/KG		11	EPA6010
RBA040005	BARIUM	360	180,000	COGCC		MG/KG		11	EPA6010
RBA052630	BARIUM	360	180,000	COGCC		MG/KG		12	EPA6010
RBA110005	BARIUM	360	180,000	COGCC		MG/KG	J	11	EPA6010
RBA122630	BARIUM	360	180,000	COGCC		MG/KG	J	12	EPA6010
RBA160005	BARIUM	360	180,000	COGCC		MG/KG		11	EPA6010
RBB072630	BARIUM	360	180,000	COGCC		MG/KG		13	EPA6010
RBB202428	BARIUM	360	180,000	COGCC		MG/KG		14	EPA6010
RBB212428	BARIUM	360	180,000	COGCC		MG/KG		16	EPA6010
RBB230508	BARIUM	360	180,000	COGCC		MG/KG		12	EPA6010
RBB390508	BARIUM	360	180,000	COGCC		MG/KG		12	EPA6010
RBB401216	BARIUM	360	180,000	COGCC		MG/KG		12	EPA6010
RBB421620	BARIUM	360	180,000	COGCC		MG/KG		13	EPA6010
RBB430005	BARIUM	360	180,000	COGCC		MG/KG		11	EPA6010
RBC051216	BARIUM	360	180,000	COGCC		MG/KG		13	EPA6010
RBC171216	BARIUM	360	180,000	COGCC		MG/KG		13	EPA6010
RBC241620	BARIUM	360	180,000	COGCC		MG/KG		14	EPA6010
RBC330005	BARIUM	360	180,000	COGCC		MG/KG		11	EPA6010
RBC460005	BARIUM	360	180,000	COGCC		MG/KG	J	11	EPA6010
RBA011620	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBA030508	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBA060005	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBA151216	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBA174549	BARIUM	370	180,000	COGCC		MG/KG	J	14	EPA6010
RBB030005	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB130508	BARIUM	370	180,000	COGCC		MG/KG		12	EPA6010
RBB220508	BARIUM	370	180,000	COGCC		MG/KG		12	EPA6010
RBB250508	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBB260005	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBB260508	BARIUM	370	180,000	COGCC		MG/KG		12	EPA6010
RBB290005	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBB292428	BARIUM	370	180,000	COGCC		MG/KG		15	EPA6010
RBB352428	BARIUM	370	180,000	COGCC		MG/KG		14	EPA6010
RBB370508	BARIUM	370	180,000	COGCC		MG/KG		12	EPA6010
RBB400005	BARIUM	370	180,000	COGCC		MG/KG		11	EPA6010
RBB431216	BARIUM	370	180,000	COGCC		MG/KG		12	EPA6010
RBB443539	BARIUM	370	180,000	COGCC		MG/KG		17	EPA6010
RBC020509	BARIUM	370	180,000	COGCC		MG/KG		13	EPA6010
RBC181620	BARIUM	370	180,000	COGCC		MG/KG		13	EPA6010
RBM162025	BARIUM	370	180,000	COGCC		MG/KG		14	EPA6010
RBA050005	BARIUM	380	180,000	COGCC		MG/KG		10	EPA6010
RBA062630	BARIUM	380	180,000	COGCC		MG/KG		11	EPA6010
RBA092630	BARIUM	380	180,000	COGCC		MG/KG		12	EPA6010
RBA100812	BARIUM	380	180,000	COGCC		MG/KG		11	EPA6010
RBA141216	BARIUM	380	180,000	COGCC		MG/KG		12	EPA6010
RBB012428	BARIUM	380	180,000	COGCC		MG/KG		15	EPA6010
RBB210508	BARIUM	380	180,000	COGCC		MG/KG		12	EPA6010
RBB210812	BARIUM	380	180,000	COGCC		MG/KG		13	EPA6010
RBB250005	BARIUM	380	180,000	COGCC		MG/KG		11	EPA6010
RBB280508	BARIUM	380	180,000	COGCC		MG/KG		12	EPA6010
RBB310005	BARIUM	380	180,000	COGCC		MG/KG		12	EPA6010
RBB442025	BARIUM	380	180,000	COGCC		MG/KG		12	EPA6010
RBC061216	BARIUM	380	180,000	COGCC		MG/KG		13	EPA6010
RBC141620	BARIUM	380	180,000	COGCC		MG/KG		14	EPA6010
RBM052428	BARIUM	380	180,000	COGCC		MG/KG		14	EPA6010
RBA061620	BARIUM	390	180,000	COGCC		MG/KG		11	EPA6010
RBB040005	BARIUM	390	180,000	COGCC		MG/KG		11	EPA6010
RBB110005	BARIUM	390	180,000	COGCC		MG/KG		11	EPA6010
RBB242428	BARIUM	390	180,000	COGCC		MG/KG		14	EPA6010
RBB270508	BARIUM	390	180,000	COGCC		MG/KG		11	EPA6010
RBB330005	BARIUM	390	180,000	COGCC		MG/KG		12	EPA6010
RBB370005	BARIUM	390	180,000	COGCC		MG/KG		12	EPA6010
RBC381216	BARIUM	390	180,000	COGCC		MG/KG		12	EPA6010
RBA132630	BARIUM	400	180,000	COGCC		MG/KG		12	EPA6010
RBB030508	BARIUM	400	180,000	COGCC		MG/KG		12	EPA6010
RBB070005	BARIUM	400	180,000	COGCC		MG/KG		11	EPA6010
RBB080005	BARIUM	400	180,000	COGCC		MG/KG		11	EPA6010
RBB270005	BARIUM	400	180,000	COGCC		MG/KG		11	EPA6010
RBC131620	BARIUM	400	180,000	COGCC		MG/KG		14	EPA6010
RBC391216	BARIUM	400	180,000	COGCC		MG/KG		14	EPA6010
RBC441620	BARIUM	400	180,000	COGCC		MG/KG		13	EPA6010
RBM041620	BARIUM	400	180,000	COGCC		MG/KG	J	12	EPA6010
RBA042630	BARIUM	410	180,000	COGCC		MG/KG		11	EPA6010
RBB010005	BARIUM	410	180,000	COGCC		MG/KG		11	EPA6010
RBB020005	BARIUM	410	180,000	COGCC		MG/KG		11	EPA6010
RBB040508	BARIUM	410	180,000	COGCC		MG/KG		11	EPA6010
RBB082630	BARIUM	410	180,000	COGCC		MG/KG		15	EPA6010
RBB120005	BARIUM	410	180,000	COGCC		MG/KG		12	EPA6010
RBB150508	BARIUM	410	180,000	COGCC		MG/KG	J	12	EPA6010
RBB300005	BARIUM	410	180,000	COGCC		MG/KG		12	EPA6010
RBB320005	BARIUM	410	180,000	COGCC		MG/KG		12	EPA6010
RBB350005	BARIUM	410	180,000	COGCC		MG/KG		12	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB360005	BARIUM	410	180,000	COGCC		MG/KG		11	EPA6010
RBB360812	BARIUM	410	180,000	COGCC		MG/KG		12	EPA6010
RBB390812	BARIUM	410	180,000	COGCC		MG/KG		12	EPA6010
RBB410005	BARIUM	410	180,000	COGCC		MG/KG		11	EPA6010
RBC421216	BARIUM	410	180,000	COGCC		MG/KG		13	EPA6010
RBA081216	BARIUM	420	180,000	COGCC		MG/KG		11	EPA6010
RBA100005	BARIUM	420	180,000	COGCC		MG/KG		11	EPA6010
RBA140005	BARIUM	420	180,000	COGCC		MG/KG		11	EPA6010
RBB060005	BARIUM	420	180,000	COGCC		MG/KG		11	EPA6010
RBB130005	BARIUM	420	180,000	COGCC		MG/KG		11	EPA6010
RBB152024	BARIUM	420	180,000	COGCC		MG/KG	J	13	EPA6010
RBB230005	BARIUM	420	180,000	COGCC		MG/KG		12	EPA6010
RBB252428	BARIUM	420	180,000	COGCC		MG/KG		13	EPA6010
RBC021620	BARIUM	420	180,000	COGCC		MG/KG		15	EPA6010
RBC070005	BARIUM	420	180,000	COGCC		MG/KG		12	EPA6010
RBC462025	BARIUM	420	180,000	COGCC		MG/KG	J	16	EPA6010
RBD040001	BARIUM	420	180,000	COGCC		MG/KG		11	EPA6010
RBA090005	BARIUM	430	180,000	COGCC		MG/KG		11	EPA6010
RBA102630	BARIUM	430	180,000	COGCC		MG/KG		12	EPA6010
RBD070001	BARIUM	430	180,000	COGCC		MG/KG		11	EPA6010
RBA170005	BARIUM	440	180,000	COGCC		MG/KG	J	11	EPA6010
RBB050005	BARIUM	440	180,000	COGCC		MG/KG		11	EPA6010
RBB280005	BARIUM	440	180,000	COGCC		MG/KG		12	EPA6010
RBC151620	BARIUM	440	180,000	COGCC		MG/KG		15	EPA6010
RBC411216	BARIUM	440	180,000	COGCC		MG/KG		13	EPA6010
RBC441216	BARIUM	440	180,000	COGCC		MG/KG		14	EPA6010
RBB200005	BARIUM	460	180,000	COGCC		MG/KG		11	EPA6010
RBB062630	BARIUM	470	180,000	COGCC		MG/KG		15	EPA6010
RBB340508	BARIUM	470	180,000	COGCC		MG/KG		12	EPA6010
RBB022428	BARIUM	480	180,000	COGCC		MG/KG		14	EPA6010
RBB340005	BARIUM	480	180,000	COGCC		MG/KG		12	EPA6010
RBB240005	BARIUM	490	180,000	COGCC		MG/KG		12	EPA6010
RBB420005	BARIUM	500	180,000	COGCC		MG/KG		11	EPA6010
RBM060005	BARIUM	500	180,000	COGCC		MG/KG		12	EPA6010
RBB090005	BARIUM	550	180,000	COGCC		MG/KG		12	EPA6010
RBC431216	BARIUM	560	180,000	COGCC		MG/KG		18	EPA6010
RBA051620	BARIUM	570	180,000	COGCC		MG/KG		11	EPA6010
RBB222428	BARIUM	570	180,000	COGCC		MG/KG		16	EPA6010
RBB070508	BARIUM	580	180,000	COGCC		MG/KG		12	EPA6010
RBB050508	BARIUM	690	180,000	COGCC		MG/KG		11	EPA6010
RBD060001	BARIUM	700	180,000	COGCC		MG/KG		11	EPA6010
RBB112024	BARIUM	810	180,000	COGCC		MG/KG		14	EPA6010
RBD080001	BARIUM	810	180,000	COGCC		MG/KG		11	EPA6010
RBM030508	BARIUM	990	180,000	COGCC		MG/KG		12	EPA6010
RBA091216	BARIUM	1000	180,000	COGCC		MG/KG		12	EPA6010
RBB061620	BARIUM	1500	180,000	COGCC		MG/KG		41	EPA6010
RBB090508	BARIUM	1800	180,000	COGCC		MG/KG		120	EPA6010
RBB020508	BARIUM	2000	180,000	COGCC		MG/KG		25	EPA6010
RBA151620	BARIUM	2100	180,000	COGCC		MG/KG		22	EPA6010
RBB011216	BARIUM	8600	180,000	COGCC		MG/KG		190	EPA6010
RBB300005	BENZENE	0.58	4,100	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBC260005	BENZENE	0.61	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC280005	BENZENE	0.72	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC341620	BENZENE	0.74	4,100	CDLE Tier 1		UG/KG	J	7	EPA8260
RBC290005	BENZENE	0.75	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC311620	BENZENE	0.75	4,100	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBC291620	BENZENE	1	4,100	CDLE Tier 1		UG/KG	J	7.9	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC350005	BENZENE	1.1	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC011216	BENZENE	1.2	4,100	CDLE Tier 1		UG/KG	J	6.7	EPA8260
RBC100509	BENZENE	1.3	4,100	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBC180005	BENZENE	1.3	4,100	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB421620	BENZENE	1.5	4,100	CDLE Tier 1		UG/KG	J	6.4	EPA8260
RBC091620	BENZENE	1.5	4,100	CDLE Tier 1		UG/KG	J	7	EPA8260
RBB442530	BENZENE	1.7	4,100	CDLE Tier 1		UG/KG	J	8.3	EPA8260
RBC232024	BENZENE	1.7	4,100	CDLE Tier 1		UG/KG	J	6.6	EPA8260
RBC430005	BENZENE	1.7	4,100	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC101620	BENZENE	1.8	4,100	CDLE Tier 1		UG/KG	J	6.4	EPA8260
RBC121620	BENZENE	1.8	4,100	CDLE Tier 1		UG/KG	J	6.4	EPA8260
RBC381216	BENZENE	1.9	4,100	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBC212024	BENZENE	2	4,100	CDLE Tier 1		UG/KG	J	6.7	EPA8260
RBC080005	BENZENE	2.1	4,100	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBC130005	BENZENE	2.1	4,100	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC320005	BENZENE	2.1	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC100005	BENZENE	2.2	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC200005	BENZENE	2.2	4,100	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC240005	BENZENE	2.2	4,100	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBC241620	BENZENE	2.3	4,100	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBC120005	BENZENE	2.5	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC250005	BENZENE	2.5	4,100	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBM110005	BENZENE	2.5	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC230005	BENZENE	2.6	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC140005	BENZENE	2.7	4,100	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC202024	BENZENE	2.7	4,100	CDLE Tier 1		UG/KG	J	7	EPA8260
RBC210005	BENZENE	2.8	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC252024	BENZENE	3	4,100	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBC141620	BENZENE	3.5	4,100	CDLE Tier 1		UG/KG	J	6.8	EPA8260
RBC021620	BENZENE	3.6	4,100	CDLE Tier 1		UG/KG	J	7.5	EPA8260
RBB430005	BENZENE	3.7	4,100	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC181620	BENZENE	3.7	4,100	CDLE Tier 1		UG/KG	J	6.5	EPA8260
RBM122024	BENZENE	3.7	4,100	CDLE Tier 1		UG/KG	J	6.7	EPA8260
RBC192024	BENZENE	3.8	4,100	CDLE Tier 1		UG/KG	J	6.8	EPA8260
RBC321620	BENZENE	4	4,100	CDLE Tier 1		UG/KG	J	7	EPA8260
RBC161620	BENZENE	4.5	4,100	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBC070005	BENZENE	4.7	4,100	CDLE Tier 1		UG/KG	J	6	EPA8260
RBC071216	BENZENE	5.4	4,100	CDLE Tier 1		UG/KG	J	7.1	EPA8260
RBC090005	BENZENE	6.2	4,100	CDLE Tier 1		UG/KG		5.6	EPA8260
RBM132024	BENZENE	6.8	4,100	CDLE Tier 1		UG/KG		6.6	EPA8260
RBC171216	BENZENE	16	4,100	CDLE Tier 1		UG/KG	J	32	EPA8260
RBB210812	BENZENE	420	4,100	CDLE Tier 1		UG/KG	E	6.6	EPA8260
RBC460005	BPE	73	35,000	EPA Reg 9 PRG		UG/KG	J	360	EPA8270
RBA151620	BPE	190	35,000	EPA Reg 9 PRG		UG/KG	J	370	EPA8270
RBM041620	BPE	210	35,000	EPA Reg 9 PRG		UG/KG	J	400	EPA8270
RBA100812	BPE	220	35,000	EPA Reg 9 PRG		UG/KG	J	360	EPA8270
RBA110812	BPE	230	35,000	EPA Reg 9 PRG		UG/KG	J	360	EPA8270
RBA072630	BPE	240	35,000	EPA Reg 9 PRG		UG/KG	J	400	EPA8270
RBC071216	BPE	240	35,000	EPA Reg 9 PRG		UG/KG	J	470	EPA8270
RBA102630	BPE	250	35,000	EPA Reg 9 PRG		UG/KG	J	390	EPA8270
RBB012830	BPE	250	35,000	EPA Reg 9 PRG		UG/KG	J	520	EPA8270
RBC462530	BPE	250	35,000	EPA Reg 9 PRG		UG/KG	J	680	EPA8270
RBB072630	BPE	270	35,000	EPA Reg 9 PRG		UG/KG	J	470	EPA8270
RBB222428	BPE	270	35,000	EPA Reg 9 PRG		UG/KG	J	520	EPA8270
RBB312428	BPE	280	35,000	EPA Reg 9 PRG		UG/KG	J	480	EPA8270
RBB382024	BPE	290	35,000	EPA Reg 9 PRG		UG/KG	J	460	EPA8270
RBB161620	BPE	320	35,000	EPA Reg 9 PRG		UG/KG	J	400	EPA8270

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB022428	BPE	330	35,000	EPA Reg 9 PRG		UG/KG	J	470	EPA8270
RBB252428	BPE	360	35,000	EPA Reg 9 PRG		UG/KG	J	440	EPA8270
RBC321620	BPE	420	35,000	EPA Reg 9 PRG		UG/KG	J	470	EPA8270
RBB340005	BPE	460	35,000	EPA Reg 9 PRG		UG/KG		390	EPA8270
RBC241620	BPE	480	35,000	EPA Reg 9 PRG		UG/KG	J	480	EPA8270
RBM012630	BPE	940	35,000	EPA Reg 9 PRG		UG/KG		400	EPA8270
RBB242428	BPE	1800	35,000	EPA Reg 9 PRG		UG/KG		450	EPA8270
RBM030508	BPE	1800	35,000	EPA Reg 9 PRG		UG/KG	J	390	EPA8270
RBB110508	CADMIUM	0.025	26	COGCC		MG/KG	B	0.6	EPA6010
RBA042630	CADMIUM	0.038	26	COGCC		MG/KG	B	0.55	EPA6010
RBC222024	CADMIUM	0.039	26	COGCC		MG/KG	B	0.65	EPA6010
RBA030508	CADMIUM	0.043	26	COGCC		MG/KG	B	0.55	EPA6010
RBB090005	CADMIUM	0.052	26	COGCC		MG/KG	B	0.58	EPA6010
RBA011620	CADMIUM	0.06	26	COGCC		MG/KG	B	0.53	EPA6010
RBA050005	CADMIUM	0.06	26	COGCC		MG/KG	B	0.52	EPA6010
RBA040812	CADMIUM	0.062	26	COGCC		MG/KG	B	0.55	EPA6010
RBA020408	CADMIUM	0.067	26	COGCC		MG/KG	B	0.54	EPA6010
RBA091216	CADMIUM	0.083	26	COGCC		MG/KG	B	0.59	EPA6010
RBA030005	CADMIUM	0.089	26	COGCC		MG/KG	B	0.53	EPA6010
RBA052630	CADMIUM	0.089	26	COGCC		MG/KG	B	0.58	EPA6010
RBB070005	CADMIUM	0.093	26	COGCC		MG/KG	B	1.1	EPA6010
RBA090005	CADMIUM	0.096	26	COGCC		MG/KG	B	0.53	EPA6010
RBA020004	CADMIUM	0.1	26	COGCC		MG/KG	B	1.1	EPA6010
RBA040005	CADMIUM	0.11	26	COGCC		MG/KG	B	1.1	EPA6010
RBA051620	CADMIUM	0.11	26	COGCC		MG/KG	B	0.56	EPA6010
RBC230005	CADMIUM	0.11	26	COGCC		MG/KG	B	0.55	EPA6010
RBA092630	CADMIUM	0.12	26	COGCC		MG/KG	B	0.59	EPA6010
RBC220005	CADMIUM	0.12	26	COGCC		MG/KG	B	0.55	EPA6010
RBA010005	CADMIUM	0.13	26	COGCC		MG/KG	B	0.53	EPA6010
RBA102630	CADMIUM	0.18	26	COGCC		MG/KG	B	0.59	EPA6010
RBC340005	CADMIUM	0.18	26	COGCC		MG/KG	B	0.54	EPA6010
RBC390005	CADMIUM	0.19	26	COGCC		MG/KG	B	0.54	EPA6010
RBC290005	CADMIUM	0.2	26	COGCC		MG/KG	B	0.55	EPA6010
RBC320005	CADMIUM	0.2	26	COGCC		MG/KG	B	0.55	EPA6010
RBC400005	CADMIUM	0.22	26	COGCC		MG/KG	B	0.55	EPA6010
RBC391216	CADMIUM	0.23	26	COGCC		MG/KG	B	0.7	EPA6010
RBC400812	CADMIUM	0.23	26	COGCC		MG/KG	B	0.61	EPA6010
RBC280005	CADMIUM	0.24	26	COGCC		MG/KG	B	0.55	EPA6010
RBC371620	CADMIUM	0.24	26	COGCC		MG/KG	B	0.67	EPA6010
RBB020508	CADMIUM	0.29	26	COGCC		MG/KG	B	0.63	EPA6010
RBC381216	CADMIUM	0.36	26	COGCC		MG/KG	B	0.61	EPA6010
RBC340509	CADMIUM	0.38	26	COGCC		MG/KG	B	0.58	EPA6010
RBC380509	CADMIUM	0.41	26	COGCC		MG/KG	B	0.55	EPA6010
RBB210812	CADMIUM	0.42	26	COGCC		MG/KG	B	0.66	EPA6010
RBC370812	CADMIUM	0.42	26	COGCC		MG/KG	B	0.62	EPA6010
RBB200812	CADMIUM	0.6	26	COGCC		MG/KG	B	0.69	EPA6010
RBB232428	CARBON DISULFIDE	0.93	360,000	EPA Reg 9 PRG		UG/KG	J	8.2	EPA8260
RBB012830	CARBON DISULFIDE	1.2	360,000	EPA Reg 9 PRG		UG/KG	J	7.8	EPA8260
RBB152024	CARBON DISULFIDE	1.2	360,000	EPA Reg 9 PRG		UG/KG	J	6.5	EPA8260
RBB092630	CARBON DISULFIDE	1.7	360,000	EPA Reg 9 PRG		UG/KG	J	7.1	EPA8260
RBM132024	CARBON DISULFIDE	1.7	360,000	EPA Reg 9 PRG		UG/KG	J	6.6	EPA8260
RBB322428	CARBON DISULFIDE	1.8	360,000	EPA Reg 9 PRG		UG/KG	J	7.2	EPA8260
RBC041216	CARBON DISULFIDE	2	360,000	EPA Reg 9 PRG		UG/KG	J	6.8	EPA8260
RBC431216	CARBON DISULFIDE	2	360,000	EPA Reg 9 PRG		UG/KG	J	8.8	EPA8260
RBM162025	CARBON DISULFIDE	2.1	360,000	EPA Reg 9 PRG		UG/KG	J	7	EPA8260
RBC252024	CARBON DISULFIDE	2.2	360,000	EPA Reg 9 PRG		UG/KG	J	6.2	EPA8260
RBC232024	CARBON DISULFIDE	2.3	360,000	EPA Reg 9 PRG		UG/KG	J	6.6	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB242428	CARBON DISULFIDE	2.4	360,000	EPA Reg 9 PRG		UG/KG	J	6.8	EPA8260
RBC242428	CARBON DISULFIDE	2.4	360,000	EPA Reg 9 PRG		UG/KG	J	7.2	EPA8260
RBB210812	CARBON DISULFIDE	2.5	360,000	EPA Reg 9 PRG		UG/KG	J	6.6	EPA8260
RBM062428	CARBON DISULFIDE	2.6	360,000	EPA Reg 9 PRG		UG/KG	J	7.2	EPA8260
RBM152024	CARBON DISULFIDE	2.6	360,000	EPA Reg 9 PRG		UG/KG	J	9.1	EPA8260
RBB442025	CARBON DISULFIDE	2.7	360,000	EPA Reg 9 PRG		UG/KG	J	6.1	EPA8260
RBB272428	CARBON DISULFIDE	2.8	360,000	EPA Reg 9 PRG		UG/KG	J	7.3	EPA8260
RBB352428	CARBON DISULFIDE	2.8	360,000	EPA Reg 9 PRG		UG/KG	J	7.2	EPA8260
RBB362428	CARBON DISULFIDE	2.8	360,000	EPA Reg 9 PRG		UG/KG	J	7	EPA8260
RBC321620	CARBON DISULFIDE	3.5	360,000	EPA Reg 9 PRG		UG/KG	J	7	EPA8260
RBC291620	CARBON DISULFIDE	3.7	360,000	EPA Reg 9 PRG		UG/KG	J	7.9	EPA8260
RBB062630	CARBON DISULFIDE	4	360,000	EPA Reg 9 PRG		UG/KG	J	7.7	EPA8260
RBB332428	CARBON DISULFIDE	4.3	360,000	EPA Reg 9 PRG		UG/KG	J	7.7	EPA8260
RBB012428	CARBON DISULFIDE	4.7	360,000	EPA Reg 9 PRG		UG/KG	J	7.3	EPA8260
RBB132024	CARBON DISULFIDE	4.8	360,000	EPA Reg 9 PRG		UG/KG	J	7.3	EPA8260
RBB382024	CARBON DISULFIDE	4.8	360,000	EPA Reg 9 PRG		UG/KG	J	6.8	EPA8260
RBB222428	CARBON DISULFIDE	5.1	360,000	EPA Reg 9 PRG		UG/KG	J	7.8	EPA8260
RBB202428	CARBON DISULFIDE	5.2	360,000	EPA Reg 9 PRG		UG/KG	J	7.1	EPA8260
RBB372428	CARBON DISULFIDE	5.2	360,000	EPA Reg 9 PRG		UG/KG	J	7.4	EPA8260
RBC172428	CARBON DISULFIDE	5.2	360,000	EPA Reg 9 PRG		UG/KG	J	7.5	EPA8260
RBB142024	CARBON DISULFIDE	5.3	360,000	EPA Reg 9 PRG		UG/KG	J	7.4	EPA8260
RBC311620	CARBON DISULFIDE	5.4	360,000	EPA Reg 9 PRG		UG/KG	J	7.2	EPA8260
RBM052428	CARBON DISULFIDE	5.7	360,000	EPA Reg 9 PRG		UG/KG	J	7	EPA8260
RBB252428	CARBON DISULFIDE	5.9	360,000	EPA Reg 9 PRG		UG/KG	J	6.7	EPA8260
RBC281620	CARBON DISULFIDE	6	360,000	EPA Reg 9 PRG		UG/KG	J	9.8	EPA8260
RBB032428	CARBON DISULFIDE	6.6	360,000	EPA Reg 9 PRG		UG/KG	J	7.2	EPA8260
RBB212428	CARBON DISULFIDE	7.7	360,000	EPA Reg 9 PRG		UG/KG	J	7.9	EPA8260
RBB082630	CARBON DISULFIDE	8.2	360,000	EPA Reg 9 PRG		UG/KG		7.6	EPA8260
RBB292428	CARBON DISULFIDE	8.2	360,000	EPA Reg 9 PRG		UG/KG		7.6	EPA8260
RBB342428	CARBON DISULFIDE	10	360,000	EPA Reg 9 PRG		UG/KG		7.7	EPA8260
RBC462530	CARBON DISULFIDE	10	360,000	EPA Reg 9 PRG		UG/KG	J	10	EPA8260
RBC432024	CARBON DISULFIDE	12	360,000	EPA Reg 9 PRG		UG/KG		9	EPA8260
RBB052630	CARBON DISULFIDE	13	360,000	EPA Reg 9 PRG		UG/KG		7.1	EPA8260
RBB072630	CARBON DISULFIDE	13	360,000	EPA Reg 9 PRG		UG/KG		7	EPA8260
RBB312428	CARBON DISULFIDE	15	360,000	EPA Reg 9 PRG		UG/KG	J	7.3	EPA8260
RBM072428	CARBON DISULFIDE	15	360,000	EPA Reg 9 PRG		UG/KG		7	EPA8260
RBB022428	CARBON DISULFIDE	16	360,000	EPA Reg 9 PRG		UG/KG		7	EPA8260
RBC171216	CARBON DISULFIDE	20	360,000	EPA Reg 9 PRG		UG/KG	J	32	EPA8260
RBB112024	CARBON DISULFIDE	25	360,000	EPA Reg 9 PRG		UG/KG		7	EPA8260
RBB302428	CARBON DISULFIDE	25	360,000	EPA Reg 9 PRG		UG/KG		7	EPA8260
RBB442530	CARBON DISULFIDE	27	360,000	EPA Reg 9 PRG		UG/KG		8.3	EPA8260
RBB122024	CARBON DISULFIDE	35	360,000	EPA Reg 9 PRG		UG/KG		7.7	EPA8260
RBC271620	CARBON DISULFIDE	46	360,000	EPA Reg 9 PRG		UG/KG		7.8	EPA8260
RBB443539	CARBON DISULFIDE	47	360,000	EPA Reg 9 PRG		UG/KG		8.5	EPA8260
RBB210812	CHLOROMETHANE	27	1200	EPA Reg 9 PRG		UG/KG		13	EPA8260
RBC281620	CHROMIUM	5	1,500	COGCC		MG/KG		2	EPA6010
RBC432024	CHROMIUM	10	1,500	COGCC		MG/KG		1.8	EPA6010
RBM152024	CHROMIUM	13	1,500	COGCC		MG/KG		1.8	EPA6010
RBD020001	CHROMIUM	17	1,500	COGCC		MG/KG		1.1	EPA6010
RBA151620	CHROMIUM	18	1,500	COGCC		MG/KG		1.1	EPA6010
RBC291620	CHROMIUM	18	1,500	COGCC		MG/KG		1.6	EPA6010
RBC242428	CHROMIUM	22	1,500	COGCC		MG/KG		1.4	EPA6010
RBB102024	CHROMIUM	23	1,500	COGCC		MG/KG		1.2	EPA6010
RBB170508	CHROMIUM	23	1,500	COGCC		MG/KG		1.1	EPA6010
RBC340509	CHROMIUM	23	1,500	COGCC		MG/KG		1.2	EPA6010
RBA151216	CHROMIUM	24	1,500	COGCC		MG/KG		1.1	EPA6010
RBA160005	CHROMIUM	24	1,500	COGCC		MG/KG		1.1	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC310005	CHROMIUM	24	1,500	COGCC		MG/KG		1.1	EPA6010
RBB012830	CHROMIUM	25	1,500	COGCC		MG/KG		1.6	EPA6010
RBB100005	CHROMIUM	25	1,500	COGCC		MG/KG		1.1	EPA6010
RBB232428	CHROMIUM	25	1,500	COGCC		MG/KG		1.6	EPA6010
RBB310812	CHROMIUM	25	1,500	COGCC		MG/KG		1.2	EPA6010
RBC232024	CHROMIUM	25	1,500	COGCC		MG/KG		1.3	EPA6010
RBC271620	CHROMIUM	25	1,500	COGCC		MG/KG		1.6	EPA6010
RBA092630	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBA102630	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBA142630	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBB171216	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBB240508	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBB290812	CHROMIUM	26	1,500	COGCC		MG/KG		1.1	EPA6010
RBC021314	CHROMIUM	26	1,500	COGCC		MG/KG		1.4	EPA6010
RBC351620	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBC361620	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBC462530	CHROMIUM	26	1,500	COGCC		MG/KG		2	EPA6010
RBM072428	CHROMIUM	26	1,500	COGCC		MG/KG		1.4	EPA6010
RBM141620	CHROMIUM	26	1,500	COGCC		MG/KG		1.2	EPA6010
RBB110508	CHROMIUM	27	1,500	COGCC		MG/KG		1.2	EPA6010
RBB140508	CHROMIUM	27	1,500	COGCC		MG/KG		1.2	EPA6010
RBB170005	CHROMIUM	27	1,500	COGCC		MG/KG		1.1	EPA6010
RBB270508	CHROMIUM	27	1,500	COGCC		MG/KG		1.1	EPA6010
RBB330508	CHROMIUM	27	1,500	COGCC		MG/KG		1.2	EPA6010
RBB342428	CHROMIUM	27	1,500	COGCC		MG/KG		1.5	EPA6010
RBB442025	CHROMIUM	27	1,500	COGCC		MG/KG		1.2	EPA6010
RBC101620	CHROMIUM	27	1,500	COGCC		MG/KG	J	1.3	EPA6010
RBC331620	CHROMIUM	27	1,500	COGCC		MG/KG		1.5	EPA6010
RBC381216	CHROMIUM	27	1,500	COGCC		MG/KG		1.2	EPA6010
RBB040005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBB052630	CHROMIUM	28	1,500	COGCC		MG/KG		1.4	EPA6010
RBB130508	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBB250508	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBB272428	CHROMIUM	28	1,500	COGCC		MG/KG		1.5	EPA6010
RBB280508	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBB302428	CHROMIUM	28	1,500	COGCC		MG/KG		1.4	EPA6010
RBB320508	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBB350508	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBB360812	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBB370508	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBB440005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC011216	CHROMIUM	28	1,500	COGCC		MG/KG		1.3	EPA6010
RBC020005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC040005	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBC091620	CHROMIUM	28	1,500	COGCC		MG/KG	J	1.4	EPA6010
RBC110005	CHROMIUM	28	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBC150005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC160005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC270005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC340005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC360005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC370812	CHROMIUM	28	1,500	COGCC		MG/KG		1.2	EPA6010
RBC380005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC380509	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBC451216	CHROMIUM	28	1,500	COGCC		MG/KG		1.3	EPA6010
RBM020005	CHROMIUM	28	1,500	COGCC		MG/KG		1.1	EPA6010
RBA150005	CHROMIUM	29	1,500	COGCC		MG/KG		1.1	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB030005	CHROMIUM	29	1,500	COGCC		MG/KG		1.1	EPA6010
RBB042630	CHROMIUM	29	1,500	COGCC		MG/KG		1.7	EPA6010
RBB072630	CHROMIUM	29	1,500	COGCC		MG/KG		1.3	EPA6010
RBB110005	CHROMIUM	29	1,500	COGCC		MG/KG		1.1	EPA6010
RBB120812	CHROMIUM	29	1,500	COGCC		MG/KG		1.2	EPA6010
RBB132024	CHROMIUM	29	1,500	COGCC		MG/KG		1.5	EPA6010
RBB212428	CHROMIUM	29	1,500	COGCC		MG/KG		1.6	EPA6010
RBB230508	CHROMIUM	29	1,500	COGCC		MG/KG		1.2	EPA6010
RBB242428	CHROMIUM	29	1,500	COGCC		MG/KG		1.4	EPA6010
RBB260812	CHROMIUM	29	1,500	COGCC		MG/KG		1.1	EPA6010
RBB290005	CHROMIUM	29	1,500	COGCC		MG/KG		1.1	EPA6010
RBB300508	CHROMIUM	29	1,500	COGCC		MG/KG		1.2	EPA6010
RBB312428	CHROMIUM	29	1,500	COGCC		MG/KG		1.5	EPA6010
RBB330005	CHROMIUM	29	1,500	COGCC		MG/KG		1.2	EPA6010
RBB362428	CHROMIUM	29	1,500	COGCC		MG/KG		1.4	EPA6010
RBB372428	CHROMIUM	29	1,500	COGCC		MG/KG		1.5	EPA6010
RBB442530	CHROMIUM	29	1,500	COGCC		MG/KG		1.7	EPA6010
RBC031216	CHROMIUM	29	1,500	COGCC		MG/KG		1.3	EPA6010
RBC080005	CHROMIUM	29	1,500	COGCC		MG/KG		1.2	EPA6010
RBC100509	CHROMIUM	29	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBC172428	CHROMIUM	29	1,500	COGCC		MG/KG		1.5	EPA6010
RBC230005	CHROMIUM	29	1,500	COGCC		MG/KG		1.1	EPA6010
RBC290005	CHROMIUM	29	1,500	COGCC		MG/KG		1.1	EPA6010
RBM132024	CHROMIUM	29	1,500	COGCC		MG/KG		1.3	EPA6010
RBA010005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBB010005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBB040508	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBB050005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBB070005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBB090005	CHROMIUM	30	1,500	COGCC		MG/KG		1.2	EPA6010
RBB100812	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBB210005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBB260508	CHROMIUM	30	1,500	COGCC		MG/KG		1.2	EPA6010
RBB281216	CHROMIUM	30	1,500	COGCC		MG/KG		1.2	EPA6010
RBB322428	CHROMIUM	30	1,500	COGCC		MG/KG		1.4	EPA6010
RBB370005	CHROMIUM	30	1,500	COGCC		MG/KG		1.2	EPA6010
RBB382024	CHROMIUM	30	1,500	COGCC		MG/KG		1.4	EPA6010
RBB430005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBC010005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBC020509	CHROMIUM	30	1,500	COGCC		MG/KG		1.3	EPA6010
RBC170005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBC190005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBC220005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBC260005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBC341620	CHROMIUM	30	1,500	COGCC		MG/KG		1.4	EPA6010
RBC400812	CHROMIUM	30	1,500	COGCC		MG/KG		1.2	EPA6010
RBC410005	CHROMIUM	30	1,500	COGCC		MG/KG		1.1	EPA6010
RBC461215	CHROMIUM	30	1,500	COGCC		MG/KG		1.3	EPA6010
RBM052428	CHROMIUM	30	1,500	COGCC		MG/KG		1.4	EPA6010
RBM171215	CHROMIUM	30	1,500	COGCC		MG/KG		1.3	EPA6010
RBA131216	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBB020005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBB032428	CHROMIUM	31	1,500	COGCC		MG/KG		1.4	EPA6010
RBB060005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBB080005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBB120005	CHROMIUM	31	1,500	COGCC		MG/KG		1.2	EPA6010
RBB130005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB200005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBB252428	CHROMIUM	31	1,500	COGCC		MG/KG		1.3	EPA6010
RBB300005	CHROMIUM	31	1,500	COGCC		MG/KG		1.2	EPA6010
RBB332428	CHROMIUM	31	1,500	COGCC		MG/KG		1.5	EPA6010
RBB380005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBB390812	CHROMIUM	31	1,500	COGCC		MG/KG		1.2	EPA6010
RBB410005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBB421620	CHROMIUM	31	1,500	COGCC		MG/KG		1.3	EPA6010
RBB431216	CHROMIUM	31	1,500	COGCC		MG/KG		1.2	EPA6010
RBC030005	CHROMIUM	31	1,500	COGCC		MG/KG		1.2	EPA6010
RBC060005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBC071216	CHROMIUM	31	1,500	COGCC		MG/KG		1.4	EPA6010
RBC100005	CHROMIUM	31	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBC121620	CHROMIUM	31	1,500	COGCC		MG/KG	J	1.3	EPA6010
RBC181620	CHROMIUM	31	1,500	COGCC		MG/KG		1.3	EPA6010
RBC240005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBC250005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBC261620	CHROMIUM	31	1,500	COGCC		MG/KG		1.4	EPA6010
RBC280005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBC420005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBC430005	CHROMIUM	31	1,500	COGCC		MG/KG		1.1	EPA6010
RBM101216	CHROMIUM	31	1,500	COGCC		MG/KG		1.4	EPA6010
RBA030005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBA052630	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBA082630	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB030508	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB070508	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB080812	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBB122024	CHROMIUM	32	1,500	COGCC		MG/KG		1.5	EPA6010
RBB140005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBB150005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBB161620	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB162428	CHROMIUM	32	1,500	COGCC		MG/KG		1.4	EPA6010
RBB220005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBB230005	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB260005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBB280005	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB292428	CHROMIUM	32	1,500	COGCC		MG/KG		1.5	EPA6010
RBB310005	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB320005	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB352428	CHROMIUM	32	1,500	COGCC		MG/KG		1.4	EPA6010
RBB360005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBB390508	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBB411216	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBC130005	CHROMIUM	32	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBC161620	CHROMIUM	32	1,500	COGCC		MG/KG		1.4	EPA6010
RBC210005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBC311620	CHROMIUM	32	1,500	COGCC		MG/KG		1.4	EPA6010
RBC390005	CHROMIUM	32	1,500	COGCC		MG/KG		1.1	EPA6010
RBC421216	CHROMIUM	32	1,500	COGCC		MG/KG		1.3	EPA6010
RBM041620	CHROMIUM	32	1,500	COGCC		MG/KG		1.2	EPA6010
RBM110005	CHROMIUM	32	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBA050005	CHROMIUM	33	1,500	COGCC		MG/KG		1	EPA6010
RBA051620	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBA060005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBA090005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBA112630	CHROMIUM	33	1,500	COGCC		MG/KG	J	1.1	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBA170005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBA173035	CHROMIUM	33	1,500	COGCC		MG/KG		1.4	EPA6010
RBB062630	CHROMIUM	33	1,500	COGCC		MG/KG		1.5	EPA6010
RBB160005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBB250005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBB270005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBB340508	CHROMIUM	33	1,500	COGCC		MG/KG		1.2	EPA6010
RBB350005	CHROMIUM	33	1,500	COGCC		MG/KG		1.2	EPA6010
RBB401216	CHROMIUM	33	1,500	COGCC		MG/KG		1.2	EPA6010
RBC051216	CHROMIUM	33	1,500	COGCC		MG/KG		1.3	EPA6010
RBC140005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBC171216	CHROMIUM	33	1,500	COGCC		MG/KG		1.3	EPA6010
RBC200005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBC320005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBC371620	CHROMIUM	33	1,500	COGCC		MG/KG		1.3	EPA6010
RBC400005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBC440005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBM060005	CHROMIUM	33	1,500	COGCC		MG/KG		1.2	EPA6010
RBM162025	CHROMIUM	33	1,500	COGCC		MG/KG		1.4	EPA6010
RBA040812	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBA062630	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBA080005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBA172025	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBB012428	CHROMIUM	34	1,500	COGCC		MG/KG		1.5	EPA6010
RBB050508	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBB090508	CHROMIUM	34	1,500	COGCC		MG/KG		1.2	EPA6010
RBB142024	CHROMIUM	34	1,500	COGCC		MG/KG		1.5	EPA6010
RBB150508	CHROMIUM	34	1,500	COGCC		MG/KG		1.2	EPA6010
RBB340005	CHROMIUM	34	1,500	COGCC		MG/KG		1.2	EPA6010
RBB390005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBB420005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBC021620	CHROMIUM	34	1,500	COGCC		MG/KG		1.5	EPA6010
RBC050005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBC081216	CHROMIUM	34	1,500	COGCC		MG/KG		1.4	EPA6010
RBC090005	CHROMIUM	34	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBC120005	CHROMIUM	34	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBC141620	CHROMIUM	34	1,500	COGCC		MG/KG		1.4	EPA6010
RBC180005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBC190913	CHROMIUM	34	1,500	COGCC		MG/KG		1.3	EPA6010
RBC252024	CHROMIUM	34	1,500	COGCC		MG/KG		1.2	EPA6010
RBC321620	CHROMIUM	34	1,500	COGCC		MG/KG		1.4	EPA6010
RBC330005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBC350005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBC441216	CHROMIUM	34	1,500	COGCC		MG/KG		1.4	EPA6010
RBC441620	CHROMIUM	34	1,500	COGCC		MG/KG		1.3	EPA6010
RBC460005	CHROMIUM	34	1,500	COGCC		MG/KG		1.1	EPA6010
RBM030508	CHROMIUM	34	1,500	COGCC		MG/KG		1.2	EPA6010
RBM062428	CHROMIUM	34	1,500	COGCC		MG/KG		1.4	EPA6010
RBA011620	CHROMIUM	35	1,500	COGCC		MG/KG		1.1	EPA6010
RBA020004	CHROMIUM	35	1,500	COGCC		MG/KG		1.1	EPA6010
RBA070005	CHROMIUM	35	1,500	COGCC		MG/KG		1.1	EPA6010
RBA100005	CHROMIUM	35	1,500	COGCC		MG/KG		1.1	EPA6010
RBA160508	CHROMIUM	35	1,500	COGCC		MG/KG		1.1	EPA6010
RBB022428	CHROMIUM	35	1,500	COGCC		MG/KG		1.4	EPA6010
RBB092630	CHROMIUM	35	1,500	COGCC		MG/KG		1.4	EPA6010
RBB152024	CHROMIUM	35	1,500	COGCC		MG/KG		1.3	EPA6010
RBB220508	CHROMIUM	35	1,500	COGCC		MG/KG		1.2	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB222428	CHROMIUM	35	1,500	COGCC		MG/KG		1.6	EPA6010
RBB382428	CHROMIUM	35	1,500	COGCC		MG/KG		1.6	EPA6010
RBB443539	CHROMIUM	35	1,500	COGCC		MG/KG		1.7	EPA6010
RBC111620	CHROMIUM	35	1,500	COGCC		MG/KG	J	1.4	EPA6010
RBC391216	CHROMIUM	35	1,500	COGCC		MG/KG		1.4	EPA6010
RBC411216	CHROMIUM	35	1,500	COGCC		MG/KG		1.3	EPA6010
RBC450005	CHROMIUM	35	1,500	COGCC		MG/KG		1.1	EPA6010
RBM012630	CHROMIUM	35	1,500	COGCC		MG/KG		1.2	EPA6010
RBA020408	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBA030508	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBA040005	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBA061620	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBA070812	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBA072630	CHROMIUM	36	1,500	COGCC		MG/KG		1.2	EPA6010
RBA081216	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBA100812	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBA110005	CHROMIUM	36	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBA110812	CHROMIUM	36	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBA120005	CHROMIUM	36	1,500	COGCC		MG/KG	J	1	EPA6010
RBA130005	CHROMIUM	36	1,500	COGCC		MG/KG		1.1	EPA6010
RBB112024	CHROMIUM	36	1,500	COGCC		MG/KG		1.4	EPA6010
RBB240005	CHROMIUM	36	1,500	COGCC		MG/KG		1.2	EPA6010
RBC041216	CHROMIUM	36	1,500	COGCC		MG/KG		1.4	EPA6010
RBC061216	CHROMIUM	36	1,500	COGCC		MG/KG		1.3	EPA6010
RBC131620	CHROMIUM	36	1,500	COGCC		MG/KG	J	1.4	EPA6010
RBC151620	CHROMIUM	36	1,500	COGCC		MG/KG		1.5	EPA6010
RBA042630	CHROMIUM	37	1,500	COGCC		MG/KG		1.1	EPA6010
RBA091216	CHROMIUM	37	1,500	COGCC		MG/KG		1.2	EPA6010
RBA132630	CHROMIUM	37	1,500	COGCC		MG/KG		1.2	EPA6010
RBA174549	CHROMIUM	37	1,500	COGCC		MG/KG		1.4	EPA6010
RBB210508	CHROMIUM	37	1,500	COGCC		MG/KG		1.2	EPA6010
RBB400005	CHROMIUM	37	1,500	COGCC		MG/KG		1.1	EPA6010
RBC070005	CHROMIUM	37	1,500	COGCC		MG/KG		1.2	EPA6010
RBC222024	CHROMIUM	37	1,500	COGCC		MG/KG		1.3	EPA6010
RBC370005	CHROMIUM	37	1,500	COGCC		MG/KG		1.1	EPA6010
RBC462025	CHROMIUM	37	1,500	COGCC		MG/KG		1.6	EPA6010
RBM122024	CHROMIUM	37	1,500	COGCC		MG/KG		1.3	EPA6010
RBA122630	CHROMIUM	38	1,500	COGCC		MG/KG	J	1.2	EPA6010
RBA140005	CHROMIUM	38	1,500	COGCC		MG/KG		1.1	EPA6010
RBC212024	CHROMIUM	38	1,500	COGCC		MG/KG		1.3	EPA6010
RBB082630	CHROMIUM	39	1,500	COGCC		MG/KG		1.5	EPA6010
RBD040001	CHROMIUM	39	1,500	COGCC		MG/KG		1.1	EPA6010
RBD080001	CHROMIUM	39	1,500	COGCC		MG/KG		1.1	EPA6010
RBA121620	CHROMIUM	40	1,500	COGCC		MG/KG	J	1.1	EPA6010
RBA141216	CHROMIUM	40	1,500	COGCC		MG/KG		1.2	EPA6010
RBB061620	CHROMIUM	40	1,500	COGCC		MG/KG		1.4	EPA6010
RBC192024	CHROMIUM	40	1,500	COGCC		MG/KG		1.4	EPA6010
RBC202024	CHROMIUM	40	1,500	COGCC		MG/KG		1.4	EPA6010
RBD070001	CHROMIUM	40	1,500	COGCC		MG/KG		1.1	EPA6010
RBD010001	CHROMIUM	42	1,500	COGCC		MG/KG		1.1	EPA6010
RBD060001	CHROMIUM	42	1,500	COGCC		MG/KG		1.1	EPA6010
RBD090001	CHROMIUM	43	1,500	COGCC		MG/KG		1.1	EPA6010
RBM090001	CHROMIUM	43	1,500	COGCC		MG/KG		1.1	EPA6010
RBD030001	CHROMIUM	44	1,500	COGCC		MG/KG		1.1	EPA6010
RBD050001	CHROMIUM	45	1,500	COGCC		MG/KG		1.1	EPA6010
RBC241620	CHROMIUM	46	1,500	COGCC		MG/KG		1.4	EPA6010
RBD100001	CHROMIUM	47	1,500	COGCC		MG/KG		1.1	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB020508	CHROMIUM	53	1,500	COGCC		MG/KG		1.3	EPA6010
RBC431216	CHROMIUM	55	1,500	COGCC		MG/KG		1.8	EPA6010
RBB202428	CHROMIUM	60	1,500	COGCC		MG/KG		1.4	EPA6010
RBB210812	CHROMIUM	130	1,500	COGCC		MG/KG		1.3	EPA6010
RBB200812	CHROMIUM	230	1,500	COGCC		MG/KG		1.4	EPA6010
RBB011216	CHROMIUM	410	1,500	COGCC		MG/KG		1.9	EPA6010
RBA062630	CIS-1,2-DICHLOROETHENE	0.42	43,000	EPA Reg 9 PRG		UG/KG	J	5.8	EPA8260
RBA061620	CIS-1,2-DICHLOROETHENE	1.1	43,000	EPA Reg 9 PRG		UG/KG	J	5.5	EPA8260
RBB440005	DIESEL RANGE ORGANICS	19	1,000	COGCC		MG/KG	J	5.6	EPA8015
RBB443539	DIESEL RANGE ORGANICS	19	1,000	COGCC		MG/KG	J	8.5	EPA8015
RBC340005	DIESEL RANGE ORGANICS	21	1,000	COGCC		MG/KG		5.4	EPA8015
RBM162025	DIESEL RANGE ORGANICS	22	1,000	COGCC		MG/KG	J	7	EPA8015
RBC200005	DIESEL RANGE ORGANICS	24	1,000	COGCC		MG/KG		5.4	EPA8015
RBB072630	DIESEL RANGE ORGANICS	25	1,000	COGCC		MG/KG		7	EPA8015
RBC090005	DIESEL RANGE ORGANICS	25	1,000	COGCC		MG/KG		5.6	EPA8015
RBC381216	DIESEL RANGE ORGANICS	28	1,000	COGCC		MG/KG		6.1	EPA8015
RBC242428	DIESEL RANGE ORGANICS	29	1,000	COGCC		MG/KG		7.2	EPA8015
RBB442530	DIESEL RANGE ORGANICS	31	1,000	COGCC		MG/KG	J	8.3	EPA8015
RBB022428	DIESEL RANGE ORGANICS	32	1,000	COGCC		MG/KG		7	EPA8015
RBM152024	DIESEL RANGE ORGANICS	33	1,000	COGCC		MG/KG		9.1	EPA8015
RBA141216	DIESEL RANGE ORGANICS	34	1,000	COGCC		MG/KG		5.8	EPA8015
RBA070812	DIESEL RANGE ORGANICS	37	1,000	COGCC		MG/KG		5.5	EPA8015
RBD010001	DIESEL RANGE ORGANICS	38	1,000	COGCC		MG/KG		5.4	EPA8015
RBB012428	DIESEL RANGE ORGANICS	41	1,000	COGCC		MG/KG		7.3	EPA8015
RBA061620	DIESEL RANGE ORGANICS	42	1,000	COGCC		MG/KG		5.4	EPA8015
RBB062630	DIESEL RANGE ORGANICS	44	1,000	COGCC		MG/KG		7.7	EPA8015
RBA051620	DIESEL RANGE ORGANICS	46	1,000	COGCC		MG/KG		5.6	EPA8015
RBA110812	DIESEL RANGE ORGANICS	61	1,000	COGCC		MG/KG	J	5.4	EPA8015
RBB012830	DIESEL RANGE ORGANICS	61	1,000	COGCC		MG/KG		7.8	EPA8015
RBB210812	DIESEL RANGE ORGANICS	63	1,000	COGCC		MG/KG		6.6	EPA8015
RBB090508	DIESEL RANGE ORGANICS	64	1,000	COGCC		MG/KG		5.8	EPA8015
RBC432024	DIESEL RANGE ORGANICS	64	1,000	COGCC		MG/KG		9	EPA8015
RBC380005	DIESEL RANGE ORGANICS	77	1,000	COGCC		MG/KG		5.4	EPA8015
RBB240005	DIESEL RANGE ORGANICS	81	1,000	COGCC		MG/KG		5.8	EPA8015
RBC181620	DIESEL RANGE ORGANICS	90	1,000	COGCC		MG/KG		6.5	EPA8015
RBA062630	DIESEL RANGE ORGANICS	91	1,000	COGCC		MG/KG		5.6	EPA8015
RBB050508	DIESEL RANGE ORGANICS	98	1,000	COGCC		MG/KG		5.6	EPA8015
RBC252024	DIESEL RANGE ORGANICS	98	1,000	COGCC		MG/KG		6.2	EPA8015
RBA081216	DIESEL RANGE ORGANICS	100	1,000	COGCC		MG/KG		5.6	EPA8015
RBC340509	DIESEL RANGE ORGANICS	140	1,000	COGCC		MG/KG		5.8	EPA8015
RBC380509	DIESEL RANGE ORGANICS	150	1,000	COGCC		MG/KG	J	55	EPA8015
RBC441620	DIESEL RANGE ORGANICS	150	1,000	COGCC		MG/KG		6.5	EPA8015
RBC100005	DIESEL RANGE ORGANICS	160	1,000	COGCC		MG/KG		5.5	EPA8015
RBM030508	DIESEL RANGE ORGANICS	170	1,000	COGCC		MG/KG		5.8	EPA8015
RBA060005	DIESEL RANGE ORGANICS	230	1,000	COGCC		MG/KG		5.4	EPA8015
RBB200812	DIESEL RANGE ORGANICS	260	1,000	COGCC		MG/KG		6.9	EPA8015
RBC441216	DIESEL RANGE ORGANICS	260	1,000	COGCC		MG/KG		6.8	EPA8015
RBC190913	DIESEL RANGE ORGANICS	340	1,000	COGCC		MG/KG		6.5	EPA8015
RBC370812	DIESEL RANGE ORGANICS	370	1,000	COGCC		MG/KG		6.2	EPA8015
RBC431216	DIESEL RANGE ORGANICS	370	1,000	COGCC		MG/KG		8.8	EPA8015
RBA091216	DIESEL RANGE ORGANICS	490	1,000	COGCC		MG/KG		5.9	EPA8015
RBC171216	DIESEL RANGE ORGANICS	870	1,000	COGCC		MG/KG		6.4	EPA8015
RBC241620	DIESEL RANGE ORGANICS	1100	1,000	COGCC	HIT	MG/KG		7.2	EPA8015
RBC110005	DIESEL RANGE ORGANICS	1200	1,000	COGCC	HIT	MG/KG		5.5	EPA8015
RBB061620	DIESEL RANGE ORGANICS	1700	1,000	COGCC	HIT	MG/KG		14	EPA8015
RBB020508	DIESEL RANGE ORGANICS	2000	1,000	COGCC	HIT	MG/KG		63	EPA8015
RBB011216	DIESEL RANGE ORGANICS	8100	1,000	COGCC	HIT	MG/KG	J	190	EPA8015

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB011216	DIESEL RANGE ORGANICS	13000	1,000	COGCC	HIT	MG/KG		86	EPA8015
RBA120005	ETHYLBENZENE	0.69	2,100,000	CDLE Tier 1		UG/KG	J	5.2	EPA8260
RBB350005	ETHYLBENZENE	0.72	2,100,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB300005	ETHYLBENZENE	0.77	2,100,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB100005	ETHYLBENZENE	0.81	2,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC361620	ETHYLBENZENE	0.81	2,100,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBM030508	ETHYLBENZENE	0.83	2,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBA140005	ETHYLBENZENE	0.84	2,100,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBB130508	ETHYLBENZENE	0.86	2,100,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBA051620	ETHYLBENZENE	1	2,100,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBA070005	ETHYLBENZENE	1	2,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB132024	ETHYLBENZENE	1	2,100,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260
RBB310812	ETHYLBENZENE	1	2,100,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBB250508	ETHYLBENZENE	1.1	2,100,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBB360812	ETHYLBENZENE	1.1	2,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBM141620	ETHYLBENZENE	1.1	2,100,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBB200812	ETHYLBENZENE	1.2	2,100,000	CDLE Tier 1		UG/KG	J	6.9	EPA8260
RBB120812	ETHYLBENZENE	1.3	2,100,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBA052630	ETHYLBENZENE	1.4	2,100,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB350508	ETHYLBENZENE	1.4	2,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB360005	ETHYLBENZENE	1.4	2,100,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBC360005	ETHYLBENZENE	1.4	2,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBA141216	ETHYLBENZENE	1.5	2,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB380005	ETHYLBENZENE	1.5	2,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBA030005	ETHYLBENZENE	1.6	2,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBA062630	ETHYLBENZENE	1.6	2,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB120005	ETHYLBENZENE	1.6	2,100,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB340508	ETHYLBENZENE	1.7	2,100,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBB312428	ETHYLBENZENE	2.2	2,100,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260
RBB122024	ETHYLBENZENE	2.4	2,100,000	CDLE Tier 1		UG/KG	J	7.7	EPA8260
RBA091216	ETHYLBENZENE	2.6	2,100,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBC431216	ETHYLBENZENE	3	2,100,000	CDLE Tier 1		UG/KG	J	8.8	EPA8260
RBB210812	ETHYLBENZENE	100	2,100,000	CDLE Tier 1		UG/KG		6.6	EPA8260
RBC171216	ETHYLBENZENE	380	2,100,000	CDLE Tier 1		UG/KG		32	EPA8260
RBC441216	ISOPROPYLBENZENE	1.7	160,000	EPA Reg 9 PRG		UG/KG	J	6.8	EPA8260
RBA091216	ISOPROPYLBENZENE	3.3	160,000	EPA Reg 9 PRG		UG/KG	J	5.9	EPA8260
RBC431216	ISOPROPYLBENZENE	5.3	160,000	EPA Reg 9 PRG		UG/KG	J	8.8	EPA8260
RBB210812	ISOPROPYLBENZENE	32	160,000	EPA Reg 9 PRG		UG/KG		6.6	EPA8260
RBC171216	ISOPROPYLBENZENE	500	160,000	EPA Reg 9 PRG		UG/KG		32	EPA8260
RBC281620	LEAD	1.2	300	COGCC		MG/KG	B	1.8	EPA6010
RBD020001	LEAD	4.4	300	COGCC		MG/KG		0.32	EPA6010
RBC432024	LEAD	5.4	300	COGCC		MG/KG	J	2.7	EPA6010
RBM152024	LEAD	7	300	COGCC		MG/KG	J	2.7	EPA6010
RBC291620	LEAD	8	300	COGCC		MG/KG		0.47	EPA6010
RBC462530	LEAD	8.5	300	COGCC		MG/KG		0.61	EPA6010
RBC271620	LEAD	8.9	300	COGCC		MG/KG		0.94	EPA6010
RBC172428	LEAD	9.1	300	COGCC		MG/KG		0.9	EPA6010
RBA173035	LEAD	9.3	300	COGCC		MG/KG		0.41	EPA6010
RBC311620	LEAD	9.3	300	COGCC		MG/KG		0.43	EPA6010
RBC021314	LEAD	9.6	300	COGCC		MG/KG		0.41	EPA6010
RBA132630	LEAD	9.7	300	COGCC		MG/KG		0.36	EPA6010
RBC242428	LEAD	9.8	300	COGCC		MG/KG		0.86	EPA6010
RBD080001	LEAD	9.8	300	COGCC		MG/KG		0.64	EPA6010
RBA082630	LEAD	10	300	COGCC		MG/KG		0.36	EPA6010
RBA092630	LEAD	10	300	COGCC		MG/KG		0.36	EPA6010
RBA112630	LEAD	10	300	COGCC		MG/KG	J	0.34	EPA6010
RBA122630	LEAD	10	300	COGCC		MG/KG	J	0.35	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBA142630	LEAD	10	300	COGCC		MG/KG		0.36	EPA6010
RBA151620	LEAD	10	300	COGCC		MG/KG		0.66	EPA6010
RBB140508	LEAD	10	300	COGCC		MG/KG		0.35	EPA6010
RBB171216	LEAD	10	300	COGCC		MG/KG		0.69	EPA6010
RBB232428	LEAD	10	300	COGCC		MG/KG		0.49	EPA6010
RBC010005	LEAD	10	300	COGCC		MG/KG		0.32	EPA6010
RBC212024	LEAD	10	300	COGCC		MG/KG		0.4	EPA6010
RBC310005	LEAD	10	300	COGCC		MG/KG		0.33	EPA6010
RBD040001	LEAD	10	300	COGCC		MG/KG		0.66	EPA6010
RBD060001	LEAD	10	300	COGCC		MG/KG		0.64	EPA6010
RBM072428	LEAD	10	300	COGCC		MG/KG		0.42	EPA6010
RBA011620	LEAD	11	300	COGCC		MG/KG		0.32	EPA6010
RBA040812	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBA042630	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBA050005	LEAD	11	300	COGCC		MG/KG		0.31	EPA6010
RBA052630	LEAD	11	300	COGCC		MG/KG		0.35	EPA6010
RBA072630	LEAD	11	300	COGCC		MG/KG		0.36	EPA6010
RBA130005	LEAD	11	300	COGCC		MG/KG		0.32	EPA6010
RBA131216	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBA172025	LEAD	11	300	COGCC		MG/KG		0.34	EPA6010
RBA174549	LEAD	11	300	COGCC		MG/KG		0.41	EPA6010
RBB100812	LEAD	11	300	COGCC		MG/KG		0.34	EPA6010
RBB132024	LEAD	11	300	COGCC		MG/KG		0.44	EPA6010
RBB142024	LEAD	11	300	COGCC		MG/KG		0.44	EPA6010
RBB152024	LEAD	11	300	COGCC		MG/KG		0.39	EPA6010
RBB160005	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBB161620	LEAD	11	300	COGCC		MG/KG		0.36	EPA6010
RBB162428	LEAD	11	300	COGCC		MG/KG		0.41	EPA6010
RBB170508	LEAD	11	300	COGCC		MG/KG		0.65	EPA6010
RBB281216	LEAD	11	300	COGCC		MG/KG		0.36	EPA6010
RBB302428	LEAD	11	300	COGCC		MG/KG		0.42	EPA6010
RBB310812	LEAD	11	300	COGCC		MG/KG		0.36	EPA6010
RBB312428	LEAD	11	300	COGCC		MG/KG		0.44	EPA6010
RBB322428	LEAD	11	300	COGCC		MG/KG		0.43	EPA6010
RBB330508	LEAD	11	300	COGCC		MG/KG		0.36	EPA6010
RBB332428	LEAD	11	300	COGCC		MG/KG		0.46	EPA6010
RBB342428	LEAD	11	300	COGCC		MG/KG		0.46	EPA6010
RBB350508	LEAD	11	300	COGCC		MG/KG		0.35	EPA6010
RBB362428	LEAD	11	300	COGCC		MG/KG		0.42	EPA6010
RBB372428	LEAD	11	300	COGCC		MG/KG		0.45	EPA6010
RBB390005	LEAD	11	300	COGCC		MG/KG		0.32	EPA6010
RBB440005	LEAD	11	300	COGCC		MG/KG		0.34	EPA6010
RBC020005	LEAD	11	300	COGCC		MG/KG		0.34	EPA6010
RBC060005	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBC130005	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBC202024	LEAD	11	300	COGCC		MG/KG		0.42	EPA6010
RBC222024	LEAD	11	300	COGCC		MG/KG		0.39	EPA6010
RBC261620	LEAD	11	300	COGCC		MG/KG		0.43	EPA6010
RBC270005	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBC331620	LEAD	11	300	COGCC		MG/KG		0.91	EPA6010
RBC350005	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBC351620	LEAD	11	300	COGCC		MG/KG		0.75	EPA6010
RBC360005	LEAD	11	300	COGCC		MG/KG		0.32	EPA6010
RBC361620	LEAD	11	300	COGCC		MG/KG		0.74	EPA6010
RBC420005	LEAD	11	300	COGCC		MG/KG	J	0.33	EPA6010
RBC451216	LEAD	11	300	COGCC		MG/KG	J	1.9	EPA6010
RBC461215	LEAD	11	300	COGCC		MG/KG		0.38	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBD030001	LEAD	11	300	COGCC		MG/KG		0.65	EPA6010
RBD050001	LEAD	11	300	COGCC		MG/KG		0.65	EPA6010
RBD070001	LEAD	11	300	COGCC		MG/KG		0.33	EPA6010
RBD090001	LEAD	11	300	COGCC		MG/KG		0.64	EPA6010
RBD100001	LEAD	11	300	COGCC		MG/KG		0.65	EPA6010
RBM012630	LEAD	11	300	COGCC		MG/KG		0.36	EPA6010
RBM041620	LEAD	11	300	COGCC		MG/KG		0.36	EPA6010
RBM090001	LEAD	11	300	COGCC		MG/KG		0.63	EPA6010
RBM122024	LEAD	11	300	COGCC		MG/KG		0.4	EPA6010
RBM171215	LEAD	11	300	COGCC		MG/KG		0.78	EPA6010
RBA010005	LEAD	12	300	COGCC		MG/KG		0.63	EPA6010
RBA030508	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBA040005	LEAD	12	300	COGCC		MG/KG		0.63	EPA6010
RBA061620	LEAD	12	300	COGCC		MG/KG		0.32	EPA6010
RBA100005	LEAD	12	300	COGCC		MG/KG		0.64	EPA6010
RBA100812	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBA102630	LEAD	12	300	COGCC		MG/KG		0.35	EPA6010
RBA110812	LEAD	12	300	COGCC		MG/KG	J	0.32	EPA6010
RBA120005	LEAD	12	300	COGCC		MG/KG	J	0.31	EPA6010
RBA121620	LEAD	12	300	COGCC		MG/KG	J	0.67	EPA6010
RBA160005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBA160508	LEAD	12	300	COGCC		MG/KG		0.32	EPA6010
RBB012830	LEAD	12	300	COGCC		MG/KG		0.47	EPA6010
RBB030005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBB032428	LEAD	12	300	COGCC		MG/KG		0.43	EPA6010
RBB040005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBB042630	LEAD	12	300	COGCC		MG/KG		0.51	EPA6010
RBB052630	LEAD	12	300	COGCC		MG/KG		0.43	EPA6010
RBB110005	LEAD	12	300	COGCC		MG/KG		0.34	EPA6010
RBB110508	LEAD	12	300	COGCC		MG/KG		0.72	EPA6010
RBB112024	LEAD	12	300	COGCC		MG/KG		0.42	EPA6010
RBB122024	LEAD	12	300	COGCC		MG/KG		0.46	EPA6010
RBB130508	LEAD	12	300	COGCC		MG/KG		0.36	EPA6010
RBB140005	LEAD	12	300	COGCC		MG/KG		0.68	EPA6010
RBB150005	LEAD	12	300	COGCC		MG/KG		0.34	EPA6010
RBB170005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBB212428	LEAD	12	300	COGCC		MG/KG		0.48	EPA6010
RBB260005	LEAD	12	300	COGCC		MG/KG		0.34	EPA6010
RBB260812	LEAD	12	300	COGCC		MG/KG		0.34	EPA6010
RBB272428	LEAD	12	300	COGCC		MG/KG		0.44	EPA6010
RBB290812	LEAD	12	300	COGCC		MG/KG		0.68	EPA6010
RBB292428	LEAD	12	300	COGCC		MG/KG		0.46	EPA6010
RBB320508	LEAD	12	300	COGCC		MG/KG		0.35	EPA6010
RBB330005	LEAD	12	300	COGCC		MG/KG		0.36	EPA6010
RBB352428	LEAD	12	300	COGCC		MG/KG		0.43	EPA6010
RBB360812	LEAD	12	300	COGCC		MG/KG		0.7	EPA6010
RBB370508	LEAD	12	300	COGCC		MG/KG		0.35	EPA6010
RBB382024	LEAD	12	300	COGCC		MG/KG		0.41	EPA6010
RBB390508	LEAD	12	300	COGCC		MG/KG		0.35	EPA6010
RBB390812	LEAD	12	300	COGCC		MG/KG		0.73	EPA6010
RBB401216	LEAD	12	300	COGCC		MG/KG		0.36	EPA6010
RBB411216	LEAD	12	300	COGCC		MG/KG		0.36	EPA6010
RBB421620	LEAD	12	300	COGCC		MG/KG		0.38	EPA6010
RBB430005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBB442025	LEAD	12	300	COGCC		MG/KG		0.37	EPA6010
RBB443539	LEAD	12	300	COGCC		MG/KG		1	EPA6010
RBC011216	LEAD	12	300	COGCC		MG/KG		0.4	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC020509	LEAD	12	300	COGCC		MG/KG		0.38	EPA6010
RBC031216	LEAD	12	300	COGCC		MG/KG		0.38	EPA6010
RBC040005	LEAD	12	300	COGCC		MG/KG		0.35	EPA6010
RBC080005	LEAD	12	300	COGCC		MG/KG		0.35	EPA6010
RBC091620	LEAD	12	300	COGCC		MG/KG		0.42	EPA6010
RBC100509	LEAD	12	300	COGCC		MG/KG		0.34	EPA6010
RBC101620	LEAD	12	300	COGCC		MG/KG		0.38	EPA6010
RBC110005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBC121620	LEAD	12	300	COGCC		MG/KG		0.38	EPA6010
RBC141620	LEAD	12	300	COGCC		MG/KG		0.41	EPA6010
RBC161620	LEAD	12	300	COGCC		MG/KG		0.43	EPA6010
RBC192024	LEAD	12	300	COGCC		MG/KG		0.41	EPA6010
RBC232024	LEAD	12	300	COGCC		MG/KG		0.4	EPA6010
RBC280005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBC290005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBC320005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBC321620	LEAD	12	300	COGCC		MG/KG		0.42	EPA6010
RBC390005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBC410005	LEAD	12	300	COGCC		MG/KG	J	0.33	EPA6010
RBC440005	LEAD	12	300	COGCC		MG/KG	J	0.32	EPA6010
RBC460005	LEAD	12	300	COGCC		MG/KG		0.64	EPA6010
RBD010001	LEAD	12	300	COGCC		MG/KG		0.65	EPA6010
RBM101216	LEAD	12	300	COGCC		MG/KG		0.41	EPA6010
RBM110005	LEAD	12	300	COGCC		MG/KG		0.33	EPA6010
RBM132024	LEAD	12	300	COGCC		MG/KG		0.39	EPA6010
RBM141620	LEAD	12	300	COGCC		MG/KG		0.74	EPA6010
RBM162025	LEAD	12	300	COGCC		MG/KG		0.42	EPA6010
RBA030005	LEAD	13	300	COGCC		MG/KG		0.32	EPA6010
RBA062630	LEAD	13	300	COGCC		MG/KG		0.33	EPA6010
RBA070005	LEAD	13	300	COGCC		MG/KG		0.32	EPA6010
RBA081216	LEAD	13	300	COGCC		MG/KG		0.34	EPA6010
RBA110005	LEAD	13	300	COGCC		MG/KG	J	0.63	EPA6010
RBA140005	LEAD	13	300	COGCC		MG/KG		0.64	EPA6010
RBA151216	LEAD	13	300	COGCC		MG/KG		0.66	EPA6010
RBB040508	LEAD	13	300	COGCC		MG/KG		0.34	EPA6010
RBB072630	LEAD	13	300	COGCC		MG/KG		0.4	EPA6010
RBB080005	LEAD	13	300	COGCC		MG/KG		0.67	EPA6010
RBB080812	LEAD	13	300	COGCC		MG/KG		0.69	EPA6010
RBB090005	LEAD	13	300	COGCC		MG/KG		0.35	EPA6010
RBB090508	LEAD	13	300	COGCC		MG/KG		0.35	EPA6010
RBB092630	LEAD	13	300	COGCC		MG/KG		0.43	EPA6010
RBB100005	LEAD	13	300	COGCC		MG/KG		0.33	EPA6010
RBB120005	LEAD	13	300	COGCC		MG/KG		0.35	EPA6010
RBB120812	LEAD	13	300	COGCC		MG/KG		0.75	EPA6010
RBB150508	LEAD	13	300	COGCC		MG/KG		0.73	EPA6010
RBB210508	LEAD	13	300	COGCC		MG/KG		0.35	EPA6010
RBB230508	LEAD	13	300	COGCC		MG/KG		0.72	EPA6010
RBB240508	LEAD	13	300	COGCC		MG/KG	J	0.35	EPA6010
RBB250508	LEAD	13	300	COGCC		MG/KG		0.34	EPA6010
RBB252428	LEAD	13	300	COGCC		MG/KG		0.4	EPA6010
RBB270508	LEAD	13	300	COGCC		MG/KG		0.68	EPA6010
RBB280005	LEAD	13	300	COGCC		MG/KG		0.35	EPA6010
RBB280508	LEAD	13	300	COGCC		MG/KG		0.69	EPA6010
RBB290005	LEAD	13	300	COGCC		MG/KG		0.68	EPA6010
RBB300005	LEAD	13	300	COGCC		MG/KG		0.71	EPA6010
RBB300508	LEAD	13	300	COGCC		MG/KG		0.36	EPA6010
RBB310005	LEAD	13	300	COGCC		MG/KG		0.71	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB380005	LEAD	13	300	COGCC		MG/KG		0.65	EPA6010
RBB400005	LEAD	13	300	COGCC		MG/KG		0.64	EPA6010
RBB431216	LEAD	13	300	COGCC		MG/KG		0.37	EPA6010
RBC030005	LEAD	13	300	COGCC		MG/KG		0.71	EPA6010
RBC050005	LEAD	13	300	COGCC		MG/KG		0.34	EPA6010
RBC051216	LEAD	13	300	COGCC		MG/KG		0.39	EPA6010
RBC071216	LEAD	13	300	COGCC		MG/KG		0.42	EPA6010
RBC111620	LEAD	13	300	COGCC		MG/KG		0.42	EPA6010
RBC120005	LEAD	13	300	COGCC		MG/KG		0.66	EPA6010
RBC230005	LEAD	13	300	COGCC		MG/KG		0.33	EPA6010
RBC240005	LEAD	13	300	COGCC		MG/KG		0.32	EPA6010
RBC250005	LEAD	13	300	COGCC		MG/KG		0.32	EPA6010
RBC252024	LEAD	13	300	COGCC		MG/KG		0.37	EPA6010
RBC260005	LEAD	13	300	COGCC		MG/KG		0.33	EPA6010
RBC370005	LEAD	13	300	COGCC		MG/KG		0.64	EPA6010
RBC391216	LEAD	13	300	COGCC		MG/KG		0.42	EPA6010
RBC400812	LEAD	13	300	COGCC		MG/KG		0.37	EPA6010
RBC411216	LEAD	13	300	COGCC		MG/KG	J	0.4	EPA6010
RBC430005	LEAD	13	300	COGCC		MG/KG	J	0.32	EPA6010
RBC450005	LEAD	13	300	COGCC		MG/KG	J	0.33	EPA6010
RBM020005	LEAD	13	300	COGCC		MG/KG		0.33	EPA6010
RBM062428	LEAD	13	300	COGCC		MG/KG		0.43	EPA6010
RBA070812	LEAD	14	300	COGCC		MG/KG		0.66	EPA6010
RBA080005	LEAD	14	300	COGCC		MG/KG		0.32	EPA6010
RBA090005	LEAD	14	300	COGCC		MG/KG		0.32	EPA6010
RBA150005	LEAD	14	300	COGCC		MG/KG		0.66	EPA6010
RBB030508	LEAD	14	300	COGCC		MG/KG		0.69	EPA6010
RBB070005	LEAD	14	300	COGCC		MG/KG		0.65	EPA6010
RBB082630	LEAD	14	300	COGCC		MG/KG		0.46	EPA6010
RBB102024	LEAD	14	300	COGCC		MG/KG		0.35	EPA6010
RBB200005	LEAD	14	300	COGCC		MG/KG		0.33	EPA6010
RBB242428	LEAD	14	300	COGCC		MG/KG	J	0.41	EPA6010
RBB260508	LEAD	14	300	COGCC		MG/KG		0.71	EPA6010
RBB270005	LEAD	14	300	COGCC		MG/KG		0.67	EPA6010
RBB320005	LEAD	14	300	COGCC		MG/KG		0.7	EPA6010
RBB340508	LEAD	14	300	COGCC		MG/KG		0.74	EPA6010
RBB360005	LEAD	14	300	COGCC		MG/KG		0.69	EPA6010
RBB370005	LEAD	14	300	COGCC		MG/KG		0.71	EPA6010
RBB382428	LEAD	14	300	COGCC		MG/KG		0.48	EPA6010
RBB410005	LEAD	14	300	COGCC		MG/KG		0.32	EPA6010
RBC021620	LEAD	14	300	COGCC		MG/KG		0.45	EPA6010
RBC061216	LEAD	14	300	COGCC		MG/KG		0.8	EPA6010
RBC131620	LEAD	14	300	COGCC		MG/KG		0.41	EPA6010
RBC140005	LEAD	14	300	COGCC		MG/KG		0.65	EPA6010
RBC151620	LEAD	14	300	COGCC		MG/KG		0.44	EPA6010
RBC170005	LEAD	14	300	COGCC		MG/KG		0.64	EPA6010
RBC190005	LEAD	14	300	COGCC		MG/KG		0.33	EPA6010
RBC220005	LEAD	14	300	COGCC		MG/KG		0.33	EPA6010
RBC330005	LEAD	14	300	COGCC		MG/KG		0.66	EPA6010
RBC421216	LEAD	14	300	COGCC		MG/KG	J	0.39	EPA6010
RBC462025	LEAD	14	300	COGCC		MG/KG		0.96	EPA6010
RBM060005	LEAD	14	300	COGCC		MG/KG		0.7	EPA6010
RBA060005	LEAD	15	300	COGCC		MG/KG		0.32	EPA6010
RBA170005	LEAD	15	300	COGCC		MG/KG		0.32	EPA6010
RBB012428	LEAD	15	300	COGCC		MG/KG		0.44	EPA6010
RBB062630	LEAD	15	300	COGCC		MG/KG		0.46	EPA6010
RBB210005	LEAD	15	300	COGCC		MG/KG		0.33	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB340005	LEAD	15	300	COGCC		MG/KG		0.71	EPA6010
RBB350005	LEAD	15	300	COGCC		MG/KG		0.71	EPA6010
RBC041216	LEAD	15	300	COGCC		MG/KG		0.41	EPA6010
RBC081216	LEAD	15	300	COGCC		MG/KG		0.42	EPA6010
RBM030508	LEAD	15	300	COGCC		MG/KG		0.35	EPA6010
RBB010005	LEAD	16	300	COGCC		MG/KG		0.33	EPA6010
RBB130005	LEAD	16	300	COGCC		MG/KG		0.68	EPA6010
RBC070005	LEAD	16	300	COGCC		MG/KG		0.72	EPA6010
RBC100005	LEAD	16	300	COGCC		MG/KG		0.33	EPA6010
RBC150005	LEAD	16	300	COGCC		MG/KG		0.33	EPA6010
RBC160005	LEAD	16	300	COGCC		MG/KG		0.33	EPA6010
RBC340005	LEAD	16	300	COGCC		MG/KG		0.33	EPA6010
RBC341620	LEAD	16	300	COGCC		MG/KG		0.42	EPA6010
RBC371620	LEAD	16	300	COGCC		MG/KG		0.4	EPA6010
RBM052428	LEAD	16	300	COGCC		MG/KG	J	0.42	EPA6010
RBB070508	LEAD	17	300	COGCC		MG/KG		0.35	EPA6010
RBB250005	LEAD	17	300	COGCC		MG/KG		0.69	EPA6010
RBB420005	LEAD	17	300	COGCC		MG/KG		0.67	EPA6010
RBB222428	LEAD	18	300	COGCC		MG/KG		0.47	EPA6010
RBB442530	LEAD	18	300	COGCC		MG/KG		1	EPA6010
RBC210005	LEAD	18	300	COGCC		MG/KG		0.65	EPA6010
RBC190913	LEAD	19	300	COGCC		MG/KG		0.39	EPA6010
RBA020004	LEAD	20	300	COGCC		MG/KG		0.63	EPA6010
RBB022428	LEAD	20	300	COGCC		MG/KG		0.42	EPA6010
RBB220508	LEAD	20	300	COGCC		MG/KG		0.35	EPA6010
RBC400005	LEAD	20	300	COGCC		MG/KG		0.33	EPA6010
RBC431216	LEAD	20	300	COGCC		MG/KG	J	0.53	EPA6010
RBA141216	LEAD	21	300	COGCC		MG/KG		0.35	EPA6010
RBC180005	LEAD	21	300	COGCC		MG/KG		0.33	EPA6010
RBB060005	LEAD	22	300	COGCC		MG/KG		0.32	EPA6010
RBC381216	LEAD	22	300	COGCC		MG/KG		0.73	EPA6010
RBB050005	LEAD	23	300	COGCC		MG/KG		0.33	EPA6010
RBC171216	LEAD	23	300	COGCC		MG/KG		0.38	EPA6010
RBB020005	LEAD	24	300	COGCC		MG/KG		0.65	EPA6010
RBB202428	LEAD	24	300	COGCC		MG/KG		0.43	EPA6010
RBA051620	LEAD	25	300	COGCC		MG/KG		0.33	EPA6010
RBC441620	LEAD	25	300	COGCC		MG/KG	J	0.39	EPA6010
RBC380509	LEAD	26	300	COGCC		MG/KG		0.67	EPA6010
RBB230005	LEAD	27	300	COGCC		MG/KG		0.7	EPA6010
RBC340509	LEAD	27	300	COGCC		MG/KG		0.69	EPA6010
RBC181620	LEAD	28	300	COGCC		MG/KG		0.39	EPA6010
RBC200005	LEAD	30	300	COGCC		MG/KG		0.65	EPA6010
RBA091216	LEAD	34	300	COGCC		MG/KG		0.35	EPA6010
RBC241620	LEAD	36	300	COGCC		MG/KG		0.43	EPA6010
RBB050508	LEAD	39	300	COGCC		MG/KG		0.34	EPA6010
RBB061620	LEAD	39	300	COGCC		MG/KG		0.41	EPA6010
RBA020408	LEAD	40	300	COGCC		MG/KG		0.32	EPA6010
RBC370812	LEAD	43	300	COGCC		MG/KG		0.37	EPA6010
RBC441216	LEAD	43	300	COGCC		MG/KG	J	2	EPA6010
RBB220005	LEAD	46	300	COGCC		MG/KG		0.34	EPA6010
RBC380005	LEAD	53	300	COGCC		MG/KG		0.65	EPA6010
RBB210812	LEAD	68	300	COGCC		MG/KG		0.39	EPA6010
RBB240005	LEAD	99	300	COGCC		MG/KG	J	0.69	EPA6010
RBB200812	LEAD	120	300	COGCC		MG/KG		0.41	EPA6010
RBB020508	LEAD	130	300	COGCC		MG/KG		0.76	EPA6010
RBC090005	LEAD	340	300	COGCC	HIT	MG/KG		0.34	EPA6010
RBB011216	LEAD	470	300	COGCC	HIT	MG/KG		0.57	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB130005	M+P-XYLENE	1.5	36,000,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBB171216	M+P-XYLENE	1.5	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBM020005	M+P-XYLENE	1.5	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB250005	M+P-XYLENE	1.6	36,000,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBA060005	M+P-XYLENE	1.8	36,000,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB030508	M+P-XYLENE	2	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB300508	M+P-XYLENE	2.3	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBB030005	M+P-XYLENE	2.4	36,000,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBA040005	M+P-XYLENE	2.5	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB102024	M+P-XYLENE	2.5	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB300005	M+P-XYLENE	2.5	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB342428	M+P-XYLENE	2.5	36,000,000	CDLE Tier 1		UG/KG	J	7.7	EPA8260
RBB352428	M+P-XYLENE	2.6	36,000,000	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBB202428	M+P-XYLENE	2.7	36,000,000	CDLE Tier 1		UG/KG	J	7.1	EPA8260
RBB340005	M+P-XYLENE	2.8	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB390812	M+P-XYLENE	2.8	36,000,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBB350005	M+P-XYLENE	2.9	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBM072428	M+P-XYLENE	2.9	36,000,000	CDLE Tier 1		UG/KG	J	7	EPA8260
RBA030508	M+P-XYLENE	3	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB130508	M+P-XYLENE	3	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBB390005	M+P-XYLENE	3	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBA020004	M+P-XYLENE	3.1	36,000,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBB100005	M+P-XYLENE	3.1	36,000,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB330508	M+P-XYLENE	3.1	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBA020408	M+P-XYLENE	3.3	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBA120005	M+P-XYLENE	3.3	36,000,000	CDLE Tier 1		UG/KG	J	5.2	EPA8260
RBB092630	M+P-XYLENE	3.3	36,000,000	CDLE Tier 1		UG/KG	J	7.1	EPA8260
RBC361620	M+P-XYLENE	3.3	36,000,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBB322428	M+P-XYLENE	3.5	36,000,000	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBA140005	M+P-XYLENE	3.7	36,000,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBA051620	M+P-XYLENE	3.9	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBB132024	M+P-XYLENE	3.9	36,000,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260
RBB372428	M+P-XYLENE	3.9	36,000,000	CDLE Tier 1		UG/KG	J	7.4	EPA8260
RBM030508	M+P-XYLENE	3.9	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB200812	M+P-XYLENE	4.2	36,000,000	CDLE Tier 1		UG/KG	J	6.9	EPA8260
RBA041620	M+P-XYLENE	4.4	36,000,000	CDLE Tier 1		UG/KG	J	5.6	EPA8260
RBB250508	M+P-XYLENE	4.4	36,000,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBB310812	M+P-XYLENE	4.5	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBM141620	M+P-XYLENE	4.5	36,000,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBA070005	M+P-XYLENE	4.6	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBA010005	M+P-XYLENE	4.8	36,000,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBA011620	M+P-XYLENE	5	36,000,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBB120812	M+P-XYLENE	5	36,000,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBB360812	M+P-XYLENE	5.4	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBA052630	M+P-XYLENE	5.6	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBC441216	M+P-XYLENE	5.6	36,000,000	CDLE Tier 1		UG/KG	J	6.8	EPA8260
RBA062630	M+P-XYLENE	6.1	36,000,000	CDLE Tier 1		UG/KG		5.8	EPA8260
RBB360005	M+P-XYLENE	6.2	36,000,000	CDLE Tier 1		UG/KG		5.7	EPA8260
RBB380005	M+P-XYLENE	6.2	36,000,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBB120005	M+P-XYLENE	6.4	36,000,000	CDLE Tier 1		UG/KG		5.9	EPA8260
RBB350508	M+P-XYLENE	6.4	36,000,000	CDLE Tier 1		UG/KG		5.8	EPA8260
RBA141216	M+P-XYLENE	6.8	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBC360005	M+P-XYLENE	7.2	36,000,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBA030005	M+P-XYLENE	7.4	36,000,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBB340508	M+P-XYLENE	7.8	36,000,000	CDLE Tier 1		UG/KG		6.2	EPA8260
RBM080004	M+P-XYLENE	7.8	36,000,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBB312428	M+P-XYLENE	8.7	36,000,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB122024	M+P-XYLENE	9.1	36,000,000	CDLE Tier 1		UG/KG		7.7	EPA8260
RBA091216	M+P-XYLENE	9.5	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBC431216	M+P-XYLENE	11	36,000,000	CDLE Tier 1		UG/KG		8.8	EPA8260
RBB210812	M+P-XYLENE	160	36,000,000	CDLE Tier 1		UG/KG		6.6	EPA8260
RBC171216	M+P-XYLENE	1100	36,000,000	CDLE Tier 1		UG/KG		32	EPA8260
RBD070001	MERCURY	0.07	17	COGCC		MG/KG	B	0.11	EPA7470
RBA091216	METHYLENE CHLORIDE	28	8,900	EPA Reg 9 PRG		UG/KG	J	5.9	EPA8260
RBA100005	METHYLENE CHLORIDE	31	8,900	EPA Reg 9 PRG		UG/KG	J	5.3	EPA8260
RBA100812	METHYLENE CHLORIDE	37	8,900	EPA Reg 9 PRG		UG/KG	J	5.4	EPA8260
RBC021620	METHYLENE CHLORIDE	56	8,900	EPA Reg 9 PRG		UG/KG	B	7.5	EPA8260
RBB090508	METHYLENE CHLORIDE	63	8,900	EPA Reg 9 PRG		UG/KG	B	5.8	EPA8260
RBB082630	METHYLENE CHLORIDE	72	8,900	EPA Reg 9 PRG		UG/KG	B	7.6	EPA8260
RBB080005	METHYLENE CHLORIDE	73	8,900	EPA Reg 9 PRG		UG/KG	B	5.5	EPA8260
RBB220005	NAPHTHALENE	0.99	NA			UG/KG	J	5.7	EPA8260
RBC190913	NAPHTHALENE	3.4	NA			UG/KG	J	6.5	EPA8260
RBC441216	NAPHTHALENE	9.3	NA			UG/KG		6.8	EPA8260
RBC431216	NAPHTHALENE	33	NA			UG/KG		8.8	EPA8260
RBA091216	NAPHTHALENE	38	NA			UG/KG	J	5.9	EPA8260
RBB210812	NAPHTHALENE	45	NA			UG/KG		6.6	EPA8260
RBC171216	NAPHTHALENE	700	NA			UG/KG	J	32	EPA8260
RBC340005	NAPHTHALENE	780	NA			UG/KG		360	EPA8270
RBB200812	NAPHTHALENE	1000	NA			UG/KG		460	EPA8270
RBB210812	NAPHTHALENE	1100	NA			UG/KG		440	EPA8270
RBB061620	NAPHTHALENE	1600	NA			UG/KG	J	1800	EPA8270
RBB011216	NAPHTHALENE	12000	NA			UG/KG	J	19000	EPA8270
RBC441216	N-BUTYLBENZENE	2.5	140,000	EPA Reg 9 PRG		UG/KG	J	6.8	EPA8260
RBA091216	N-BUTYLBENZENE	10	140,000	EPA Reg 9 PRG		UG/KG	J	5.9	EPA8260
RBB210812	N-BUTYLBENZENE	13	140,000	EPA Reg 9 PRG		UG/KG		6.6	EPA8260
RBC431216	N-BUTYLBENZENE	20	140,000	EPA Reg 9 PRG		UG/KG		8.8	EPA8260
RBC171216	N-BUTYLBENZENE	1500	140,000	EPA Reg 9 PRG		UG/KG	J	32	EPA8260
RBC441216	N-PROPYLBENZENE	2.1	140,000	EPA Reg 9 PRG		UG/KG	J	6.8	EPA8260
RBA091216	N-PROPYLBENZENE	7.7	140,000	EPA Reg 9 PRG		UG/KG	J	5.9	EPA8260
RBC431216	N-PROPYLBENZENE	11	140,000	EPA Reg 9 PRG		UG/KG		8.8	EPA8260
RBB210812	N-PROPYLBENZENE	59	140,000	EPA Reg 9 PRG		UG/KG		6.6	EPA8260
RBC171216	N-PROPYLBENZENE	1100	140,000	EPA Reg 9 PRG		UG/KG		32	EPA8260
RBB100005	O-XYLENE	0.91	36,000,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB330508	O-XYLENE	0.91	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBB350005	O-XYLENE	0.97	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBA051620	O-XYLENE	1	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBC361620	O-XYLENE	1	36,000,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBA140005	O-XYLENE	1.1	36,000,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBB200812	O-XYLENE	1.1	36,000,000	CDLE Tier 1		UG/KG	J	6.9	EPA8260
RBA120005	O-XYLENE	1.2	36,000,000	CDLE Tier 1		UG/KG	J	5.2	EPA8260
RBM030508	O-XYLENE	1.2	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB132024	O-XYLENE	1.3	36,000,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260
RBB250508	O-XYLENE	1.3	36,000,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBM080004	O-XYLENE	1.3	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB120812	O-XYLENE	1.4	36,000,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBB310812	O-XYLENE	1.4	36,000,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBM141620	O-XYLENE	1.4	36,000,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBA041620	O-XYLENE	1.5	36,000,000	CDLE Tier 1		UG/KG	J	5.6	EPA8260
RBA070005	O-XYLENE	1.5	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBA010005	O-XYLENE	1.7	36,000,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBA011620	O-XYLENE	1.7	36,000,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBA052630	O-XYLENE	1.7	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB360812	O-XYLENE	1.7	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBA062630	O-XYLENE	1.8	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB120005	O-XYLENE	1.9	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB380005	O-XYLENE	2	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBA141216	O-XYLENE	2.1	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB350508	O-XYLENE	2.1	36,000,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB360005	O-XYLENE	2.1	36,000,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBC360005	O-XYLENE	2.3	36,000,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB340508	O-XYLENE	2.5	36,000,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBA030005	O-XYLENE	2.6	36,000,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB122024	O-XYLENE	2.8	36,000,000	CDLE Tier 1		UG/KG	J	7.7	EPA8260
RBC441216	O-XYLENE	3	36,000,000	CDLE Tier 1		UG/KG	J	6.8	EPA8260
RBB312428	O-XYLENE	3.2	36,000,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260
RBA091216	O-XYLENE	4	36,000,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBC431216	O-XYLENE	4.9	36,000,000	CDLE Tier 1		UG/KG	J	8.8	EPA8260
RBB210812	O-XYLENE	20	36,000,000	CDLE Tier 1		UG/KG		6.6	EPA8260
RBC171216	O-XYLENE	250	36,000,000	CDLE Tier 1		UG/KG		32	EPA8260
RBC340005	PHENANTHRENE	180	NA			UG/KG	J	360	EPA8270
RBC241620	PHENANTHRENE	190	NA			UG/KG	J	480	EPA8270
RBB012428	PHENANTHRENE	220	NA			UG/KG	J	490	EPA8270
RBB200812	PHENANTHRENE	240	NA			UG/KG	J	460	EPA8270
RBB210812	PHENANTHRENE	260	NA			UG/KG	J	440	EPA8270
RBB020508	PHENANTHRENE	3300	NA			UG/KG		1700	EPA8270
RBB061620	PHENANTHRENE	4700	NA			UG/KG		1800	EPA8270
RBB011216	PHENANTHRENE	38000	NA			UG/KG	J	19000	EPA8270
RBC441216	P-ISOPROPYLTOLUENE	2.9	NA			UG/KG	J	6.8	EPA8260
RBB210812	P-ISOPROPYLTOLUENE	8.8	NA			UG/KG	J	6.6	EPA8260
RBA091216	P-ISOPROPYLTOLUENE	9.7	NA			UG/KG	J	5.9	EPA8260
RBC431216	P-ISOPROPYLTOLUENE	11	NA			UG/KG		8.8	EPA8260
RBC171216	P-ISOPROPYLTOLUENE	1400	NA			UG/KG	J	32	EPA8260
RBC441216	SEC-BUTYLBENZENE	7.4	110,000	EPA Reg 9 PRG		UG/KG		6.8	EPA8260
RBB210812	SEC-BUTYLBENZENE	15	110,000	EPA Reg 9 PRG		UG/KG		6.6	EPA8260
RBA091216	SEC-BUTYLBENZENE	16	110,000	EPA Reg 9 PRG		UG/KG	J	5.9	EPA8260
RBC431216	SEC-BUTYLBENZENE	31	110,000	EPA Reg 9 PRG		UG/KG		8.8	EPA8260
RBC171216	SEC-BUTYLBENZENE	1900	110,000	EPA Reg 9 PRG		UG/KG	J	32	EPA8260
RBC020005	SELENIUM	0.38	390	EPA Reg 9 PRG		MG/KG	B	0.56	EPA6010
RBC202024	SELENIUM	0.38	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBB411216	SELENIUM	0.4	390	EPA Reg 9 PRG		MG/KG	B	0.6	EPA6010
RBA052630	SELENIUM	0.45	390	EPA Reg 9 PRG		MG/KG	B	0.58	EPA6010
RBB240508	SELENIUM	0.45	390	EPA Reg 9 PRG		MG/KG	B	0.59	EPA6010
RBB350508	SELENIUM	0.45	390	EPA Reg 9 PRG		MG/KG	B	0.58	EPA6010
RBB431216	SELENIUM	0.45	390	EPA Reg 9 PRG		MG/KG	B	0.61	EPA6010
RBA090005	SELENIUM	0.46	390	EPA Reg 9 PRG		MG/KG	B	0.53	EPA6010
RBA092630	SELENIUM	0.46	390	EPA Reg 9 PRG		MG/KG	B	0.59	EPA6010
RBA173035	SELENIUM	0.46	390	EPA Reg 9 PRG		MG/KG	B	0.68	EPA6010
RBB100812	SELENIUM	0.46	390	EPA Reg 9 PRG		MG/KG	B	0.57	EPA6010
RBB421620	SELENIUM	0.46	390	EPA Reg 9 PRG		MG/KG	B	0.64	EPA6010
RBC040005	SELENIUM	0.46	390	EPA Reg 9 PRG		MG/KG	B	0.59	EPA6010
RBA062630	SELENIUM	0.47	390	EPA Reg 9 PRG		MG/KG	B	0.56	EPA6010
RBA082630	SELENIUM	0.47	390	EPA Reg 9 PRG		MG/KG	B	0.61	EPA6010
RBA072630	SELENIUM	0.48	390	EPA Reg 9 PRG		MG/KG	B	0.6	EPA6010
RBA112630	SELENIUM	0.48	390	EPA Reg 9 PRG		MG/KG	J	0.57	EPA6010
RBB072630	SELENIUM	0.48	390	EPA Reg 9 PRG		MG/KG	B	0.66	EPA6010
RBC151620	SELENIUM	0.48	390	EPA Reg 9 PRG		MG/KG	B	0.74	EPA6010
RBA011620	SELENIUM	0.49	390	EPA Reg 9 PRG		MG/KG	B	0.53	EPA6010
RBB232428	SELENIUM	0.5	390	EPA Reg 9 PRG		MG/KG	B	0.82	EPA6010
RBC101620	SELENIUM	0.5	390	EPA Reg 9 PRG		MG/KG	B	0.64	EPA6010
RBC081216	SELENIUM	0.52	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBC080005	SELENIUM	0.53	390	EPA Reg 9 PRG		MG/KG	B	0.58	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBA042630	SELENIUM	0.54	390	EPA Reg 9 PRG		MG/KG	B	0.55	EPA6010
RBA070005	SELENIUM	0.54	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBC111620	SELENIUM	0.54	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBC091620	SELENIUM	0.55	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBC400005	SELENIUM	0.55	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB052630	SELENIUM	0.56	390	EPA Reg 9 PRG		MG/KG	B	0.71	EPA6010
RBC181620	SELENIUM	0.56	390	EPA Reg 9 PRG		MG/KG	B	0.65	EPA6010
RBA170005	SELENIUM	0.57	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBC192024	SELENIUM	0.57	390	EPA Reg 9 PRG		MG/KG	B	0.68	EPA6010
RBA020408	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBB110508	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG	B	0.6	EPA6010
RBB160005	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB162428	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG	B	0.68	EPA6010
RBB410005	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBC391216	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBC421216	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG	B	0.66	EPA6010
RBM052428	SELENIUM	0.58	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBC021314	SELENIUM	0.59	390	EPA Reg 9 PRG		MG/KG	B	0.69	EPA6010
RBA061620	SELENIUM	0.6	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBM162025	SELENIUM	0.6	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBB330508	SELENIUM	0.62	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBC010005	SELENIUM	0.62	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBC200005	SELENIUM	0.62	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBA091216	SELENIUM	0.63	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBC030005	SELENIUM	0.63	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBC121620	SELENIUM	0.63	390	EPA Reg 9 PRG		MG/KG	B	0.64	EPA6010
RBC060005	SELENIUM	0.64	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBA100812	SELENIUM	0.65	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBB060005	SELENIUM	0.65	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBB250508	SELENIUM	0.65	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBC011216	SELENIUM	0.65	390	EPA Reg 9 PRG		MG/KG	B	0.67	EPA6010
RBB212428	SELENIUM	0.66	390	EPA Reg 9 PRG		MG/KG	B	0.79	EPA6010
RBB320508	SELENIUM	0.66	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBC172428	SELENIUM	0.66	390	EPA Reg 9 PRG		MG/KG	B	0.75	EPA6010
RBA040005	SELENIUM	0.67	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBB362428	SELENIUM	0.67	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBB130005	SELENIUM	0.68	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBB430005	SELENIUM	0.68	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC120005	SELENIUM	0.68	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBC141620	SELENIUM	0.68	390	EPA Reg 9 PRG		MG/KG	B	0.68	EPA6010
RBC321620	SELENIUM	0.68	390	EPA Reg 9 PRG		MG/KG	B	0.7	EPA6010
RBD050001	SELENIUM	0.68	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBB440005	SELENIUM	0.69	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBA050005	SELENIUM	0.7	390	EPA Reg 9 PRG		MG/KG		0.52	EPA6010
RBA130005	SELENIUM	0.7	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBA122630	SELENIUM	0.71	390	EPA Reg 9 PRG		MG/KG	J	0.58	EPA6010
RBB320005	SELENIUM	0.71	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBC190913	SELENIUM	0.71	390	EPA Reg 9 PRG		MG/KG		0.65	EPA6010
RBB161620	SELENIUM	0.72	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBB260005	SELENIUM	0.72	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBD040001	SELENIUM	0.72	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBA120005	SELENIUM	0.73	390	EPA Reg 9 PRG		MG/KG	J	0.52	EPA6010
RBB210005	SELENIUM	0.73	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC180005	SELENIUM	0.73	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBM101216	SELENIUM	0.73	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBA010005	SELENIUM	0.74	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBA131216	SELENIUM	0.74	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB390005	SELENIUM	0.74	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBC290005	SELENIUM	0.74	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBD060001	SELENIUM	0.74	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBA051620	SELENIUM	0.75	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBA160005	SELENIUM	0.75	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBB442025	SELENIUM	0.75	390	EPA Reg 9 PRG		MG/KG		0.61	EPA6010
RBC170005	SELENIUM	0.75	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBC241620	SELENIUM	0.75	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBC400812	SELENIUM	0.75	390	EPA Reg 9 PRG		MG/KG		0.61	EPA6010
RBA040812	SELENIUM	0.76	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC280005	SELENIUM	0.77	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBA060005	SELENIUM	0.78	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBB220005	SELENIUM	0.78	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBC041216	SELENIUM	0.78	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBC050005	SELENIUM	0.78	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBC171216	SELENIUM	0.78	390	EPA Reg 9 PRG		MG/KG		0.64	EPA6010
RBA030005	SELENIUM	0.79	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBB010005	SELENIUM	0.79	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBB302428	SELENIUM	0.79	390	EPA Reg 9 PRG		MG/KG		0.7	EPA6010
RBB390812	SELENIUM	0.79	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBC252024	SELENIUM	0.79	390	EPA Reg 9 PRG		MG/KG		0.62	EPA6010
RBC051216	SELENIUM	0.81	390	EPA Reg 9 PRG		MG/KG		0.65	EPA6010
RBC261620	SELENIUM	0.81	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBD070001	SELENIUM	0.81	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBA080005	SELENIUM	0.82	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBB102024	SELENIUM	0.82	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBD080001	SELENIUM	0.82	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBM020005	SELENIUM	0.82	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBA174549	SELENIUM	0.83	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBB061620	SELENIUM	0.83	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBB122024	SELENIUM	0.83	390	EPA Reg 9 PRG		MG/KG		0.77	EPA6010
RBB360812	SELENIUM	0.83	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBC071216	SELENIUM	0.83	390	EPA Reg 9 PRG		MG/KG		0.71	EPA6010
RBC240005	SELENIUM	0.83	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBC271620	SELENIUM	0.83	390	EPA Reg 9 PRG		MG/KG		0.78	EPA6010
RBA070812	SELENIUM	0.84	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBB142024	SELENIUM	0.84	390	EPA Reg 9 PRG		MG/KG		0.74	EPA6010
RBB210508	SELENIUM	0.84	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBC250005	SELENIUM	0.85	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBC320005	SELENIUM	0.85	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB150005	SELENIUM	0.86	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBB312428	SELENIUM	0.86	390	EPA Reg 9 PRG		MG/KG		0.73	EPA6010
RBC210005	SELENIUM	0.87	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBB200005	SELENIUM	0.88	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB340005	SELENIUM	0.88	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBA132630	SELENIUM	0.89	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBA140005	SELENIUM	0.89	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBB070508	SELENIUM	0.89	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBB171216	SELENIUM	0.89	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBC461215	SELENIUM	0.89	390	EPA Reg 9 PRG		MG/KG		0.63	EPA6010
RBA030508	SELENIUM	0.9	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB050508	SELENIUM	0.9	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBB242428	SELENIUM	0.9	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBC021620	SELENIUM	0.9	390	EPA Reg 9 PRG		MG/KG		0.75	EPA6010
RBC260005	SELENIUM	0.9	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBD100001	SELENIUM	0.9	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBA172025	SELENIUM	0.91	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC222024	SELENIUM	0.91	390	EPA Reg 9 PRG		MG/KG		0.65	EPA6010
RBA102630	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBB050005	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBB112024	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.7	EPA6010
RBB140508	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBB382428	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.79	EPA6010
RBC031216	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.64	EPA6010
RBC270005	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBB042630	SELENIUM	0.94	390	EPA Reg 9 PRG		MG/KG		0.85	EPA6010
RBB130508	SELENIUM	0.94	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBB342428	SELENIUM	0.94	390	EPA Reg 9 PRG		MG/KG		0.77	EPA6010
RBB370508	SELENIUM	0.94	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBC371620	SELENIUM	0.94	390	EPA Reg 9 PRG		MG/KG		0.67	EPA6010
RBB040005	SELENIUM	0.95	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB030005	SELENIUM	0.96	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB230508	SELENIUM	0.96	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBC220005	SELENIUM	0.96	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC430005	SELENIUM	0.96	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBC020509	SELENIUM	0.97	390	EPA Reg 9 PRG		MG/KG		0.64	EPA6010
RBC291620	SELENIUM	0.97	390	EPA Reg 9 PRG		MG/KG		0.79	EPA6010
RBA110005	SELENIUM	0.98	390	EPA Reg 9 PRG		MG/KG	J	1.1	EPA6010
RBB120005	SELENIUM	0.98	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBB350005	SELENIUM	0.98	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBC100509	SELENIUM	0.98	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBB152024	SELENIUM	0.99	390	EPA Reg 9 PRG		MG/KG		0.65	EPA6010
RBB401216	SELENIUM	0.99	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBB170005	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB382024	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBC110005	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC160005	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC370005	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBC381216	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.61	EPA6010
RBC451216	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.63	EPA6010
RBM012630	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBM041620	SELENIUM	1	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBA081216	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBA110812	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG	J	0.54	EPA6010
RBA160508	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.53	EPA6010
RBB020005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG	B	1.1	EPA6010
RBB030508	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBB110005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBB222428	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.78	EPA6010
RBB230005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBB300508	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBB310812	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBB322428	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBB330005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBB390508	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBC130005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBC190005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC230005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC242428	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBC432024	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.9	EPA6010
RBC440005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBC450005	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBM072428	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.7	EPA6010
RBM132024	SELENIUM	1.1	390	EPA Reg 9 PRG		MG/KG		0.66	EPA6010

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBA142630	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.59	EPA6010
RBB032428	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBB100005	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB210812	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.66	EPA6010
RBB300005	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		1.2	EPA6010
RBB340508	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBB370005	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG	B	1.2	EPA6010
RBB372428	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.74	EPA6010
RBC212024	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.67	EPA6010
RBC232024	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.66	EPA6010
RBC390005	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.54	EPA6010
RBC420005	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC441620	SELENIUM	1.2	390	EPA Reg 9 PRG		MG/KG		0.65	EPA6010
RBA141216	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBB120812	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		1.2	EPA6010
RBB132024	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.73	EPA6010
RBB252428	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.67	EPA6010
RBB380005	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		1.1	EPA6010
RBC100005	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC150005	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBC380005	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		1.1	EPA6010
RBC410005	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBM030508	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBM122024	SELENIUM	1.3	390	EPA Reg 9 PRG		MG/KG		0.67	EPA6010
RBA121620	SELENIUM	1.4	390	EPA Reg 9 PRG		MG/KG	J	1.1	EPA6010
RBB020508	SELENIUM	1.4	390	EPA Reg 9 PRG		MG/KG		0.63	EPA6010
RBB090508	SELENIUM	1.4	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBB092630	SELENIUM	1.4	390	EPA Reg 9 PRG		MG/KG		0.71	EPA6010
RBB220508	SELENIUM	1.4	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBB310005	SELENIUM	1.4	390	EPA Reg 9 PRG		MG/KG		1.2	EPA6010
RBC131620	SELENIUM	1.4	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBB090005	SELENIUM	1.5	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBB202428	SELENIUM	1.5	390	EPA Reg 9 PRG		MG/KG		0.71	EPA6010
RBB352428	SELENIUM	1.5	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBC441216	SELENIUM	1.5	390	EPA Reg 9 PRG		MG/KG		0.68	EPA6010
RBM110005	SELENIUM	1.5	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBM152024	SELENIUM	1.5	390	EPA Reg 9 PRG		MG/KG		0.91	EPA6010
RBC380509	SELENIUM	1.6	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBC411216	SELENIUM	1.6	390	EPA Reg 9 PRG		MG/KG		0.67	EPA6010
RBB022428	SELENIUM	1.7	390	EPA Reg 9 PRG		MG/KG		0.7	EPA6010
RBB040508	SELENIUM	1.7	390	EPA Reg 9 PRG		MG/KG		0.57	EPA6010
RBB332428	SELENIUM	1.7	390	EPA Reg 9 PRG		MG/KG		0.77	EPA6010
RBM062428	SELENIUM	1.7	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBC090005	SELENIUM	1.8	390	EPA Reg 9 PRG		MG/KG		0.56	EPA6010
RBC370812	SELENIUM	1.8	390	EPA Reg 9 PRG		MG/KG		0.62	EPA6010
RBB442530	SELENIUM	2.1	390	EPA Reg 9 PRG		MG/KG		0.83	EPA6010
RBB200812	SELENIUM	2.2	390	EPA Reg 9 PRG		MG/KG		0.69	EPA6010
RBC431216	SELENIUM	2.2	390	EPA Reg 9 PRG		MG/KG		0.88	EPA6010
RBA151620	SELENIUM	2.4	390	EPA Reg 9 PRG		MG/KG		0.55	EPA6010
RBB443539	SELENIUM	2.5	390	EPA Reg 9 PRG		MG/KG		0.85	EPA6010
RBC281620	SELENIUM	2.5	390	EPA Reg 9 PRG		MG/KG		0.98	EPA6010
RBB210812	TERT-BUTYLBENZENE	1.2	130,000	EPA Reg 9 PRG		UG/KG	J	6.6	EPA8260
RBB370508	TETRACHLOROETHENE	1.8	5,700	EPA Reg 9 PRG		UG/KG	J	5.8	EPA8260
RBC141620	TETRACHLOROETHENE	21	5,700	EPA Reg 9 PRG		UG/KG		6.8	EPA8260
RBB210508	TOLUENE	0.7	4,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBB040005	TOLUENE	0.71	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB070005	TOLUENE	0.72	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBB030005	TOLUENE	0.74	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB120812	TOLUENE	0.76	4,100,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBM012630	TOLUENE	0.76	4,100,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBB120005	TOLUENE	0.82	4,100,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBB132024	TOLUENE	0.83	4,100,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260
RBC270005	TOLUENE	0.85	4,100,000	CDLE Tier 1		UG/KG	J	5.6	EPA8260
RBB022428	TOLUENE	0.89	4,100,000	CDLE Tier 1		UG/KG	J	7	EPA8260
RBC380005	TOLUENE	0.93	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC370005	TOLUENE	0.95	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB420005	TOLUENE	0.99	4,100,000	CDLE Tier 1		UG/KG	J	5.6	EPA8260
RBC261620	TOLUENE	1	4,100,000	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBB312428	TOLUENE	1.1	4,100,000	CDLE Tier 1		UG/KG	J	7.3	EPA8260
RBA082630	TOLUENE	1.2	4,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBC110005	TOLUENE	1.2	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC380509	TOLUENE	1.2	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBA080005	TOLUENE	1.3	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC190913	TOLUENE	1.3	4,100,000	CDLE Tier 1		UG/KG	J	6.5	EPA8260
RBC451216	TOLUENE	1.3	4,100,000	CDLE Tier 1		UG/KG	J	6.3	EPA8260
RBC222024	TOLUENE	1.4	4,100,000	CDLE Tier 1		UG/KG	J	6.5	EPA8260
RBC281620	TOLUENE	1.4	4,100,000	CDLE Tier 1		UG/KG	J	9.8	EPA8260
RBA172025	TOLUENE	1.5	4,100,000	CDLE Tier 1		UG/KG	J	5.6	EPA8260
RBC010005	TOLUENE	1.6	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC331620	TOLUENE	1.9	4,100,000	CDLE Tier 1		UG/KG	J	7.6	EPA8260
RBC400812	TOLUENE	1.9	4,100,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBB122024	TOLUENE	2	4,100,000	CDLE Tier 1		UG/KG	J	7.7	EPA8260
RBC031216	TOLUENE	2.1	4,100,000	CDLE Tier 1		UG/KG	J	6.4	EPA8260
RBC410005	TOLUENE	2.2	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC431216	TOLUENE	2.2	4,100,000	CDLE Tier 1		UG/KG	J	8.8	EPA8260
RBM162025	TOLUENE	2.2	4,100,000	CDLE Tier 1		UG/KG	J	7	EPA8260
RBB442025	TOLUENE	2.4	4,100,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBC160005	TOLUENE	2.4	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC311620	TOLUENE	2.5	4,100,000	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBC172428	TOLUENE	2.6	4,100,000	CDLE Tier 1		UG/KG	J	7.5	EPA8260
RBC340509	TOLUENE	2.6	4,100,000	CDLE Tier 1		UG/KG	J	5.8	EPA8260
RBC170005	TOLUENE	2.7	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB431216	TOLUENE	2.8	4,100,000	CDLE Tier 1		UG/KG	J	6.1	EPA8260
RBC030005	TOLUENE	2.8	4,100,000	CDLE Tier 1		UG/KG	J	5.9	EPA8260
RBA170005	TOLUENE	2.9	4,100,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBB410005	TOLUENE	3	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC020005	TOLUENE	3	4,100,000	CDLE Tier 1		UG/KG	J	5.6	EPA8260
RBC220005	TOLUENE	3	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC341620	TOLUENE	3	4,100,000	CDLE Tier 1		UG/KG	J	7	EPA8260
RBC370812	TOLUENE	3	4,100,000	CDLE Tier 1		UG/KG	J	6.2	EPA8260
RBC411216	TOLUENE	3.3	4,100,000	CDLE Tier 1		UG/KG	J	6.7	EPA8260
RBC390005	TOLUENE	3.4	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC460005	TOLUENE	3.5	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC131620	TOLUENE	3.8	4,100,000	CDLE Tier 1		UG/KG	J	6.8	EPA8260
RBC212024	TOLUENE	3.9	4,100,000	CDLE Tier 1		UG/KG	J	6.7	EPA8260
RBC421216	TOLUENE	4.1	4,100,000	CDLE Tier 1		UG/KG	J	6.6	EPA8260
RBC091620	TOLUENE	4.2	4,100,000	CDLE Tier 1		UG/KG	J	7	EPA8260
RBC340005	TOLUENE	4.3	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBC151620	TOLUENE	4.4	4,100,000	CDLE Tier 1		UG/KG	J	7.4	EPA8260
RBC242428	TOLUENE	4.4	4,100,000	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBC441620	TOLUENE	4.4	4,100,000	CDLE Tier 1		UG/KG	J	6.5	EPA8260
RBC450005	TOLUENE	4.5	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB411216	TOLUENE	4.6	4,100,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBC260005	TOLUENE	4.6	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBC280005	TOLUENE	4.6	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBB401216	TOLUENE	4.7	4,100,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBC461215	TOLUENE	4.7	4,100,000	CDLE Tier 1		UG/KG	J	6.3	EPA8260
RBC100509	TOLUENE	4.9	4,100,000	CDLE Tier 1		UG/KG	J	5.7	EPA8260
RBC011216	TOLUENE	5.1	4,100,000	CDLE Tier 1		UG/KG	J	6.7	EPA8260
RBC271620	TOLUENE	5.2	4,100,000	CDLE Tier 1		UG/KG	J	7.8	EPA8260
RBC240005	TOLUENE	5.5	4,100,000	CDLE Tier 1		UG/KG		5.3	EPA8260
RBC190005	TOLUENE	5.8	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC291620	TOLUENE	5.8	4,100,000	CDLE Tier 1		UG/KG	J	7.9	EPA8260
RBB443539	TOLUENE	5.9	4,100,000	CDLE Tier 1		UG/KG	J	8.5	EPA8260
RBC020509	TOLUENE	6.6	4,100,000	CDLE Tier 1		UG/KG		6.4	EPA8260
RBC081216	TOLUENE	6.7	4,100,000	CDLE Tier 1		UG/KG	J	7	EPA8260
RBC150005	TOLUENE	6.7	4,100,000	CDLE Tier 1		UG/KG		5.6	EPA8260
RBC290005	TOLUENE	6.7	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC180005	TOLUENE	6.9	4,100,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBC381216	TOLUENE	6.9	4,100,000	CDLE Tier 1		UG/KG		6.1	EPA8260
RBB421620	TOLUENE	7.2	4,100,000	CDLE Tier 1		UG/KG		6.4	EPA8260
RBC101620	TOLUENE	7.4	4,100,000	CDLE Tier 1		UG/KG		6.4	EPA8260
RBC202024	TOLUENE	7.4	4,100,000	CDLE Tier 1		UG/KG		7	EPA8260
RBC121620	TOLUENE	7.5	4,100,000	CDLE Tier 1		UG/KG		6.4	EPA8260
RBC440005	TOLUENE	7.6	4,100,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBC200005	TOLUENE	9.1	4,100,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBC241620	TOLUENE	9.5	4,100,000	CDLE Tier 1		UG/KG		7.2	EPA8260
RBC120005	TOLUENE	9.7	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC100005	TOLUENE	9.8	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBM110005	TOLUENE	9.8	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC192024	TOLUENE	10	4,100,000	CDLE Tier 1		UG/KG		6.8	EPA8260
RBC252024	TOLUENE	10	4,100,000	CDLE Tier 1		UG/KG		6.2	EPA8260
RBC320005	TOLUENE	10	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC130005	TOLUENE	11	4,100,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBM122024	TOLUENE	11	4,100,000	CDLE Tier 1		UG/KG		6.7	EPA8260
RBB442530	TOLUENE	12	4,100,000	CDLE Tier 1		UG/KG		8.3	EPA8260
RBC021620	TOLUENE	12	4,100,000	CDLE Tier 1		UG/KG		7.5	EPA8260
RBC040005	TOLUENE	12	4,100,000	CDLE Tier 1		UG/KG		5.9	EPA8260
RBC350005	TOLUENE	12	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC140005	TOLUENE	13	4,100,000	CDLE Tier 1		UG/KG		5.4	EPA8260
RBC181620	TOLUENE	13	4,100,000	CDLE Tier 1		UG/KG		6.5	EPA8260
RBC210005	TOLUENE	13	4,100,000	CDLE Tier 1		UG/KG	J	5.5	EPA8260
RBC230005	TOLUENE	13	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC250005	TOLUENE	13	4,100,000	CDLE Tier 1		UG/KG		5.3	EPA8260
RBC080005	TOLUENE	15	4,100,000	CDLE Tier 1		UG/KG		5.8	EPA8260
RBC141620	TOLUENE	15	4,100,000	CDLE Tier 1		UG/KG		6.8	EPA8260
RBC232024	TOLUENE	15	4,100,000	CDLE Tier 1		UG/KG		6.6	EPA8260
RBC161620	TOLUENE	16	4,100,000	CDLE Tier 1		UG/KG		7.2	EPA8260
RBC430005	TOLUENE	16	4,100,000	CDLE Tier 1		UG/KG	J	5.4	EPA8260
RBB430005	TOLUENE	19	4,100,000	CDLE Tier 1		UG/KG		5.5	EPA8260
RBC321620	TOLUENE	23	4,100,000	CDLE Tier 1		UG/KG		7	EPA8260
RBC090005	TOLUENE	25	4,100,000	CDLE Tier 1		UG/KG		5.6	EPA8260
RBC070005	TOLUENE	26	4,100,000	CDLE Tier 1		UG/KG		6	EPA8260
RBC071216	TOLUENE	27	4,100,000	CDLE Tier 1		UG/KG		7.1	EPA8260
RBM132024	TOLUENE	27	4,100,000	CDLE Tier 1		UG/KG		6.6	EPA8260
RBB210812	TOLUENE	30	4,100,000	CDLE Tier 1		UG/KG		6.6	EPA8260
RBC171216	TOLUENE	59	4,100,000	CDLE Tier 1		UG/KG		32	EPA8260

BPE - Bis(2-ethylhexyl)phthalate

[a]**"Screening Value"** Column:

Table E.2-2
Investigative Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method

Screening Values are included for comparison to analytical results to determine a contaminants need for further evaluation.

[b] **"Source"** Column:

Screening Values were taken from one of three sources: COGCC Series 900, USEPA Region 9 Preliminary Remediation Goals, and Colorado Department of Labor and Employment (CDLE) Tier 1 or 1A screening values

[c] **"Flag"** Column:

the screening value then the word "hit" is displayed in the flag column.

[d] **"Qualifier"** Column:

This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:

B - For inorganics, analyte is present at a concentration below contract required detection limit but above the instrument detection limit.

B - For Organics, analyte is present in the associated QC blank.

J - result is estimated, Analyte is present below nominal reporting limit, or the analyte is detected, but the quantitation

Table is sorted alphabetically by the parameter column and then by the result column.

Table E.2-3
Investigative Soil Sample Field Duplicate RPD Results

Sample Number	Duplicate ID	Parameter	Orig. Result	Dup. Result	% RPD	Units	Qualifier	Detection Limit	User Test Group
RBB280005	RBM060005	ARSENIC	5.3	5.4	2	MG/KG		1.2	EPA6010
RBB362428	RBM072428	ARSENIC	4.6	4.7	2	MG/KG		1.4	EPA6010
RBC232024	RBM132024	ARSENIC	4.6	4.7	2	MG/KG		1.3	EPA6010
RBD100001	RBM090001	ARSENIC	5.4	5.2	4	MG/KG		1.1	EPA6010
RBA072630	RBM012630	ARSENIC	3.9	4.1	5	MG/KG		1.2	EPA6010
RBB090508	RBM030508	ARSENIC	6.2	6.6	6	MG/KG		1.2	EPA6010
RBB242428	RBM052428	ARSENIC	5.3	4.8	10	MG/KG		1.4	EPA6010
RBC130005	RBM110005	ARSENIC	4.8	5.3	10	MG/KG	J	1.1	EPA6010
RBA150005	RBM020005	ARSENIC	6.2	5.5	12	MG/KG		1.1	EPA6010
RBC461215	RBM171215	ARSENIC	5.5	4.8	14	MG/KG		1.3	EPA6010
RBC361620	RBM141620	ARSENIC	6.3	5.3	17	MG/KG		1.2	EPA6010
RBB161620	RBM041620	ARSENIC	5.4	4.4	20	MG/KG		1.2	EPA6010
RBC031216	RBM101216	ARSENIC	6.4	5	25	MG/KG		1.3	EPA6010
RBC432024	RBM152024	ARSENIC	3	4.1	31	MG/KG		1.8	EPA6010
RBB322428	RBM062428	ARSENIC	5.4	7.4	31	MG/KG		1.4	EPA6010
RBC212024	RBM122024	ARSENIC	3.3	4.7	35	MG/KG		1.3	EPA6010
RBA020004	RBM080004	ARSENIC	4.3	NA	NC	MG/KG		1.1	EPA6010
RBA150005	RBM020005	BARIUM	340	340	0	MG/KG		11	EPA6010
RBD100001	RBM090001	BARIUM	320	320	0	MG/KG		11	EPA6010
RBC361620	RBM141620	BARIUM	340	340	0	MG/KG		12	EPA6010
RBB242428	RBM052428	BARIUM	390	380	3	MG/KG		14	EPA6010
RBC212024	RBM122024	BARIUM	320	330	3	MG/KG		13	EPA6010
RBC031216	RBM101216	BARIUM	350	330	6	MG/KG		13	EPA6010
RBA072630	RBM012630	BARIUM	350	320	9	MG/KG		12	EPA6010
RBC432024	RBM152024	BARIUM	180	160	12	MG/KG		18	EPA6010
RBC461215	RBM171215	BARIUM	300	340	13	MG/KG	J	13	EPA6010
RBB280005	RBM060005	BARIUM	440	500	13	MG/KG		12	EPA6010
RBC232024	RBM132024	BARIUM	270	310	14	MG/KG		13	EPA6010
RBB362428	RBM072428	BARIUM	350	300	15	MG/KG		14	EPA6010
RBB161620	RBM041620	BARIUM	340	400	16	MG/KG	J	12	EPA6010
RBB322428	RBM062428	BARIUM	290	350	19	MG/KG		14	EPA6010
RBC130005	RBM110005	BARIUM	280	350	22	MG/KG		11	EPA6010
RBB090508	RBM030508	BARIUM	1800	990	58	MG/KG		120	EPA6010
RBA020004	RBM080004	BARIUM	350	NA	NC	MG/KG		11	EPA6010
RBA020004	RBM080004	CADMIUM	0.1	NA	NC	MG/KG	B	1.1	EPA6010
RBB090508	RBM030508	CHROMIUM	34	34	0	MG/KG		1.2	EPA6010
RBB161620	RBM041620	CHROMIUM	32	32	0	MG/KG		1.2	EPA6010
RBC130005	RBM110005	CHROMIUM	32	32	0	MG/KG	J	1.1	EPA6010
RBC361620	RBM141620	CHROMIUM	26	26	0	MG/KG		1.2	EPA6010
RBC461215	RBM171215	CHROMIUM	30	30	0	MG/KG		1.3	EPA6010
RBC212024	RBM122024	CHROMIUM	38	37	3	MG/KG		1.3	EPA6010
RBA072630	RBM012630	CHROMIUM	36	35	3	MG/KG		1.2	EPA6010
RBB280005	RBM060005	CHROMIUM	32	33	3	MG/KG		1.2	EPA6010
RBB242428	RBM052428	CHROMIUM	29	30	3	MG/KG		1.4	EPA6010
RBA150005	RBM020005	CHROMIUM	29	28	4	MG/KG		1.1	EPA6010
RBC031216	RBM101216	CHROMIUM	29	31	7	MG/KG		1.3	EPA6010
RBD100001	RBM090001	CHROMIUM	47	43	9	MG/KG		1.1	EPA6010
RBB362428	RBM072428	CHROMIUM	29	26	11	MG/KG		1.4	EPA6010
RBB322428	RBM062428	CHROMIUM	30	34	13	MG/KG		1.4	EPA6010
RBC232024	RBM132024	CHROMIUM	25	29	15	MG/KG		1.3	EPA6010
RBC432024	RBM152024	CHROMIUM	10	13	26	MG/KG		1.8	EPA6010
RBA020004	RBM080004	CHROMIUM	35	NA	NC	MG/KG		1.1	EPA6010
RBA072630	RBM012630	LEAD	11	11	0	MG/KG		0.36	EPA6010
RBB161620	RBM041620	LEAD	11	11	0	MG/KG		0.36	EPA6010

Table E.2-3
Investigative Soil Sample Field Duplicate RPD Results

Sample Number	Duplicate ID	Parameter	Orig. Result	Dup. Result	% RPD	Units	Qualifier	Detection Limit	User Test Group
RBD100001	RBM090001	LEAD	11	11	0	MG/KG		0.65	EPA6010
RBC031216	RBM101216	LEAD	12	12	0	MG/KG		0.38	EPA6010
RBC232024	RBM132024	LEAD	12	12	0	MG/KG		0.4	EPA6010
RBC461215	RBM171215	LEAD	11	11	0	MG/KG		0.38	EPA6010
RBA150005	RBM020005	LEAD	14	13	7	MG/KG		0.66	EPA6010
RBB280005	RBM060005	LEAD	13	14	7	MG/KG		0.35	EPA6010
RBC130005	RBM110005	LEAD	11	12	9	MG/KG		0.33	EPA6010
RBC361620	RBM141620	LEAD	11	12	9	MG/KG		0.74	EPA6010
RBB362428	RBM072428	LEAD	11	10	10	MG/KG		0.42	EPA6010
RBC212024	RBM122024	LEAD	10	11	10	MG/KG		0.4	EPA6010
RBB242428	RBM052428	LEAD	14	16	13	MG/KG	J	0.41	EPA6010
RBB090508	RBM030508	LEAD	13	15	14	MG/KG		0.35	EPA6010
RBB322428	RBM062428	LEAD	11	13	17	MG/KG		0.43	EPA6010
RBC432024	RBM152024	LEAD	5.4	7	26	MG/KG	J	2.7	EPA6010
RBA020004	RBM080004	LEAD	20	NA	NC	MG/KG		0.63	EPA6010
RBB090508	RBM030508	SELENIUM	1.4	1.3	7	MG/KG		0.58	EPA6010
RBC212024	RBM122024	SELENIUM	1.2	1.3	8	MG/KG		0.67	EPA6010
RBC232024	RBM132024	SELENIUM	1.2	1.1	9	MG/KG		0.66	EPA6010
RBC031216	RBM101216	SELENIUM	0.93	0.73	24	MG/KG		0.64	EPA6010
RBC130005	RBM110005	SELENIUM	1.1	1.5	31	MG/KG		0.54	EPA6010
RBC432024	RBM152024	SELENIUM	1.1	1.5	31	MG/KG		0.9	EPA6010
RBB161620	RBM041620	SELENIUM	0.72	1	33	MG/KG		0.59	EPA6010
RBB322428	RBM062428	SELENIUM	1.1	1.7	43	MG/KG		0.72	EPA6010
RBB242428	RBM052428	SELENIUM	0.9	0.58	43	MG/KG		0.68	EPA6010
RBB362428	RBM072428	SELENIUM	0.67	1.1	49	MG/KG	B	0.7	EPA6010
RBA072630	RBM012630	SELENIUM	0.48	1	70	MG/KG	B	0.6	EPA6010
RBA150005	RBM020005	SELENIUM	ND	0.82	NC	MG/KG			EPA6010
RBD100001	RBM090001	SELENIUM	0.9	ND	NC	MG/KG	B	1.1	EPA6010
RBC461215	RBM171215	SELENIUM	0.89	2200	NC	MG/KG		0.63	EPA6010
RBC432024	RBM152024	DRO	64	33	64	MG/KG		9	EPA8015
RBB090508	RBM030508	DRO	64	170	91	MG/KG		5.8	EPA8015
RBB362428	RBM072428	2-BUTANONE	ND	41	NC	UG/KG			EPA8260
RBC432024	RBM152024	4-CHLOROANILINE	ND	1500	NC	UG/KG			EPA8260
RBB161620	RBM041620	ACETONE	10	9.9	1	UG/KG	J	24	EPA8260
RBB322428	RBM062428	ACETONE	53	48	10	UG/KG		29	EPA8260
RBC232024	RBM132024	ACETONE	20	15	29	UG/KG	J	26	EPA8260
RBB242428	RBM052428	ACETONE	46	75	48	UG/KG		27	EPA8260
RBB362428	RBM072428	ACETONE	120	210	55	UG/KG		28	EPA8260
RBC212024	RBM122024	ACETONE	19	37	64	UG/KG	J	27	EPA8260
RBC031216	RBM101216	ACETONE	19	ND	NC	UG/KG	J	26	EPA8260
RBC130005	RBM110005	ACETONE	28		NC	UG/KG		22	EPA8260
RBC432024	RBM152024	ACETONE	26		NC	UG/KG	J	36	EPA8260
RBC130005	RBM110005	BENZENE	2.1	2.5	17	UG/KG	J	5.4	EPA8260
RBC212024	RBM122024	BENZENE	2	3.7	60	UG/KG	J	6.7	EPA8260
RBC232024	RBM132024	BENZENE	1.7	6.8	120	UG/KG	J	6.6	EPA8260
RBC232024	RBM132024	CARBON DISULFIDE	2.3	1.7	30	UG/KG	J	6.6	EPA8260
RBB322428	RBM062428	CARBON DISULFIDE	1.8	2.6	36	UG/KG	J	7.2	EPA8260
RBB242428	RBM052428	CARBON DISULFIDE	2.4	5.7	81	UG/KG	J	6.8	EPA8260
RBC432024	RBM152024	CARBON DISULFIDE	12	2.6	129	UG/KG		9	EPA8260
RBB362428	RBM072428	CARBON DISULFIDE	2.8	15	137	UG/KG	J	7	EPA8260
RBC361620	RBM141620	ETHYLBENZENE	0.81	1.1	30	UG/KG	J	6.1	EPA8260
RBB090508	RBM030508	ETHYLBENZENE	ND	0.83	NC	UG/KG			EPA8260
RBC361620	RBM141620	M+P-XYLENE	3.3	4.5	31	UG/KG	J	6.1	EPA8260
RBA150005	RBM020005	M+P-XYLENE	ND	1.5	NC	UG/KG			EPA8260

Table E.2-3
Investigative Soil Sample Field Duplicate RPD Results

Sample Number	Duplicate ID	Parameter	Orig. Result	Dup. Result	% RPD	Units	Qualifier	Detection Limit	User Test Group
RBB090508	RBM030508	M+P-XYLENE	ND	3.9	NC	UG/KG			EPA8260
RBB322428	RBM062428	M+P-XYLENE	3.5	ND	NC	UG/KG	J	7.2	EPA8260
RBB362428	RBM072428	M+P-XYLENE	ND	2.9	NC	UG/KG			EPA8260
RBA020004	RBM080004	M+P-XYLENE	3.1	ND	NC	UG/KG	J	5.3	EPA8260
RBB090508	RBM030508	METHYLENE CHLORIDE	63	ND	NC	UG/KG	B	5.8	EPA8260
RBC361620	RBM141620	O-XYLENE	1	1.4	33	UG/KG	J	6.1	EPA8260
RBB090508	RBM030508	O-XYLENE	ND	1.2	NC	UG/KG			EPA8260
RBA020004	RBM080004	O-XYLENE	ND	1.3	NC	UG/KG			EPA8260
RBC130005	RBM110005	TOLUENE	11	9.8	12	UG/KG		5.4	EPA8260
RBC232024	RBM132024	TOLUENE	15	27	57	UG/KG		6.6	EPA8260
RBC212024	RBM122024	TOLUENE	3.9	11	95	UG/KG	J	6.7	EPA8260
RBA072630	RBM012630	TOLUENE	ND	0.76	NC	UG/KG			EPA8260
RBC031216	RBM101216	TOLUENE	2.1	ND	NC	UG/KG	J	6.4	EPA8260
RBC461215	RBM171215	TOLUENE	4.7	ND	NC	UG/KG	J	6.3	EPA8260
RBC130005	RBM110005	2,4-DINITROPHENOL	ND	1800	NC	UG/KG			EPA8270
RBB161620	RBM041620	BEHP	320	210	42	UG/KG	J	400	EPA8270
RBA072630	RBM012630	BEHP	240	940	119	UG/KG	J	400	EPA8270
RBB090508	RBM030508	BEHP	ND	1800	NC	UG/KG			EPA8270
RBB242428	RBM052428	BEHP	1800	ND	NC	UG/KG		450	EPA8270
RBC130005	RBM110005	HCP	ND	360	NC	UG/KG			EPA8270

Notes:

Table is sorted by method then by parameter and then finally by % RPD in ascending order.

RPD = 100 x {(|C 1 -C 2 |)/[(C 1 +C 2)/2]}, where C 1 = Concentration of the analyte in the first sample aliquot, C 2 =

NC - Not Calculatable

NA - Not Analyzed

BEHP - Bis(2-ethylhexyl)phthalate

DRO - Diesel Range Organics

Data qualified "R" for rejected, not included in this table: ie 3-Nitroaniline, Hexachlorocyclopentadiene

Table E.2-4
Investigative Soil Sample
Summary of Rejected Results

Sample Number	Test Method	Parameter	Result	Units	Validation Qualifier	Detection limit	Reason		
							1	2	3
RBA174549	EPA8270	1,2,4-TRICHLOROBENZENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	1,2-DICHLOROBENZENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	1,3-DICHLOROBENZENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	1,4-DICHLOROBENZENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	2,3,4,6-TETRACHLOROPHENOL	2300	UG/KG	R	2300	143		
RBA174549	EPA8270	2,4,5-TRICHLOROPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	2,4,6-TRICHLOROPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	2,4-DICHLOROPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	2,4-DIMETHYLPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	2,4-DINITROPHENOL	2300	UG/KG	R	2300	143		
RBB240005	EPA8270	2,4-DINITROPHENOL	1900	UG/KG	R	1900	069	136	
RBC050005	EPA8270	2,4-DINITROPHENOL	1900	UG/KG	R	1900	069		
RBC051216	EPA8270	2,4-DINITROPHENOL	2200	UG/KG	R	2200	069		
RBC060005	EPA8270	2,4-DINITROPHENOL	1900	UG/KG	R	1900	069		
RBC061216	EPA8270	2,4-DINITROPHENOL	2200	UG/KG	R	2200	069		
RBC070005	EPA8270	2,4-DINITROPHENOL	2000	UG/KG	R	2000	069		
RBC080005	EPA8270	2,4-DINITROPHENOL	1900	UG/KG	R	1900	069		
RBC081216	EPA8270	2,4-DINITROPHENOL	2300	UG/KG	R	2300	069		
RBC100509	EPA8270	2,4-DINITROPHENOL	1900	UG/KG	R	1900	069		
RBC101620	EPA8270	2,4-DINITROPHENOL	2100	UG/KG	R	2100	069		
RBC140005	EPA8270	2,4-DINITROPHENOL	1800	UG/KG	R	1800	069		
RBC141620	EPA8270	2,4-DINITROPHENOL	2300	UG/KG	R	2300	069		
RBC310005	EPA8270	2,4-DINITROPHENOL	1800	UG/KG	R	1800	069		
RBC311620	EPA8270	2,4-DINITROPHENOL	2400	UG/KG	R	2400	069		
RBC331620	EPA8270	2,4-DINITROPHENOL	2500	UG/KG	R	2500	069		
RBM110005	EPA8270	2,4-DINITROPHENOL	1800	UG/KG	R	1800	069		
RBA174549	EPA8270	2,4-DINITROTOLUENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	2,6-DINITROTOLUENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	2-CHLORONAPHTHALENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	2-CHLOROPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	2-METHYLNAPHTHALENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	2-METHYLPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	2-NITROANILINE	2300	UG/KG	R	2300	143		
RBA174549	EPA8270	2-NITROPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	3,3'-DICHLOROBENZIDINE	2300	UG/KG	R	2300	143		
RBA112630	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	128
RBA120005	EPA8270	3-NITROANILINE	1700	UG/KG	R	1700	069	117	128
RBA121620	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	128
RBA122630	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	128
RBA130005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBA131216	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBA132630	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	136
RBA140005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBA141216	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	136
RBA142630	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	136
RBA170005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	136	
RBA172025	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	136	
RBA173035	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	069	136	
RBA174549	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	068	069	136
RBB020005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBB062630	EPA8270	3-NITROANILINE	2600	UG/KG	R	2600	069	117	136
RBB070005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	136	
RBB070508	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	136	

Table E.2-4
Investigative Soil Sample
Summary of Rejected Results

Sample Number	Test Method	Parameter	Result	Units	Validation Qualifier	Detection limit	Reason		
							1	2	3
RBB072630	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	069	136	
RBB080005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBB080812	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	136
RBB082630	EPA8270	3-NITROANILINE	2500	UG/KG	R	2500	069	117	136
RBB090005	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	136
RBB090508	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	136
RBB092630	EPA8270	3-NITROANILINE	2400	UG/KG	R	2400	069	117	136
RBB100005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBB100812	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	136
RBB102024	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	136
RBB170005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	
RBB170508	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	
RBB310005	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	
RBB312428	EPA8270	3-NITROANILINE	2400	UG/KG	R	2400	069	117	
RBB440005	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	136
RBB442025	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	136
RBB442530	EPA8270	3-NITROANILINE	2800	UG/KG	R	2800	069	117	136
RBB443539	EPA8270	3-NITROANILINE	2800	UG/KG	R	2800	069	117	136
RBC010005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	
RBC011216	EPA8270	3-NITROANILINE	2200	UG/KG	R	2200	069	117	
RBC020005	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	
RBC020509	EPA8270	3-NITROANILINE	2100	UG/KG	R	2100	069	117	
RBC021314	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	069	117	
RBC021620	EPA8270	3-NITROANILINE	2500	UG/KG	R	2500	069	117	
RBC030005	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	
RBC031216	EPA8270	3-NITROANILINE	2100	UG/KG	R	2100	069	117	
RBC040005	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	
RBC041216	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	069	117	
RBC370005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	136	
RBC371620	EPA8270	3-NITROANILINE	2200	UG/KG	R	2200	069	136	
RBC390005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	
RBC391216	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	069	136	
RBC400005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	
RBC400812	EPA8270	3-NITROANILINE	2000	UG/KG	R	2000	069	117	
RBC460005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBC461215	EPA8270	3-NITROANILINE	2100	UG/KG	R	2100	069	136	
RBC462025	EPA8270	3-NITROANILINE	2700	UG/KG	R	2700	069	117	136
RBC462530	EPA8270	3-NITROANILINE	3400	UG/KG	R	3400	069	117	136
RBM030508	EPA8270	3-NITROANILINE	1900	UG/KG	R	1900	069	117	136
RBM101216	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	069	117	
RBM162025	EPA8270	3-NITROANILINE	2300	UG/KG	R	2300	069	117	136
RBM171215	EPA8270	3-NITROANILINE	2200	UG/KG	R	2200	069	117	136
RBZ010005	EPA8270	3-NITROANILINE	1800	UG/KG	R	1800	069	117	136
RBZ012025	EPA8270	3-NITROANILINE	2400	UG/KG	R	2400	069	117	136
RBZ013539	EPA8270	3-NITROANILINE	2600	UG/KG	R	2600	069	117	136
RBA174549	EPA8270	4,6-DINITRO-2-METHYLPHENOL	2300	UG/KG	R	2300	143		
RBA174549	EPA8270	4-BROMOPHENYL PHENYL ETHER	450	UG/KG	R	450	143		
RBA174549	EPA8270	4-CHLORO-3-METHYLPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	4-CHLOROANILINE	1100	UG/KG	R	1100	136	143	
RBC370005	EPA8270	4-CHLOROANILINE	900	UG/KG	R	900	069	136	
RBC371620	EPA8270	4-CHLOROANILINE	1100	UG/KG	R	1100	069	136	
RBC391216	EPA8270	4-CHLOROANILINE	1200	UG/KG	R	1200	069	136	
RBC411216	EPA8270	4-CHLOROANILINE	1100	UG/KG	R	1100	069	136	

Table E.2-4
Investigative Soil Sample
Summary of Rejected Results

Sample Number	Test Method	Parameter	Result	Units	Validation Qualifier	Detection limit	Reason		
							1	2	3
RBM152024	EPA8270	4-CHLOROANILINE	1500	UG/KG	R	1500	069	136	
RBA174549	EPA8270	4-CHLOROPHENYL PHENYL ETHER	450	UG/KG	R	450	143		
RBA174549	EPA8270	4-METHYLPHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	4-NITROANILINE	2300	UG/KG	R	2300	143		
RBA150005	EPA8270	4-NITROPHENOL	1800	UG/KG	R	1800	069		
RBA151216	EPA8270	4-NITROPHENOL	1800	UG/KG	R	1800	069		
RBA151620	EPA8270	4-NITROPHENOL	1800	UG/KG	R	1800	069		
RBA160508	EPA8270	4-NITROPHENOL	1800	UG/KG	R	1800	069		
RBA174549	EPA8270	4-NITROPHENOL	2300	UG/KG	R	2300	143		
RBB010005	EPA8270	4-NITROPHENOL	1800	UG/KG	R	1800	069		
RBB012428	EPA8270	4-NITROPHENOL	2400	UG/KG	R	2400	069		
RBB012830	EPA8270	4-NITROPHENOL	2600	UG/KG	R	2600	069		
RBM020005	EPA8270	4-NITROPHENOL	1800	UG/KG	R	1800	069		
RBA174549	EPA8270	ACENAPHTHENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	ACENAPHTHYLENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	ANILINE	1100	UG/KG	R	1100	136	143	
RBA174549	EPA8270	ANTHRACENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	AZOBENZENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BENZO(A)ANTHRACENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BENZO(A)PYRENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BENZO(B)FLUORANTHENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BENZO(G,H,I)PERYLENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BENZO(K)FLUORANTHENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BENZOIC ACID	2300	UG/KG	R	2300	143		
RBB240005	EPA8270	BENZOIC ACID	1900	UG/KG	R	1900	069	136	
RBA174549	EPA8270	BENZYL ALCOHOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	BIS(2-CHLOROETHOXY)METHANE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BIS(2-CHLOROETHYL)ETHER	450	UG/KG	R	450	143		
RBA174549	EPA8270	BIS(2-CHLOROISOPROPYL)ETHER	450	UG/KG	R	450	143		
RBA174549	EPA8270	BIS(2-ETHYLHEXYL)PHTHALATE	450	UG/KG	R	450	143		
RBA174549	EPA8270	BUTYL BENZYL PHTHALATE	450	UG/KG	R	450	143		
RBA174549	EPA8270	CARBAZOLE	450	UG/KG	R	450	136	143	
RBA174549	EPA8270	CHRYSENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	DIBENZO(A,H)ANTHRACENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	DIBENZOFURAN	450	UG/KG	R	450	143		
RBA174549	EPA8270	DIETHYL PHTHALATE	450	UG/KG	R	450	143		
RBA174549	EPA8270	DIMETHYL PHTHALATE	450	UG/KG	R	450	143		
RBA174549	EPA8270	DI-N-BUTYL PHTHALATE	450	UG/KG	R	450	143		
RBA174549	EPA8270	DI-N-OCTYL PHTHALATE	450	UG/KG	R	450	143		
RBA174549	EPA8270	FLUORANTHENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	FLUORENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	HEXACHLOROBENZENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	HEXACHLOROBUTADIENE	450	UG/KG	R	450	143		
RBA081216	EPA8270	HEXACHLOROCYCLOPENTADIENE	370	UG/KG	R	370	117	136	
RBA174549	EPA8270	HEXACHLOROCYCLOPENTADIENE	450	UG/KG	R	450	143		
RBB240005	EPA8270	HEXACHLOROCYCLOPENTADIENE	380	UG/KG	R	380	069	136	
RBB240508	EPA8270	HEXACHLOROCYCLOPENTADIENE	390	UG/KG	R	390	069	136	
RBB252428	EPA8270	HEXACHLOROCYCLOPENTADIENE	440	UG/KG	R	440	069	117	136
RBB260005	EPA8270	HEXACHLOROCYCLOPENTADIENE	380	UG/KG	R	380	069	117	136
RBB270005	EPA8270	HEXACHLOROCYCLOPENTADIENE	370	UG/KG	R	370	069	117	136
RBB270508	EPA8270	HEXACHLOROCYCLOPENTADIENE	380	UG/KG	R	380	069	117	136
RBB272428	EPA8270	HEXACHLOROCYCLOPENTADIENE	490	UG/KG	R	490	069	117	136
RBB280005	EPA8270	HEXACHLOROCYCLOPENTADIENE	390	UG/KG	R	390	069	117	136

Table E.2-4
Investigative Soil Sample
Summary of Rejected Results

Sample Number	Test Method	Parameter	Result	Units	Validation Qualifier	Detection limit	Reason		
							1	2	3
RBB370005	EPA8270	HEXACHLOROCYCLOPENTADIENE	390	UG/KG	R	390	069	136	
RBB370508	EPA8270	HEXACHLOROCYCLOPENTADIENE	390	UG/KG	R	390	069	136	
RBB372428	EPA8270	HEXACHLOROCYCLOPENTADIENE	500	UG/KG	R	500	069	136	
RBB380005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBB382024	EPA8270	HEXACHLOROCYCLOPENTADIENE	460	UG/KG	R	460	069	117	136
RBB382428	EPA8270	HEXACHLOROCYCLOPENTADIENE	530	UG/KG	R	530	069	117	136
RBB390005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	117	136
RBB390508	EPA8270	HEXACHLOROCYCLOPENTADIENE	390	UG/KG	R	390	069	117	136
RBB390812	EPA8270	HEXACHLOROCYCLOPENTADIENE	410	UG/KG	R	410	069	117	136
RBC050005	EPA8270	HEXACHLOROCYCLOPENTADIENE	380	UG/KG	R	380	069	117	136
RBC051216	EPA8270	HEXACHLOROCYCLOPENTADIENE	430	UG/KG	R	430	069	117	136
RBC061216	EPA8270	HEXACHLOROCYCLOPENTADIENE	440	UG/KG	R	440	069	117	136
RBC070005	EPA8270	HEXACHLOROCYCLOPENTADIENE	400	UG/KG	R	400	069	117	136
RBC080005	EPA8270	HEXACHLOROCYCLOPENTADIENE	390	UG/KG	R	390	069	117	136
RBC081216	EPA8270	HEXACHLOROCYCLOPENTADIENE	470	UG/KG	R	470	069	117	136
RBC100509	EPA8270	HEXACHLOROCYCLOPENTADIENE	380	UG/KG	R	380	069	136	
RBC101620	EPA8270	HEXACHLOROCYCLOPENTADIENE	430	UG/KG	R	430	069	136	
RBC140005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	117	136
RBC141620	EPA8270	HEXACHLOROCYCLOPENTADIENE	450	UG/KG	R	450	069	117	136
RBC160005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBC161620	EPA8270	HEXACHLOROCYCLOPENTADIENE	480	UG/KG	R	480	069	136	
RBC170005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBC172428	EPA8270	HEXACHLOROCYCLOPENTADIENE	500	UG/KG	R	500	069	136	
RBC180005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBC190005	EPA8270	HEXACHLOROCYCLOPENTADIENE	370	UG/KG	R	370	069	136	
RBC192024	EPA8270	HEXACHLOROCYCLOPENTADIENE	450	UG/KG	R	450	069	136	
RBC200005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBC202024	EPA8270	HEXACHLOROCYCLOPENTADIENE	470	UG/KG	R	470	069	136	
RBC210005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBC212024	EPA8270	HEXACHLOROCYCLOPENTADIENE	450	UG/KG	R	450	069	136	
RBC310005	EPA8270	HEXACHLOROCYCLOPENTADIENE	370	UG/KG	R	370	069	117	136
RBC311620	EPA8270	HEXACHLOROCYCLOPENTADIENE	480	UG/KG	R	480	069	117	136
RBC331620	EPA8270	HEXACHLOROCYCLOPENTADIENE	510	UG/KG	R	510	069	117	136
RBC340005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	117	136
RBM060005	EPA8270	HEXACHLOROCYCLOPENTADIENE	390	UG/KG	R	390	069	117	136
RBM110005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBZ020005	EPA8270	HEXACHLOROCYCLOPENTADIENE	360	UG/KG	R	360	069	136	
RBZ022025	EPA8270	HEXACHLOROCYCLOPENTADIENE	400	UG/KG	R	400	069	136	
RBZ023034	EPA8270	HEXACHLOROCYCLOPENTADIENE	430	UG/KG	R	430	069	136	
RBZ025560	EPA8270	HEXACHLOROCYCLOPENTADIENE	380	UG/KG	R	380	069	136	
RBA174549	EPA8270	HEXACHLOROETHANE	450	UG/KG	R	450	143		
RBA174549	EPA8270	INDENO(1,2,3-CD)PYRENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	ISOPHORONE	450	UG/KG	R	450	143		
RBA174549	EPA8270	NAPHTHALENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	NITROBENZENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	N-NITROSODIMETHYLAMINE	450	UG/KG	R	450	143		
RBA174549	EPA8270	N-NITROSO-DI-N-PROPYLAMINE	450	UG/KG	R	450	143		
RBA174549	EPA8270	N-NITROSODIPHENYLAMINE	450	UG/KG	R	450	143		
RBA174549	EPA8270	PENTACHLOROPHENOL	2300	UG/KG	R	2300	143		
RBA174549	EPA8270	PHENANTHRENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	PHENOL	450	UG/KG	R	450	143		
RBA174549	EPA8270	PYRENE	450	UG/KG	R	450	143		
RBA174549	EPA8270	PYRIDINE	450	UG/KG	R	450	143		

Table E.2-4
Investigative Soil Sample
Summary of Rejected Results

Sample Number	Test Method	Parameter	Result	Units	Validation Qualifier	Detection limit	Reason		
							1	2	3

NOTES:

Reason Code	Reason Description
069	Relative response factor < 0.05.
117	CCV percent > 25 %.
128	Sample shipping temperature exceeded and/or not documented.
136	Percent RSD exceeded 30%.
143	Surrogate recovery exceeded the lower limits.

Table E.3-1
Groundwater Sample Listing
Analysis Summary and QA/QC Cross Reference

Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
Groundwater investigation samples collected in 2000							
RBT094	TRIP BLANK	X					
RBMW0101	MS/MSD	X	X	X	X	X	X
RBMW0201		X	X	X	X	X	X
RBMW0301		X	X	X	X	X	X
RBMW0401		X	X	X	X	X	X
RBM1801	Dup. of RBMW0201	X	X	X	X	X	X
RBT095	RINSE BLANK	X	X	X	X	X	X
RBT096	FIELD BLANK	X	X	X	X	X	X
Groundwater investigation samples collected in 2002							
RBT001A	TRIP BLANK	X					
RBT002A	FIELD BLANK	X	X	X	X	X	X
RBT003A	Dup. Of RBWB02	X	X	X	X	X	X
RBWA03		X	X	X	X	X	X
RBWB02		X	X	X	X	X	X
RBWC04		X	X	X	X	X	X
RBWU01		X	X	X	X	X	X

Table E.3-2
Groundwater Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Flag[b]	Source[c]	Units	Qualifier[d]	Detection Limit	User Test Group
Groundwater Investigation Samples Collected in 2000									
Groundwater Sample. RBMW0101 was collected from monitoring well RBMW01, installed at Upgradient location in soil boring RBZ01.									
RBMW0101	ARSENIC	0.025	0.000045	HIT	EPA Region 9 PRG	MG/L		0.01	EPA6010
RBMW0101	BARIUM	2.3	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBMW0101F	BARIUM (Dissolved)	0.12	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBMW0101	CHROMIUM	0.14	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L		0.01	EPA6010
RBMW0101	LEAD	0.064	0.05	HIT	CWQS	MG/L		0.003	EPA6010
RBMW0101	SELENIUM	0.0044	0.18		EPA Region 9 PRG	MG/L	B	0.005	EPA6010
Groundwater Sample. RBMW0201 was collected from monitoring well RBMW02, installed at RB-AR-2/FCG No. 1 location in soil boring RBB44.									
RBMW0201	ARSENIC	0.0081	0.000045	HIT	EPA Region 9 PRG	MG/L	B	0.01	EPA6010
RBMW0201	BARIUM	0.79	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBMW0201F	BARIUM (Dissolved)	0.48	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBMW0201	CHROMIUM	0.043	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L		0.01	EPA6010
RBMW0201	LEAD	0.015	0.05		CWQS	MG/L		0.003	EPA6010
RBMW0201	SELENIUM	0.0027	0.18		EPA Region 9 PRG	MG/L	B	0.005	EPA6010
RBMW0201	ACETONE	14	610		EPA Region 9 PRG	UG/L	J	20	EPA8260
RBMW0201	CHLOROFORM	4.3	0.16	HIT	EPA Region 9 PRG	UG/L	J	5	EPA8260
RBMW0201	DI-N-BUTYL PHTHALATE	5.1	3600		EPA Region 9 PRG	UG/L	J	9.4	EPA8270
Groundwater Sample. RBMW0301 was collected from monitoring well RBMW03, installed at RB-E-01 location in soil boring RBA17.									
RBMW0301	ARSENIC	0.0072	0.000045	HIT	EPA Region 9 PRG	MG/L	B	0.01	EPA6010
RBMW0301	BARIUM	0.52	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBMW0301F	BARIUM (Dissolved)	0.091	2.6		EPA Region 9 PRG	MG/L	B	0.1	EPA6010
RBMW0301	CHROMIUM	0.024	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L		0.01	EPA6010
RBMW0301	LEAD	0.009	0.05		CWQS	MG/L		0.003	EPA6010
RBMW0301	BROMODICHLOROMETHAN	2.3	0.18	HIT	EPA Region 9 PRG	UG/L	J	5	EPA8260
RBMW0301	CHLOROFORM	7.5	0.16	HIT	EPA Region 9 PRG	UG/L	J	5	EPA8260
RBMW0301	DIBROMOCHLOROMETHAN	0.79	0.13	HIT	EPA Region 9 PRG	UG/L	J	5	EPA8260
RBMW0301	DI-N-BUTYL PHTHALATE	11	3600		EPA Region 9 PRG	UG/L		9.5	EPA8270
Groundwater Sample. RBMW0401 was collected from monitoring well RBMW04, installed at RB-U-4 location in soil boring RBC46.									
RBMW0401	ARSENIC	0.0067	0.000045	HIT	EPA Region 9 PRG	MG/L	B	0.01	EPA6010
RBMW0401	BARIUM	0.22	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBMW0401F	BARIUM (Dissolved)	0.12	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBMW0401	CHROMIUM	0.013	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L		0.01	EPA6010
RBMW0401	LEAD	0.0088	0.05		CWQS	MG/L		0.003	EPA6010
RBMW0401	ACETONE	16	610		EPA Region 9 PRG	UG/L	J	20	EPA8260
RBMW0401	BROMODICHLOROMETHAN	0.88	0.18	HIT	EPA Region 9 PRG	UG/L	J	5	EPA8260
RBMW0401	CARBON DISULFIDE	0.83	1000		EPA Region 9 PRG	UG/L	J	5	EPA8260
RBMW0401	CHLOROFORM	6.1	0.16	HIT	EPA Region 9 PRG	UG/L	J	5	EPA8260
RBMW0401	DI-N-BUTYL PHTHALATE	4.5	3600		EPA Region 9 PRG	UG/L	J	9.5	EPA8270
Duplicate Water Sample. RBM1801 is a duplicate groundwater sample collected at the same time as RBMW0201, from monitoring well RBMW02.									
RBM1801	ARSENIC	0.0072	0.000045	HIT	EPA Region 9 PRG	MG/L	B	0.01	EPA6010
RBM1801	BARIUM	0.65	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBM1801F	BARIUM (Dissolved)	0.48	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBM1801	CHROMIUM	0.033	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L		0.01	EPA6010
RBM1801	LEAD	0.012	0.05		CWQS	MG/L		0.003	EPA6010
RBM1801	ACETONE	14	610		EPA Region 9 PRG	UG/L	J	20	EPA8260
RBM1801	CHLOROFORM	4.3	0.16	HIT	EPA Region 9 PRG	UG/L	J	5	EPA8260
RBM1801	BIS(2-ETHYLHEXYL)PHTHA	3.1	4.8		EPA Region 9 PRG	UG/L	J	9.4	EPA8270
RBM1801	DI-N-BUTYL PHTHALATE	5.7	3600		EPA Region 9 PRG	UG/L	J	9.4	EPA8270

Table E.3-2
Groundwater Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Flag[b]	Source[c]	Units	Qualifier[d]	Detection Limit	User Test Group
Groundwater Investigation Samples Collected in 2002									
Groundwater Sample. RBWU01 was collected from monitoring well RBMW01, installed at Upgradient location in soil boring RBZ01.									
RBWU01	BARIUM	0.61	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBWU01	CHROMIUM	0.037	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L		0.01	EPA6010
RBWU01	LEAD	0.013	0.05		CWQS	MG/L		0.003	EPA6010
Groundwater Sample. RBWB02 was collected from monitoring well RBMW02, installed at RB-AR-2/FCG No. 1 location in soil boring RBB44.									
RBWB02	BARIUM	1.1	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBWB02	CHROMIUM	0.023	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L		0.01	EPA6010
RBWB02	LEAD	0.0079	0.05		CWQS	MG/L		0.003	EPA6010
Groundwater Sample. RBWA03 was collected from monitoring well RBMW03, installed at RB-E-01 location in soil boring RBA17.									
RBWA03	BARIUM	0.19	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBWA03	CHROMIUM	0.0092	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L	B	0.01	EPA6010
RBWA03	LEAD	0.002	0.05		CWQS	MG/L	B	0.003	EPA6010
Groundwater Sample. RBWC04 was collected from monitoring well RBMW04, installed at RB-U-4 location in soil boring RBC46.									
RBWC04	BARIUM	0.15	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBWC04	CHROMIUM	0.0077	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L	B	0.01	EPA6010
Duplicate Water Sample. RBM1801 is a duplicate groundwater sample collected at the same time as RBWB02, from monitoring well RBMW02.									
RBT003A	BARIUM	0.49	2.6		EPA Region 9 PRG	MG/L		0.1	EPA6010
RBT003A	CHROMIUM	0.0055	55(III), 0.110(VI)		EPA Region 9 PRG	MG/L	B	0.01	EPA6010

[a] **"Screening Value"** Column:

Screening Values are included for comparison to analytical results to determine a contaminants need for further evaluation.

[b] **"Flag"** Column.

The flag column contains a logical formula that compares the result to the screening value. If the result is greater than the screening value then the word "hit" is displayed in the flag column

[c] **"Source"**

Screening Values were taken from one of three sources: COGCC Series 900, USEPA Region 9 Preliminary Remediation Goals, and Colorado Department of Labor and Employment (CDLE) Tier 1 or 1A screening values

[d] **"Qualifier"** Column:

This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:

E - Concentration exceeds calibration Range

B - For inorganics, analyte is present at a concentration below contract required detection limit but above the instrument detection limit.

B - For Organics, analyte is present in the associated QC blank.

J - result is estimated, Analyte is present below nominal reporting limit, or the analyte is detected, but the quantitation is estimated because of associated QC data

ND - Not detected at or above the reporting limit

R - Indicates the result was rejected because of associated QC data.

Note:

Table is sorted alphabetically by the parameter column and then by the result column.

Table E.3-3
Groundwater Field Duplicate RPD Results

Sample Number	Duplicate ID	Parameter	Orig. Result	Dup. Result	% RPD	Units	User Test Group
Groundwater investigation samples collected in 2000							
RBMW0201	RBM1801	ACETONE	14	14	0	UG/L	EPA8260
RBMW0201	RBM1801F	CHLOROFORM	4.3	4.3	0	UG/L	EPA8260
RBMW0201	RBM1801	DI-N-BUTYL PHTHALATE	5.1	5.7	11	UG/L	EPA8270
RBMW0201	RBM1801	ARSENIC	0.0081	0.0072	12	MG/L	RCRAMETALS
RBMW0201	RBM1801	BARIUM	0.79	0.65	19	MG/L	RCRAMETALS
RBMW0201F	RBM1801	BARIUM	0.48	0.48	NC	MG/L	RCRAMETALS
RBMW0201	RBM1801	CHROMIUM	0.043	0.033	26	MG/L	RCRAMETALS
RBMW0201	RBM1801	LEAD	0.015	0.012	22	MG/L	RCRAMETALS
RBMW0201	RBM1801	SELENIUM	0.0027	ND	NC	MG/L	RCRAMETALS
Groundwater investigation samples collected in 2002							
RBWB02	RBT003A	BARIUM	1.1	0.49	77	MG/L	RCRAMETALS
RBWB02	RBT003A	CHROMIUM	0.023	0.0055	123	MG/L	RCRAMETALS

Notes:
Table is sorted by method then by parameter and then finally by % RPD in ascending order.
NC - Not Calculatable
ND - Not Detected

Table E.3-4
Groundwater Sample
Summary of Rejected Results

Sample Number	User Test Panel	Parameter	Result	Units	Validation Qualifier	Detection Limit	Reason		
							1	2	3
Groundwater investigation samples collected in 2000									
No results for groundwater samples collected in 2000 were rejected									
Groundwater investigation samples collected in 2002									
RBT003A	Volatile Organics	ACETONE	20	UG/L	R	20	068	069	
RBWA03	Volatile Organics	ACETONE	20	UG/L	R	20	068	069	128
RBWB02	Volatile Organics	ACETONE	20	UG/L	R	20	068	069	128
RBWC04	Volatile Organics	ACETONE	20	UG/L	R	20	068	069	128
RBWU01	Volatile Organics	ACETONE	20	UG/L	R	20	068	069	128

NOTES:

Reason Code	Reason Description
068	Average relative response factor < 0.05.
069	Relative response factor < 0.05.
128	Sample shipping temperature exceeded and/or not documented

Table E.4-1
Upgradient Soil Sample Listing
Analysis Summary and QA/QC Cross Reference

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)
09/18/00	RBT084	RINSE BLANK	X	X	X	X	X	X
09/18/00	RBT085	FIELD BLANK	X	X	X	X	X	X
09/18/00	RBT086	TRIP BLANK	X					
09/18/00	RBZ020005		X	X	X	X	X	X
09/18/00	RBZ022025		X	X	X	X	X	X
09/18/00	RBZ023034		X	X	X	X	X	X
09/18/00	RBZ025560		X	X	X	X	X	X
09/19/00	RBZ010005	MS/MSD	X	X	X	X	X	X
09/19/00	RBZ012025		X	X	X	X	X	X
09/19/00	RBZ013539		X	X	X	X	X	X
09/19/00	RBM162025	Dup. of RBZ012025	X	X	X	X	X	X

Table E.4-2
Upgradient Soil Sample Results
Summary of Positive Detects and Screening Values

Sample Number	Parameter	Result	Screening Value[a]	Source[b]	Flag[c]	Units	Qualifier[d]	Detection Limit	Test Method
RBZ012025	2-BUTANONE	14	7,300,000	EPA Reg 9 PRG		UG/KG	J	29	EPA8260
RBZ025560	ACETONE	32	1,600,000	EPA Reg 9 PRG		UG/KG		23	EPA8260
RBZ013539	ACETONE	45	1,600,000	EPA Reg 9 PRG		UG/KG		31	EPA8260
RBZ012025	ACETONE	48	1,600,000	EPA Reg 9 PRG		UG/KG		29	EPA8260
RBZ023034	ARSENIC	3.3	41	COGCC		MG/KG		1.3	EPA6010
RBZ010005	ARSENIC	4.4	41	COGCC		MG/KG		1.1	EPA6010
RBZ022025	ARSENIC	4.5	41	COGCC		MG/KG		1.2	EPA6010
RBZ020005	ARSENIC	5.5	41	COGCC		MG/KG		1.1	EPA6010
RBZ025560	ARSENIC	5.6	41	COGCC		MG/KG		1.2	EPA6010
RBZ013539	ARSENIC	5.9	41	COGCC		MG/KG		1.5	EPA6010
RBZ012025	ARSENIC	7	41	COGCC		MG/KG		1.4	EPA6010
RBZ023034	BARIUM	210	180,000	COGCC		MG/KG		13	EPA6010
RBZ025560	BARIUM	240	180,000	COGCC		MG/KG		12	EPA6010
RBZ022025	BARIUM	310	180,000	COGCC		MG/KG		12	EPA6010
RBZ010005	BARIUM	320	180,000	COGCC		MG/KG		11	EPA6010
RBZ020005	BARIUM	340	180,000	COGCC		MG/KG		11	EPA6010
RBZ012025	BARIUM	380	180,000	COGCC		MG/KG		14	EPA6010
RBZ013539	BARIUM	550	180,000	COGCC		MG/KG		15	EPA6010
RBZ025560	BIS(2-ETHYLHEXYL)PHTHALATE	1100	35,000	EPA Reg 9 PRG		UG/KG		380	EPA8270
RBZ025560	CARBON DISULFIDE	1.2	360,000	EPA Reg 9 PRG		UG/KG	J	5.8	EPA8260
RBZ012025	CARBON DISULFIDE	3	360,000	EPA Reg 9 PRG		UG/KG	J	7.2	EPA8260
RBZ013539	CARBON DISULFIDE	4.7	360,000	EPA Reg 9 PRG		UG/KG	J	7.7	EPA8260
RBZ025560	CHROMIUM	20	1,500	COGCC		MG/KG		1.2	EPA6010
RBZ023034	CHROMIUM	25	1,500	COGCC		MG/KG		1.3	EPA6010
RBZ022025	CHROMIUM	31	1,500	COGCC		MG/KG		1.2	EPA6010
RBZ012025	CHROMIUM	32	1,500	COGCC		MG/KG		1.4	EPA6010
RBZ010005	CHROMIUM	33	1,500	COGCC		MG/KG		1.1	EPA6010
RBZ020005	CHROMIUM	37	1,500	COGCC		MG/KG		1.1	EPA6010
RBZ013539	CHROMIUM	41	1,500	COGCC		MG/KG		1.5	EPA6010
RBZ025560	DICHLORODIFLUOROMETHANE	23	94,000	EPA Reg 9 PRG		UG/KG		12	EPA8260
RBZ013539	DIESEL RANGE ORGANICS	15	1,000	COGCC		MG/KG	J	7.7	EPA8015
RBZ012025	DIESEL RANGE ORGANICS	29	1,000	COGCC		MG/KG	J	7.2	EPA8015
RBZ010005	LEAD	11	300	COGCC		MG/KG		0.66	EPA6010
RBZ022025	LEAD	12	300	COGCC		MG/KG		0.36	EPA6010
RBZ012025	LEAD	13	300	COGCC		MG/KG		0.43	EPA6010
RBZ020005	LEAD	13	300	COGCC		MG/KG		0.64	EPA6010
RBZ023034	LEAD	13	300	COGCC		MG/KG		0.38	EPA6010
RBZ013539	LEAD	14	300	COGCC		MG/KG		0.46	EPA6010
RBZ025560	LEAD	17	300	COGCC		MG/KG		0.35	EPA6010
RBZ023034	SELENIUM	0.59	390	EPA Reg 9 PRG		MG/KG	B	0.64	EPA6010
RBZ013539	SELENIUM	0.77	390	EPA Reg 9 PRG		MG/KG	B	0.77	EPA6010
RBZ025560	SELENIUM	0.9	390	EPA Reg 9 PRG		MG/KG		0.58	EPA6010
RBZ022025	SELENIUM	0.93	390	EPA Reg 9 PRG		MG/KG		0.6	EPA6010
RBZ012025	SELENIUM	1.5	390	EPA Reg 9 PRG		MG/KG		0.72	EPA6010
RBZ022025	TOLUENE	1.2	4,100,000	CDLE Tier 1		UG/KG	J	6	EPA8260
RBZ020005	TOLUENE	1.7	4,100,000	CDLE Tier 1		UG/KG	J	5.3	EPA8260
RBZ012025	TOLUENE	4.2	4,100,000	CDLE Tier 1		UG/KG	J	7.2	EPA8260
RBZ013539	TOLUENE	4.7	4,100,000	CDLE Tier 1		UG/KG	J	7.7	EPA8260

[a] **"Screening Value"** Column:
Screening Values are included for comparison to analytical results to determine a contaminants need for further evaluation.
[b] **"Source"** Column:
Screening Values were taken from one of three sources: COGCC Series 900, USEPA Region 9 Preliminary Remediation Goals, and Colorado Department of Labor and Employment (CDLE) Tier 1 or 1A screening values
[c] **"Flag"** Column:
The flag column contains a logical formula that compares the result to the screening value. If the result is greater than the screening value then the word "hit" is displayed in the flag column.
[d] **"Qualifier"** Column:
This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:
E - Concentration exceeds calibration Range
B - For inorganics, analyte is present at a concentration below contract required detection limit but above the instrument detection limit.
B - For Organics, analyte is present in the associated QC blank.
J - result is estimated, Analyte is present below nominal reporting limit, or the analyte is detected, but the quantitation is estimated because of associated QC data
ND - Not detected at or above the reporting limit
R - Indicates the result was rejected because of associated QC data.
Note:
Table is sorted alphabetically by the parameter column and then by the result column.

Table E.4-3
Upgradient Soil Sample Field Duplicate RPD Results

Sample Number	Duplicate ID	Sample Matrix	Parameter	Orig. Result	Dup. Result	% RPD	Units	Test Method
RBZ012025	RBM162025	SOIL	ARSENIC	7	4	55	MG/KG	EPA6010
RBZ012025	RBM162025	SOIL	BARIUM	380	370	3	MG/KG	EPA6010
RBZ012025	RBM162025	SOIL	CHROMIUM	32	33	3	MG/KG	EPA6010
RBZ012025	RBM162025	SOIL	LEAD	13	12	8	MG/KG	EPA6010
RBZ012025	RBM162025	SOIL	SELENIUM	1.5	0.6	86	MG/KG	EPA6010
RBZ012025	RBM162025	SOIL	DIESEL RANGE ORGANICS	29	22	27	MG/KG	EPA8015
RBZ012025	RBM162025	SOIL	2-BUTANONE	14	ND	NC	UG/KG	EPA8260
RBZ012025	RBM162025	SOIL	ACETONE	48	33	37	UG/KG	EPA8260
RBZ012025	RBM162025	SOIL	CARBON DISULFIDE	3	2.1	35	UG/KG	EPA8260
RBZ012025	RBM162025	SOIL	TOLUENE	4.2	2.2	63	UG/KG	EPA8260

Notes:
Table is sorted by method then by parameter
NC - Not Calculatable
ND - Not Detected

Table E.5-1
Waste Management Sample Listing

Date	Sample Ids	QC Sample	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters
08/16/00	RBA070812	WASTE MAN.							X
08/20/00	RBB011216	WASTE MAN.							X
08/24/00	RBB150005	WASTE MAN.							X
08/25/00	RBB240508	WASTE MAN.							X
08/28/00	RBB300508	WASTE MAN.							X
08/30/00	RBB390508	WASTE MAN.							X
09/05/00	RBD050001	WASTE MAN.							X
09/07/00	RBC020509	WASTE MAN.							X
09/08/00	RBC100509	WASTE MAN.							X
09/09/00	RBC171216	WASTE MAN.							X
09/10/00	RBC252024	WASTE MAN.							X
09/10/00	RBC321620	WASTE MAN.							X
09/11/00	RBC340509	WASTE MAN.							X

Table E.5-2
Waste Management Analysis Results
Summary of Positive Detects and RCRA TCLP Values

Sample Number	Parameter	Result	RCRA TCLP Value	Units	Qualifier	Detection Limit	Test Method
RBB011216	2-BUTANONE	46	200,000	UG/L	J	100	SW8260 - TCLP
RBC020509	BARIUM	0.8	100	MG/L	B	1	SW6010 - TCLP
RBB390508	BARIUM	0.83	100	MG/L	B	1	SW6010 - TCLP
RBC340509	BARIUM	0.9	100	MG/L	B	1	SW6010 - TCLP
RBB240508	BARIUM	0.99	100	MG/L	B	1	SW6010 - TCLP
RBB300508	BARIUM	1	100	MG/L	B	1	SW6010 - TCLP
RBB011216	BARIUM	1.1	100	MG/L		1	SW6010 - TCLP
RBC100509	BARIUM	1.1	100	MG/L		1	SW6010 - TCLP
RBC271620	BARIUM	1.1	100	MG/L		1	SW6010 - TCLP
RBC321620	BARIUM	1.6	100	MG/L		1	SW6010 - TCLP
RBA070812	BARIUM	1.9	100	MG/L		1	SW6010 - TCLP
RBB150005	BARIUM	2	100	MG/L		1	SW6010 - TCLP
RBC171216	BARIUM	2.5	100	MG/L		1	SW6010 - TCLP
RBD050001	BARIUM	3.2	100	MG/L		1	SW6010 - TCLP
RBB011216	BENZENE	24	50	UG/L	J	25	SW8260 - TCLP
RBB150005	CADMIUM	0.0019	1	MG/L	B	0.05	SW6010 - TCLP
RBC171216	CADMIUM	0.0026	1	MG/L	B	0.05	SW6010 - TCLP
RBB150005	CHROMIUM	0.0037	5	MG/L	B	0.1	SW6010 - TCLP
RBD050001	CHROMIUM	0.007	5	MG/L	B	0.1	SW6010 - TCLP
RBC171216	CHROMIUM	0.0075	5	MG/L	B	0.1	SW6010 - TCLP
RBC100509	CHROMIUM	0.027	5	MG/L	B	0.1	SW6010 - TCLP
RBB011216	CHROMIUM	0.46	5	MG/L		0.1	SW6010 - TCLP
RBC171216	LEAD	0.016	5	MG/L	B	0.03	SW6010 - TCLP
RBB011216	LEAD	1.9	5	MG/L		0.03	SW6010 - TCLP
RBC271620	SELENIUM	0.028	1	MG/L	B	0.05	SW6010 - TCLP
RBB300508	SELENIUM	0.035	1	MG/L	B	0.05	SW6010 - TCLP

Note:
Table is sorted alphabetically by the parameter column and then by the result column.
"Qualifier" Column- This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:
B - For inorganics, analyte is present at a concentration below contract required detection limit but above the instrument detection limit.
J - Result is estimated, Analyte is present below nominal reporting limit.

Table E.6-1
Blank Sample Listing and Analysis Summary

Date	Sample Ids	Description	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
08/17/00	RBT0007	FIELD BLANK	X	X	X	X	X	X		
08/21/00	RBT0011	FIELD BLANK	X	X	X	X	X	X		
08/24/00	RBT020	FIELD BLANK	X	X	X	X	X	X		
08/25/00	RBT026	FIELD BLANK	X	X	X	X	X	X		
08/28/00	RBT031	FIELD BLANK	X	X	X	X	X	X		
08/29/00	RBT039	FIELD BLANK	X	X	X	X	X	X		
09/05/00	RBT045	FIELD BLANK	X	X	X	X	X	X		
09/06/00	RBT047	FIELD BLANK	X	X	X	X	X	X		
09/08/00	RBT054	FIELD BLANK	X	X	X	X	X	X		
09/09/00	RBT059	FIELD BLANK	X	X	X	X	X	X		
09/10/00	RBT065	FIELD BLANK	X	X	X	X	X	X		
09/11/00	RBT071	FIELD BLANK	X	X	X	X	X	X		
09/12/00	RBT075	FIELD BLANK	X	X	X	X	X	X		
09/13/00	RBT080	FIELD BLANK	X	X	X	X	X	X		
09/13/00	RBT082	FIELD BLANK	X	X	X	X	X	X		
09/18/00	RBT085	FIELD BLANK	X	X	X	X	X	X		
09/20/00	RBT089	FIELD BLANK	X	X	X	X	X	X		
09/24/00	RBT096	FIELD BLANK	X	X	X	X	X	X		X
08/17/00	RBT0005	RINSE BLANK	X	X	X	X	X	X		
08/21/00	RBT0010	RINSE BLANK	X	X	X	X	X	X		
08/24/00	RBT021	RINSE BLANK	X	X	X	X	X	X		
08/25/00	RBT027	RINSE BLANK	X	X	X	X	X	X		
08/28/00	RBT032	RINSE BLANK	X	X	X	X	X	X		
08/29/00	RBT038	RINSE BLANK	X	X	X	X	X	X		
09/05/00	RBT044	RINSE BLANK	X	X	X	X	X	X		
09/06/00	RBT048	RINSE BLANK	X	X	X	X	X	X		
09/08/00	RBT055	RINSE BLANK	X	X	X	X	X	X		
09/09/00	RBT060	RINSE BLANK	X	X	X	X	X	X		
09/10/00	RBT064	RINSE BLANK	X	X	X	X	X	X		
09/11/00	RBT070	RINSE BLANK	X	X	X	X	X	X		
09/12/00	RBT074	RINSE BLANK	X	X	X	X	X	X		
09/13/00	RBT079	RINSE BLANK	X	X	X	X	X	X		
09/13/00	RBT081	RINSE BLANK	X	X	X	X	X	X		
09/18/00	RBT084	RINSE BLANK	X	X	X	X	X	X		
09/20/00	RBT090	RINSE BLANK	X	X	X	X	X	X		
09/24/00	RBT095	RINSE BLANK	X	X	X	X	X	X		X
07/27/02	RBT002A	RINSE BLANK	X	X	X	X	X	X		
08/17/00	RBT0004	SOURCE BLANK	X	X	X	X	X	X		
08/14/00	RBT001	TRIP BLANK	X							
08/16/00	RBT0002	TRIP BLANK	X							

Table E.6-1
Blank Sample Listing and Analysis Summary

Date	Sample Ids	Description	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
08/16/00	RBT003	TRIP BLANK	X							
08/17/00	RBT0006	TRIP BLANK	X							
08/17/00	RBT0008	TRIP BLANK	X							
08/20/00	RBT0009	TRIP BLANK	X							
08/21/00	RBT0012	TRIP BLANK	X							
08/21/00	RBT0013	TRIP BLANK	X							
08/21/00	RBT0014	TRIP BLANK	X							
08/22/00	RBT0015	TRIP BLANK	X							
08/22/00	RBT016	TRIP BLANK	X							
08/23/00	RBT017	TRIP BLANK	X							
08/23/00	RBT018	TRIP BLANK	X							
08/24/00	RBT019	TRIP BLANK	X							
08/24/00	RBT022	TRIP BLANK	X							
08/24/00	RBT023	TRIP BLANK	X							
08/25/00	RBT024	TRIP BLANK	X							
08/25/00	RBT025	TRIP BLANK	X							
08/27/00	RBT028	TRIP BLANK	X							
08/27/00	RBT029	TRIP BLANK	X							
08/28/00	RBT030	TRIP BLANK	X							
08/28/00	RBT033	TRIP BLANK	X							
08/28/00	RBT034	TRIP BLANK	X							
08/29/00	RBT035	TRIP BLANK	X							
08/29/00	RBT036	TRIP BLANK	X							
08/29/00	RBT037	TRIP BLANK	X							
08/30/00	RBT040	TRIP BLANK	X							
08/30/00	RBT041	TRIP BLANK	X							
09/05/00	RBT042	TRIP BLANK	X							
09/05/00	RBT043	TRIP BLANK	X							
09/06/00	RBT046	TRIP BLANK	X							
09/06/00	RBT049	TRIP BLANK	X							
09/06/00	RBT050	TRIP BLANK	X							
09/07/00	RBT051	TRIP BLANK	X							
09/07/00	RBT052	TRIP BLANK	X							
09/08/00	RBT053	TRIP BLANK	X							
09/08/00	RBT056	TRIP BLANK	X							
09/08/00	RBT057	TRIP BLANK	X							
09/09/00	RBT058	TRIP BLANK	X							
09/09/00	RBT061	TRIP BLANK	X							
09/09/00	RBT062	TRIP BLANK	X							
09/10/00	RBT063	TRIP BLANK	X							

Table E.6-1
Blank Sample Listing and Analysis Summary

Date	Sample Ids	Description	VOCs (8260B)	SVOCs(8270C)	Total RCRA Metals (6000/7000)	Tritium EPA EERFH01	Gamma Spectroscopy (HASL 300, 4.5.2.3)	TPH-D (8015B)	TCLP, Waste Management Parameters	Total Dissolved Metals (6010B/7470A)
09/10/00	RBT066	TRIP BLANK	X							
09/10/00	RBT067	TRIP BLANK	X							
09/11/00	RBT068	TRIP BLANK	X							
09/11/00	RBT069	TRIP BLANK	X							
09/11/00	RBT072	TRIP BLANK	X							
09/12/00	RBT073	TRIP BLANK	X							
09/12/00	RBT076	TRIP BLANK	X							
09/12/00	RBT077	TRIP BLANK	X							
09/13/00	RBT078	TRIP BLANK	X							
09/18/00	RBT083	TRIP BLANK	X							
09/18/00	RBT086	TRIP BLANK	X							
09/19/00	RBT087	TRIP BLANK	X							
09/20/00	RBT088	TRIP BLANK	X							
09/20/00	RBT091	TRIP BLANK	X							
09/20/00	RBT092	TRIP BLANK	X							
09/21/00	RBT093	TRIP BLANK	X							
09/24/00	RBT094	TRIP BLANK	X							
07/27/02	RBT001A	TRIP BLANK	X							

Table E.6-2
Blank Sample Results
Summary Of Positive Detects

Sample Number	Blank Type	Parameter	Result	Units	Qualifier	Detection Limit	Test Method
RBT070	Rinse	2-BUTANONE	6.7	UG/L	J	20	EPA8260
RBT047	Field	2-BUTANONE	10	UG/L	J	20	EPA8260
RBT048	Rinse	2-BUTANONE	10	UG/L	J	20	EPA8260
RBT059	Field	2-BUTANONE	16	UG/L	J	20	EPA8260
RBT0004	Source	2-BUTANONE	18	UG/L	J	20	EPA8260
RBT045	Field	2-BUTANONE	18	UG/L	J	20	EPA8260
RBT0007	Field	2-BUTANONE	20	UG/L		20	EPA8260
RBT060	Rinse	2-BUTANONE	22	UG/L		20	EPA8260
RBT026	Field	2-BUTANONE	25	UG/L		20	EPA8260
RBT0011	Field	2-BUTANONE	28	UG/L		20	EPA8260
RBT032	Rinse	2-BUTANONE	33	UG/L		20	EPA8260
RBT027	Rinse	2-BUTANONE	36	UG/L		20	EPA8260
RBT054	Field	2-BUTANONE	42	UG/L		20	EPA8260
RBT0010	Rinse	2-BUTANONE	49	UG/L		20	EPA8260
RBT039	Field	2-BUTANONE	58	UG/L		20	EPA8260
RBT044	Rinse	2-BUTANONE	86	UG/L		20	EPA8260
RBT060	Rinse	2-HEXANONE	5.4	UG/L	J	20	EPA8260
RBT026	Field	2-HEXANONE	7.5	UG/L	J	20	EPA8260
RBT0011	Field	2-HEXANONE	7.9	UG/L	J	20	EPA8260
RBT032	Rinse	2-HEXANONE	9.3	UG/L	J	20	EPA8260
RBT027	Rinse	2-HEXANONE	9.8	UG/L	J	20	EPA8260
RBT0010	Rinse	2-HEXANONE	13	UG/L	J	20	EPA8260
RBT054	Field	2-HEXANONE	13	UG/L	J	20	EPA8260
RBT039	Field	2-HEXANONE	15	UG/L	J	20	EPA8260
RBT044	Rinse	2-HEXANONE	24	UG/L		20	EPA8260
RBT038	Rinse	ACETONE	15	UG/L	J	20	EPA8260
RBT081	Rinse	ACETONE	15	UG/L	J	20	EPA8260
RBT048	Rinse	ACETONE	28	UG/L		20	EPA8260
RBT047	Field	ACETONE	30	UG/L		20	EPA8260
RBT0004	Source	ACETONE	31	UG/L		20	EPA8260
RBT0007	Field	ACETONE	32	UG/L		20	EPA8260
RBT045	Field	ACETONE	48	UG/L		20	EPA8260
RBT059	Field	ACETONE	53	UG/L		20	EPA8260
RBT0011	Field	ACETONE	54	UG/L	J	20	EPA8260
RBT026	Field	ACETONE	61	UG/L		20	EPA8260
RBT060	Rinse	ACETONE	71	UG/L		20	EPA8260
RBT032	Rinse	ACETONE	80	UG/L		20	EPA8260
RBT0010	Rinse	ACETONE	87	UG/L	J	20	EPA8260
RBT027	Rinse	ACETONE	88	UG/L		20	EPA8260
RBT054	Field	ACETONE	130	UG/L		20	EPA8260
RBT039	Field	ACETONE	140	UG/L		20	EPA8260
RBT044	Rinse	ACETONE	220	UG/L		20	EPA8260
RBT075	Field	ARSENIC	0.0039	MG/L	B	0.01	EPA6010
RBT074	Rinse	ARSENIC	0.0049	MG/L	B	0.01	EPA6010
RBT002A	Rinse	BARIUM	0.00044	MG/L	B	0.1	EPA6010
RBT074	Rinse	BARIUM	0.0025	MG/L	B	0.1	EPA6010
RBT0010	Rinse	BEP	1	UG/L	J	9.5	EPA8270
RBT044	Rinse	BEP	1	UG/L	J	9.5	EPA8270

Table E.6-2
Blank Sample Results
Summary Of Positive Detects

Sample Number	Blank Type	Parameter	Result	Units	Qualifier	Detection Limit	Test Method
RBT038	Rinse	BEP	1.5	UG/L	J	9.8	EPA8270
RBT074	Rinse	BEP	1.7	UG/L	J	9.4	EPA8270
RBT079	Rinse	BEP	1.9	UG/L	J	9.4	EPA8270
RBT034	Trip	CARBON DISULFIDE	0.58	UG/L	J	5	EPA8260
RBT031	Field	CHLOROFORM	0.3	UG/L	J	5	EPA8260
RBT0004	Source	CHROMIUM	0.00051	MG/L	B	0.01	EPA6010
RBT0010	Rinse	CHROMIUM	0.0027	MG/L	B	0.01	EPA6010
RBT017	Trip	METHYLENE CHLORIDE	1.4	UG/L	J	5	EPA8260
RBT086	Trip	METHYLENE CHLORIDE	1.4	UG/L	J	5	EPA8260
RBT0014	Trip	METHYLENE CHLORIDE	1.5	UG/L	J	5	EPA8260
RBT0009	Trip	METHYLENE CHLORIDE	1.6	UG/L	J	5	EPA8260
RBT0012	Trip	METHYLENE CHLORIDE	1.6	UG/L	J	5	EPA8260
RBT093	Trip	METHYLENE CHLORIDE	1.6	UG/L	J	5	EPA8260
RBT0015	Trip	METHYLENE CHLORIDE	1.7	UG/L	J	5	EPA8260
RBT0008	Trip	METHYLENE CHLORIDE	1.9	UG/L	J	5	EPA8260
RBT0013	Trip	METHYLENE CHLORIDE	1.9	UG/L	J	5	EPA8260
RBT049	Trip	METHYLENE CHLORIDE	54	UG/L	J	5	EPA8260
RBT046	Trip	NAPHTHALENE	0.5	UG/L	J	5	EPA8260
RBT0005	Rinse	SILVER	0.00053	MG/L	B	0.01	EPA6010

Notes:

BEP - Bis(2-ethylhexyl)phthalate

"Qualifier" Column- This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:

B - For inorganics, analyte is present at a concentration below contract required detection limit

B - For Organics, analyte is present in the associated QC blank.

J - result is estimated, Analyte is present below nominal reporting limit, or the analyte is detected, but the quantitation is estimated because of associated QC data

Table E.6-3
Blank Sample Results
Summary of Rejected Results

Sample Number	User Test Panel	Parameter	Result	Units	Validation Qualifier	Detection limit	Reason	
							1	2
RBT001A	EPA8260B	ACETONE	20	UG/L	R	20	68	69
RBT002A	EPA8260B	ACETONE	20	UG/L	R	20	68	69
RBT054	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	117
RBT055	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	117
RBT059	EPA8270	3-NITROANILINE	48	UG/L	R	48	69	
RBT060	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	117
RBT064	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	117
RBT065	EPA8270	3-NITROANILINE	48	UG/L	R	48	69	117
RBT070	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	117
RBT071	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	117
RBT084	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	136
RBT085	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	136
RBT089	EPA8270	3-NITROANILINE	49	UG/L	R	49	69	136
RBT090	EPA8270	3-NITROANILINE	47	UG/L	R	47	69	136
RBT0004	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.5	UG/L	R	9.5	69	136
RBT0005	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.4	UG/L	R	9.4	69	117
RBT0007	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.4	UG/L	R	9.4	69	136
RBT0010	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.5	UG/L	R	9.5	69	117
RBT0011	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.5	UG/L	R	9.5	69	117
RBT020	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.4	UG/L	R	9.4	69	117
RBT021	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.4	UG/L	R	9.4	69	117
RBT084	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.5	UG/L	R	9.5	69	136
RBT085	EPA8270	HEXACHLOROCYCLOPENTADIENE	9.5	UG/L	R	9.5	69	136

NOTES:

Reason Code	Reason Description
68	Average relative response factor < 0.05.
69	Relative response factor < 0.05.
117	CCV percent > 25%
136	Percent RSD exceeded 30%

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBA020408	TRITIUM	1.83	pCi/g	LT	0.078	0.24	EPA906.0
RBB300508	TRITIUM	0.396	pCi/g	LT	0.085	0.08	EPA906.0
RBB020508	TRITIUM	0.332	pCi/g	LT	0.088	0.075	EPA906.0
RBB340508	TRITIUM	0.332	pCi/g	LT	0.089	0.075	EPA906.0
RBA020004	TRITIUM	0.2	pCi/g	LT	0.073	0.055	EPA906.0
RBB050508	TRITIUM	0.174	pCi/g	LT	0.061	0.047	EPA906.0
RBC151620	ACTINIUM-228	2.79	pCi/g	J	0.47	0.85	HASL300
RBC330005	ACTINIUM-228	2.68	pCi/g	J	0.47	0.82	HASL300
RBB280005	ACTINIUM-228	2.55	pCi/g		0.85	0.81	HASL300
RBB150005	ACTINIUM-228	2.46	pCi/g		1.1	0.81	HASL300
RBC351620	ACTINIUM-228	2.43	pCi/g	J	0.5	0.79	HASL300
RBB110005	ACTINIUM-228	2.41	pCi/g		0.71	0.78	HASL300
RBZ025560	ACTINIUM-228	2.4	pCi/g		0.39	0.5	HASL300
RBB012428	ACTINIUM-228	2.39	pCi/g		0.66	0.79	HASL300
RBB120005	ACTINIUM-228	2.35	pCi/g		0.37	0.8	HASL300
RBA040005	ACTINIUM-228	2.33	pCi/g		0.67	0.85	HASL300
RBB012830	ACTINIUM-228	2.32	pCi/g		0.86	0.8	HASL300
RBB230005	ACTINIUM-228	2.23	pCi/g		0.17	0.52	HASL300
RBC170005	ACTINIUM-228	2.23	pCi/g	J	0.25	0.61	HASL300
RBB140508	ACTINIUM-228	2.22	pCi/g		0.11	0.66	HASL300
RBZ012025	ACTINIUM-228	2.22	pCi/g		0.34	0.48	HASL300
RBC190005	ACTINIUM-228	2.18	pCi/g	J	0.43	0.77	HASL300
RBC160005	ACTINIUM-228	2.15	pCi/g	J	0.6	0.66	HASL300
RBA151620	ACTINIUM-228	2.14	pCi/g		0.99	0.78	HASL300
RBC421216	ACTINIUM-228	2.14	pCi/g		0.91	0.86	HASL300
RBB380005	ACTINIUM-228	2.13	pCi/g		0.48	0.46	HASL300
RBA052630	ACTINIUM-228	2.12	pCi/g		0.85	0.85	HASL300
RBC350005	ACTINIUM-228	2.12	pCi/g	J	0.5	0.7	HASL300
RBC150005	ACTINIUM-228	2.11	pCi/g	J	0.94	0.61	HASL300
RBB260508	ACTINIUM-228	2.1	pCi/g		0.45	0.61	HASL300
RBB310005	ACTINIUM-228	2.1	pCi/g		0.5	0.55	HASL300
RBA081216	ACTINIUM-228	2.09	pCi/g		0.89	0.56	HASL300
RBA090005	ACTINIUM-228	2.09	pCi/g		1.1	0.71	HASL300
RBM030508	ACTINIUM-228	2.09	pCi/g		0.77	0.78	HASL300
RBC040005	ACTINIUM-228	2.07	pCi/g		0.31	0.46	HASL300
RBC021314	ACTINIUM-228	2.05	pCi/g		0.4	0.51	HASL300
RBB360812	ACTINIUM-228	2.02	pCi/g		0.64	0.67	HASL300
RBB330508	ACTINIUM-228	2	pCi/g		0.6	0.52	HASL300
RBB370005	ACTINIUM-228	2	pCi/g		0.43	0.56	HASL300
RBC031216	ACTINIUM-228	1.98	pCi/g		0.32	0.55	HASL300
RBA040812	ACTINIUM-228	1.96	pCi/g		0.64	0.59	HASL300
RBZ013539	ACTINIUM-228	1.96	pCi/g		0.15	0.53	HASL300
RBA072630	ACTINIUM-228	1.95	pCi/g		0.76	0.69	HASL300
RBC232024	ACTINIUM-228	1.95	pCi/g		0.5	0.62	HASL300
RBC451216	ACTINIUM-228	1.95	pCi/g		0.59	0.67	HASL300
RBB200812	ACTINIUM-228	1.94	pCi/g		0.52	0.6	HASL300
RBC091620	ACTINIUM-228	1.93	pCi/g	J	0.4	0.49	HASL300
RBA141216	ACTINIUM-228	1.92	pCi/g		0.53	0.52	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB140005	ACTINIUM-228	1.92	pCi/g		0.87	0.81	HASL300
RBB170508	ACTINIUM-228	1.92	pCi/g		0.23	0.54	HASL300
RBB370508	ACTINIUM-228	1.92	pCi/g		0.13	0.44	HASL300
RBC190913	ACTINIUM-228	1.91	pCi/g	J	0.89	0.77	HASL300
RBC462025	ACTINIUM-228	1.9	pCi/g		0.7	0.66	HASL300
RBA010005	ACTINIUM-228	1.89	pCi/g		0.59	0.78	HASL300
RBM132024	ACTINIUM-228	1.89	pCi/g		0.54	0.55	HASL300
RBB022428	ACTINIUM-228	1.88	pCi/g		0.28	0.48	HASL300
RBB222428	ACTINIUM-228	1.88	pCi/g		0.46	0.45	HASL300
RBB340005	ACTINIUM-228	1.88	pCi/g		0.11	0.52	HASL300
RBC051216	ACTINIUM-228	1.88	pCi/g		0.43	0.49	HASL300
RBC100005	ACTINIUM-228	1.88	pCi/g	J	0.32	0.47	HASL300
RBC310005	ACTINIUM-228	1.88	pCi/g	J	0.66	0.7	HASL300
RBB210508	ACTINIUM-228	1.86	pCi/g		0.41	0.52	HASL300
RBB330005	ACTINIUM-228	1.86	pCi/g		0.67	0.58	HASL300
RBC021620	ACTINIUM-228	1.85	pCi/g		0.82	0.62	HASL300
RBC140005	ACTINIUM-228	1.85	pCi/g		0.04	0.42	HASL300
RBC141620	ACTINIUM-228	1.85	pCi/g		0.55	0.48	HASL300
RBB310812	ACTINIUM-228	1.84	pCi/g		0.047	0.42	HASL300
RBM162025	ACTINIUM-228	1.84	pCi/g		0.35	0.59	HASL300
RBA121620	ACTINIUM-228	1.83	pCi/g		0.16	0.33	HASL300
RBA142630	ACTINIUM-228	1.82	pCi/g		0.46	0.51	HASL300
RBB061620	ACTINIUM-228	1.82	pCi/g		0.47	0.5	HASL300
RBB230508	ACTINIUM-228	1.82	pCi/g		0.31	0.58	HASL300
RBB352428	ACTINIUM-228	1.82	pCi/g		0.67	0.54	HASL300
RBC020005	ACTINIUM-228	1.82	pCi/g		0.69	0.66	HASL300
RBB030508	ACTINIUM-228	1.81	pCi/g		0.48	0.47	HASL300
RBA151216	ACTINIUM-228	1.8	pCi/g		0.68	0.57	HASL300
RBA160005	ACTINIUM-228	1.8	pCi/g		0.64	0.61	HASL300
RBB382024	ACTINIUM-228	1.8	pCi/g		0.46	0.49	HASL300
RBC020509	ACTINIUM-228	1.8	pCi/g		0.85	0.83	HASL300
RBB340508	ACTINIUM-228	1.79	pCi/g		0.51	0.48	HASL300
RBC192024	ACTINIUM-228	1.79	pCi/g	J	0.57	0.6	HASL300
RBA100005	ACTINIUM-228	1.78	pCi/g		0.61	0.69	HASL300
RBB442025	ACTINIUM-228	1.78	pCi/g		0.31	0.53	HASL300
RBC400005	ACTINIUM-228	1.78	pCi/g		0.39	0.45	HASL300
RBM012630	ACTINIUM-228	1.78	pCi/g		0.87	0.66	HASL300
RBB032428	ACTINIUM-228	1.77	pCi/g		0.28	0.49	HASL300
RBB052630	ACTINIUM-228	1.77	pCi/g		0.062	0.38	HASL300
RBB070508	ACTINIUM-228	1.77	pCi/g		0.59	0.52	HASL300
RBB360005	ACTINIUM-228	1.77	pCi/g		0.45	0.53	HASL300
RBC131620	ACTINIUM-228	1.77	pCi/g	J	0.46	0.45	HASL300
RBB302428	ACTINIUM-228	1.76	pCi/g		0.11	0.38	HASL300
RBA011620	ACTINIUM-228	1.75	pCi/g		0.69	0.67	HASL300
RBA062630	ACTINIUM-228	1.75	pCi/g		0.36	0.57	HASL300
RBA173035	ACTINIUM-228	1.75	pCi/g		0.44	0.52	HASL300
RBB390812	ACTINIUM-228	1.75	pCi/g		0.38	0.45	HASL300
RBC080005	ACTINIUM-228	1.75	pCi/g		0.65	0.63	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC252024	ACTINIUM-228	1.75	pCi/g		0.36	0.49	HASL300
RBB440005	ACTINIUM-228	1.74	pCi/g		0.14	0.5	HASL300
RBC230005	ACTINIUM-228	1.74	pCi/g		0.33	0.47	HASL300
RBC391216	ACTINIUM-228	1.74	pCi/g		0.41	0.51	HASL300
RBZ010005	ACTINIUM-228	1.74	pCi/g		0.14	0.41	HASL300
RBA131216	ACTINIUM-228	1.73	pCi/g		0.54	0.52	HASL300
RBB040508	ACTINIUM-228	1.73	pCi/g		0.56	0.53	HASL300
RBB420005	ACTINIUM-228	1.73	pCi/g		0.73	0.58	HASL300
RBC381216	ACTINIUM-228	1.73	pCi/g		0.15	0.41	HASL300
RBB170005	ACTINIUM-228	1.72	pCi/g		0.041	0.4	HASL300
RBB280508	ACTINIUM-228	1.72	pCi/g		0.12	0.38	HASL300
RBC121620	ACTINIUM-228	1.72	pCi/g	J	0.59	0.55	HASL300
RBB270508	ACTINIUM-228	1.71	pCi/g		0.48	0.54	HASL300
RBC270005	ACTINIUM-228	1.71	pCi/g		0.53	0.54	HASL300
RBB030005	ACTINIUM-228	1.7	pCi/g		0.44	0.5	HASL300
RBB372428	ACTINIUM-228	1.7	pCi/g		0.53	0.45	HASL300
RBC241620	ACTINIUM-228	1.7	pCi/g		0.24	0.42	HASL300
RBB292428	ACTINIUM-228	1.69	pCi/g		0.38	0.45	HASL300
RBC250005	ACTINIUM-228	1.69	pCi/g		0.18	0.44	HASL300
RBA112630	ACTINIUM-228	1.68	pCi/g		0.68	0.49	HASL300
RBB200005	ACTINIUM-228	1.68	pCi/g		0.36	0.39	HASL300
RBC280005	ACTINIUM-228	1.68	pCi/g		0.46	0.53	HASL300
RBM171215	ACTINIUM-228	1.68	pCi/g		0.51	0.5	HASL300
RBC440005	ACTINIUM-228	1.67	pCi/g		0.66	0.64	HASL300
RBM110005	ACTINIUM-228	1.67	pCi/g	J	0.52	0.49	HASL300
RBA110005	ACTINIUM-228	1.66	pCi/g		0.36	0.39	HASL300
RBB050005	ACTINIUM-228	1.66	pCi/g		0.46	0.45	HASL300
RBC380005	ACTINIUM-228	1.66	pCi/g		0.41	0.51	HASL300
RBD010001	ACTINIUM-228	1.66	pCi/g		0.46	0.53	HASL300
RBB220508	ACTINIUM-228	1.65	pCi/g		0.36	0.48	HASL300
RBB400005	ACTINIUM-228	1.65	pCi/g		0.26	0.54	HASL300
RBC240005	ACTINIUM-228	1.65	pCi/g		0.39	0.38	HASL300
RBA122630	ACTINIUM-228	1.64	pCi/g		0.53	0.52	HASL300
RBB092630	ACTINIUM-228	1.64	pCi/g		0.7	0.69	HASL300
RBB152024	ACTINIUM-228	1.64	pCi/g		0.75	0.77	HASL300
RBB260005	ACTINIUM-228	1.64	pCi/g		0.36	0.4	HASL300
RBB040005	ACTINIUM-228	1.63	pCi/g		0.5	0.49	HASL300
RBB240005	ACTINIUM-228	1.63	pCi/g		0.37	0.48	HASL300
RBC220005	ACTINIUM-228	1.63	pCi/g		0.52	0.49	HASL300
RBM052428	ACTINIUM-228	1.63	pCi/g		0.44	0.48	HASL300
RBC321620	ACTINIUM-228	1.62	pCi/g		0.41	0.47	HASL300
RBA132630	ACTINIUM-228	1.61	pCi/g		0.64	0.5	HASL300
RBA174549	ACTINIUM-228	1.61	pCi/g		0.23	0.43	HASL300
RBB350005	ACTINIUM-228	1.61	pCi/g		0.61	0.54	HASL300
RBA130005	ACTINIUM-228	1.6	pCi/g		0.44	0.36	HASL300
RBA170005	ACTINIUM-228	1.6	pCi/g		0.44	0.45	HASL300
RBB162428	ACTINIUM-228	1.6	pCi/g		0.64	0.63	HASL300
RBB312428	ACTINIUM-228	1.6	pCi/g		0.16	0.41	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC460005	ACTINIUM-228	1.6	pCi/g		0.28	0.42	HASL300
RBB320005	ACTINIUM-228	1.59	pCi/g		0.47	0.44	HASL300
RBC070005	ACTINIUM-228	1.59	pCi/g		0.37	0.55	HASL300
RBC071216	ACTINIUM-228	1.59	pCi/g		0.28	0.36	HASL300
RBD030001	ACTINIUM-228	1.59	pCi/g		0.38	0.55	HASL300
RBZ020005	ACTINIUM-228	1.59	pCi/g		0.28	0.39	HASL300
RBZ022025	ACTINIUM-228	1.59	pCi/g		0.36	0.41	HASL300
RBA092630	ACTINIUM-228	1.58	pCi/g		0.73	0.58	HASL300
RBB060005	ACTINIUM-228	1.58	pCi/g		0.43	0.4	HASL300
RBB410005	ACTINIUM-228	1.58	pCi/g		0.58	0.5	HASL300
RBC060005	ACTINIUM-228	1.58	pCi/g		0.41	0.45	HASL300
RBB020508	ACTINIUM-228	1.57	pCi/g		0.077	0.46	HASL300
RBB300508	ACTINIUM-228	1.57	pCi/g		0.53	0.58	HASL300
RBC081216	ACTINIUM-228	1.57	pCi/g		0.6	0.52	HASL300
RBA020004	ACTINIUM-228	1.56	pCi/g		0.65	0.57	HASL300
RBB171216	ACTINIUM-228	1.56	pCi/g		0.41	0.45	HASL300
RBB220005	ACTINIUM-228	1.56	pCi/g		0.49	0.47	HASL300
RBC360005	ACTINIUM-228	1.56	pCi/g	J	0.64	0.61	HASL300
RBC400812	ACTINIUM-228	1.56	pCi/g		0.73	0.56	HASL300
RBB240508	ACTINIUM-228	1.55	pCi/g		0.46	0.42	HASL300
RBD080001	ACTINIUM-228	1.55	pCi/g		0.34	0.45	HASL300
RBB232428	ACTINIUM-228	1.53	pCi/g		0.48	0.46	HASL300
RBB281216	ACTINIUM-228	1.53	pCi/g		0.34	0.43	HASL300
RBC061216	ACTINIUM-228	1.52	pCi/g		0.12	0.33	HASL300
RBB390005	ACTINIUM-228	1.51	pCi/g		0.37	0.47	HASL300
RBC050005	ACTINIUM-228	1.51	pCi/g		0.66	0.47	HASL300
RBB070005	ACTINIUM-228	1.5	pCi/g		0.4	0.4	HASL300
RBB250005	ACTINIUM-228	1.5	pCi/g		0.29	0.38	HASL300
RBB252428	ACTINIUM-228	1.5	pCi/g		0.62	0.44	HASL300
RBD040001	ACTINIUM-228	1.5	pCi/g		0.41	0.46	HASL300
RBA050005	ACTINIUM-228	1.49	pCi/g		0.55	0.48	HASL300
RBB382428	ACTINIUM-228	1.49	pCi/g		0.37	0.34	HASL300
RBC290005	ACTINIUM-228	1.49	pCi/g		0.51	0.47	HASL300
RBC340005	ACTINIUM-228	1.48	pCi/g	J	0.74	0.72	HASL300
RBC390005	ACTINIUM-228	1.48	pCi/g		0.77	0.52	HASL300
RBA160508	ACTINIUM-228	1.47	pCi/g		0.53	0.52	HASL300
RBB290812	ACTINIUM-228	1.47	pCi/g		0.29	0.42	HASL300
RBC371620	ACTINIUM-228	1.47	pCi/g		0.33	0.41	HASL300
RBA140005	ACTINIUM-228	1.46	pCi/g		0.41	0.41	HASL300
RBB290005	ACTINIUM-228	1.46	pCi/g		0.33	0.42	HASL300
RBB342428	ACTINIUM-228	1.46	pCi/g		0.37	0.36	HASL300
RBC320005	ACTINIUM-228	1.46	pCi/g		0.42	0.41	HASL300
RBC380509	ACTINIUM-228	1.46	pCi/g		0.39	0.43	HASL300
RBA070005	ACTINIUM-228	1.45	pCi/g		0.64	0.58	HASL300
RBB042630	ACTINIUM-228	1.42	pCi/g		0.37	0.36	HASL300
RBB210005	ACTINIUM-228	1.42	pCi/g		0.53	0.47	HASL300
RBB322428	ACTINIUM-228	1.42	pCi/g		0.35	0.36	HASL300
RBB242428	ACTINIUM-228	1.41	pCi/g		0.38	0.38	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC101620	ACTINIUM-228	1.41	pCi/g	J	0.53	0.55	HASL300
RBD060001	ACTINIUM-228	1.4	pCi/g		0.11	0.36	HASL300
RBD100001	ACTINIUM-228	1.4	pCi/g		0.45	0.48	HASL300
RBB020005	ACTINIUM-228	1.39	pCi/g		0.23	0.38	HASL300
RBB270005	ACTINIUM-228	1.39	pCi/g		0.46	0.39	HASL300
RBC120005	ACTINIUM-228	1.39	pCi/g	J	0.42	0.42	HASL300
RBC110005	ACTINIUM-228	1.38	pCi/g	J	0.57	0.45	HASL300
RBD020001	ACTINIUM-228	1.38	pCi/g		0.4	0.41	HASL300
RBB250508	ACTINIUM-228	1.36	pCi/g		0.41	0.39	HASL300
RBB332428	ACTINIUM-228	1.36	pCi/g		0.32	0.37	HASL300
RBC222024	ACTINIUM-228	1.36	pCi/g		0.45	0.46	HASL300
RBB272428	ACTINIUM-228	1.34	pCi/g		0.32	0.38	HASL300
RBA172025	ACTINIUM-228	1.32	pCi/g		0.23	0.4	HASL300
RBB260812	ACTINIUM-228	1.32	pCi/g		0.31	0.36	HASL300
RBC370005	ACTINIUM-228	1.32	pCi/g		0.47	0.49	HASL300
RBD070001	ACTINIUM-228	1.32	pCi/g		0.59	0.53	HASL300
RBB442530	ACTINIUM-228	1.31	pCi/g		0.17	0.42	HASL300
RBA120005	ACTINIUM-228	1.26	pCi/g		0.39	0.37	HASL300
RBM090001	ACTINIUM-228	1.26	pCi/g		0.3	0.39	HASL300
RBD050001	ACTINIUM-228	1.25	pCi/g		0.42	0.45	HASL300
RBM122024	ACTINIUM-228	1.23	pCi/g		0.43	0.32	HASL300
RBC130005	ACTINIUM-228	1.22	pCi/g	J	0.52	0.44	HASL300
RBB050508	ACTINIUM-228	1.2	pCi/g		0.35	0.37	HASL300
RBB202428	ACTINIUM-228	1.2	pCi/g		0.44	0.46	HASL300
RBC370812	ACTINIUM-228	1.2	pCi/g		0.51	0.37	HASL300
RBB072630	ACTINIUM-228	1.18	pCi/g		0.46	0.4	HASL300
RBZ023034	ACTINIUM-228	1.09	pCi/g		0.3	0.28	HASL300
RBB320508	ACTINIUM-228	0.92	pCi/g		0.36	0.29	HASL300
RBC260005	ACTINIUM-228	0.86	pCi/g	J	0.42	0.3	HASL300
RBC261620	ACTINIUM-228	0.84	pCi/g		0.42	0.36	HASL300
RBB210812	ACTINIUM-228	0.82	pCi/g		0.41	0.33	HASL300
RBC111620	ACTINIUM-228	0.67	pCi/g	J	0.4	0.26	HASL300
RBD090001	ACTINIUM-228	0.66	pCi/g		0.34	0.28	HASL300
RBC291620	ACTINIUM-228	0.64	pCi/g		0.38	0.25	HASL300
RBC090005	ACTINIUM-228	0.62	pCi/g	J	0.36	0.24	HASL300
RBC461215	BISMUTH-212	2.47	pCi/g		0.33	0.83	HASL300
RBZ025560	BISMUTH-212	2.3	pCi/g		1	1.2	HASL300
RBM090001	BISMUTH-212	2.2	pCi/g		1	1.1	HASL300
RBC230005	BISMUTH-212	2	pCi/g		0.87	1.1	HASL300
RBC100509	BISMUTH-212	1.97	pCi/g	J	0.82	0.95	HASL300
RBB272428	BISMUTH-212	1.76	pCi/g		0.78	0.89	HASL300
RBA151620	BISMUTH-214	3.9	pCi/g		0.73	1.2	HASL300
RBM020005	BISMUTH-214	3.39	pCi/g		0.56	0.72	HASL300
RBB011216	BISMUTH-214	2.86	pCi/g		0.91	0.9	HASL300
RBA150005	BISMUTH-214	2.69	pCi/g		0.69	0.79	HASL300
RBB012428	BISMUTH-214	2.42	pCi/g		0.34	0.59	HASL300
RBA091216	BISMUTH-214	2.36	pCi/g		0.68	0.83	HASL300
RBC040005	BISMUTH-214	2.33	pCi/g		0.61	0.79	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC351620	BISMUTH-214	2.26	pCi/g	J	0.75	0.85	HASL300
RBA090005	BISMUTH-214	2.22	pCi/g		0.7	0.7	HASL300
RBC260005	BISMUTH-214	2.18	pCi/g	J	0.4	0.63	HASL300
RBA040005	BISMUTH-214	2.11	pCi/g		0.57	0.64	HASL300
RBM072428	BISMUTH-214	2.07	pCi/g		0.83	0.72	HASL300
RBB260508	BISMUTH-214	1.96	pCi/g		0.33	0.54	HASL300
RBC172428	BISMUTH-214	1.95	pCi/g		0.93	0.6	HASL300
RBC041216	BISMUTH-214	1.94	pCi/g		0.47	0.53	HASL300
RBC171216	BISMUTH-214	1.91	pCi/g		0.77	0.72	HASL300
RBA072630	BISMUTH-214	1.87	pCi/g		0.67	0.74	HASL300
RBA082630	BISMUTH-214	1.83	pCi/g		0.76	0.97	HASL300
RBB340508	BISMUTH-214	1.8	pCi/g		0.38	0.52	HASL300
RBC450005	BISMUTH-214	1.8	pCi/g		0.52	0.7	HASL300
RBA061620	BISMUTH-214	1.79	pCi/g		0.61	0.59	HASL300
RBA070005	BISMUTH-214	1.77	pCi/g		0.27	0.45	HASL300
RBA100005	BISMUTH-214	1.77	pCi/g		0.55	0.69	HASL300
RBB310005	BISMUTH-214	1.77	pCi/g		0.42	0.6	HASL300
RBA102630	BISMUTH-214	1.76	pCi/g		0.71	0.78	HASL300
RBB150508	BISMUTH-214	1.76	pCi/g		0.8	0.86	HASL300
RBA030005	BISMUTH-214	1.75	pCi/g		0.48	0.45	HASL300
RBB240005	BISMUTH-214	1.75	pCi/g		0.32	0.49	HASL300
RBC030005	BISMUTH-214	1.75	pCi/g		0.53	0.54	HASL300
RBC160005	BISMUTH-214	1.74	pCi/g		0.51	0.61	HASL300
RBC161620	BISMUTH-214	1.74	pCi/g		0.63	0.79	HASL300
RBC421216	BISMUTH-214	1.74	pCi/g		0.73	0.81	HASL300
RBM171215	BISMUTH-214	1.74	pCi/g		0.4	0.48	HASL300
RBC371620	BISMUTH-214	1.73	pCi/g		0.37	0.56	HASL300
RBA151216	BISMUTH-214	1.72	pCi/g		0.63	0.78	HASL300
RBB040508	BISMUTH-214	1.71	pCi/g		0.31	0.44	HASL300
RBB240508	BISMUTH-214	1.71	pCi/g		0.39	0.55	HASL300
RBB020508	BISMUTH-214	1.7	pCi/g		0.33	0.46	HASL300
RBC232024	BISMUTH-214	1.69	pCi/g		0.33	0.47	HASL300
RBA160005	BISMUTH-214	1.68	pCi/g		0.5	0.64	HASL300
RBB320508	BISMUTH-214	1.67	pCi/g		0.37	0.5	HASL300
RBZ012025	BISMUTH-214	1.67	pCi/g		0.54	0.5	HASL300
RBB122024	BISMUTH-214	1.66	pCi/g		0.6	0.75	HASL300
RBC252024	BISMUTH-214	1.66	pCi/g		0.39	0.54	HASL300
RBC141620	BISMUTH-214	1.65	pCi/g		0.27	0.35	HASL300
RBC340509	BISMUTH-214	1.63	pCi/g	J	0.57	0.61	HASL300
RBB090508	BISMUTH-214	1.61	pCi/g		0.75	0.63	HASL300
RBB390812	BISMUTH-214	1.61	pCi/g		0.34	0.5	HASL300
RBC021620	BISMUTH-214	1.61	pCi/g		0.54	0.55	HASL300
RBB040005	BISMUTH-214	1.6	pCi/g		0.44	0.61	HASL300
RBB332428	BISMUTH-214	1.6	pCi/g		0.35	0.5	HASL300
RBC400812	BISMUTH-214	1.6	pCi/g		0.41	0.41	HASL300
RBB061620	BISMUTH-214	1.59	pCi/g		0.41	0.5	HASL300
RBB110508	BISMUTH-214	1.59	pCi/g		0.55	0.69	HASL300
RBC131620	BISMUTH-214	1.59	pCi/g		0.32	0.46	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBA172025	BISMUTH-214	1.58	pCi/g		0.37	0.38	HASL300
RBB382024	BISMUTH-214	1.58	pCi/g		0.37	0.45	HASL300
RBC180005	BISMUTH-214	1.58	pCi/g		0.52	0.45	HASL300
RBM012630	BISMUTH-214	1.58	pCi/g		0.68	0.62	HASL300
RBB362428	BISMUTH-214	1.57	pCi/g		0.62	0.53	HASL300
RBC461215	BISMUTH-214	1.57	pCi/g		0.51	0.56	HASL300
RBC050005	BISMUTH-214	1.56	pCi/g		0.46	0.43	HASL300
RBA160508	BISMUTH-214	1.55	pCi/g		0.55	0.59	HASL300
RBB160005	BISMUTH-214	1.54	pCi/g		0.31	0.4	HASL300
RBB020005	BISMUTH-214	1.53	pCi/g		0.21	0.31	HASL300
RBB210508	BISMUTH-214	1.53	pCi/g	J	0.39	0.55	HASL300
RBB300508	BISMUTH-214	1.53	pCi/g		0.46	0.59	HASL300
RBB431216	BISMUTH-214	1.53	pCi/g		0.58	0.64	HASL300
RBB421620	BISMUTH-214	1.52	pCi/g		0.51	0.47	HASL300
RBM060005	BISMUTH-214	1.52	pCi/g		0.6	0.52	HASL300
RBB022428	BISMUTH-214	1.51	pCi/g		0.4	0.4	HASL300
RBB110005	BISMUTH-214	1.51	pCi/g		0.51	0.5	HASL300
RBM162025	BISMUTH-214	1.51	pCi/g		0.51	0.58	HASL300
RBB080005	BISMUTH-214	1.5	pCi/g		0.59	0.62	HASL300
RBC020509	BISMUTH-214	1.5	pCi/g		0.52	0.48	HASL300
RBC200005	BISMUTH-214	1.5	pCi/g		0.46	0.43	HASL300
RBM030508	BISMUTH-214	1.5	pCi/g		0.71	0.7	HASL300
RBA040812	BISMUTH-214	1.48	pCi/g		0.61	0.52	HASL300
RBA092630	BISMUTH-214	1.48	pCi/g		0.64	0.68	HASL300
RBB030005	BISMUTH-214	1.48	pCi/g		0.35	0.46	HASL300
RBB140005	BISMUTH-214	1.48	pCi/g		0.49	0.62	HASL300
RBB420005	BISMUTH-214	1.48	pCi/g		0.59	0.73	HASL300
RBB042630	BISMUTH-214	1.47	pCi/g		0.31	0.42	HASL300
RBB210812	BISMUTH-214	1.47	pCi/g	J	0.34	0.44	HASL300
RBB100812	BISMUTH-214	1.46	pCi/g		0.59	0.73	HASL300
RBB350005	BISMUTH-214	1.46	pCi/g		0.33	0.35	HASL300
RBB410005	BISMUTH-214	1.46	pCi/g		0.39	0.48	HASL300
RBC121620	BISMUTH-214	1.46	pCi/g		0.35	0.44	HASL300
RBC311620	BISMUTH-214	1.46	pCi/g	J	0.59	0.59	HASL300
RBC411216	BISMUTH-214	1.46	pCi/g		0.73	0.58	HASL300
RBC420005	BISMUTH-214	1.46	pCi/g		0.51	0.55	HASL300
RBM101216	BISMUTH-214	1.46	pCi/g		0.81	0.62	HASL300
RBM110005	BISMUTH-214	1.46	pCi/g		0.32	0.46	HASL300
RBM122024	BISMUTH-214	1.46	pCi/g		0.32	0.35	HASL300
RBA060005	BISMUTH-214	1.45	pCi/g		0.54	0.61	HASL300
RBB411216	BISMUTH-214	1.45	pCi/g		0.59	0.49	HASL300
RBB443539	BISMUTH-214	1.45	pCi/g		0.53	0.48	HASL300
RBC051216	BISMUTH-214	1.45	pCi/g		0.35	0.47	HASL300
RBC381216	BISMUTH-214	1.45	pCi/g		0.26	0.36	HASL300
RBA062630	BISMUTH-214	1.44	pCi/g		0.53	0.47	HASL300
RBA112630	BISMUTH-214	1.44	pCi/g		0.42	0.39	HASL300
RBB162428	BISMUTH-214	1.43	pCi/g		0.61	0.5	HASL300
RBB260005	BISMUTH-214	1.43	pCi/g		0.23	0.34	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB312428	BISMUTH-214	1.43	pCi/g		0.36	0.5	HASL300
RBB330005	BISMUTH-214	1.43	pCi/g		0.34	0.34	HASL300
RBB330508	BISMUTH-214	1.43	pCi/g		0.42	0.51	HASL300
RBC190005	BISMUTH-214	1.43	pCi/g		0.68	0.53	HASL300
RBC440005	BISMUTH-214	1.43	pCi/g		0.39	0.53	HASL300
RBA110812	BISMUTH-214	1.42	pCi/g		0.19	0.32	HASL300
RBC020005	BISMUTH-214	1.42	pCi/g		0.46	0.61	HASL300
RBC101620	BISMUTH-214	1.42	pCi/g		0.33	0.34	HASL300
RBC291620	BISMUTH-214	1.42	pCi/g		0.38	0.48	HASL300
RBA052630	BISMUTH-214	1.41	pCi/g		0.44	0.48	HASL300
RBA170005	BISMUTH-214	1.41	pCi/g		0.27	0.3	HASL300
RBC021314	BISMUTH-214	1.41	pCi/g		0.36	0.42	HASL300
RBC091620	BISMUTH-214	1.41	pCi/g		0.35	0.35	HASL300
RBC242428	BISMUTH-214	1.41	pCi/g		0.39	0.42	HASL300
RBC330005	BISMUTH-214	1.41	pCi/g	J	0.65	0.52	HASL300
RBZ023034	BISMUTH-214	1.4	pCi/g	J	0.32	0.44	HASL300
RBA174549	BISMUTH-214	1.39	pCi/g		0.28	0.32	HASL300
RBB060005	BISMUTH-214	1.39	pCi/g		0.22	0.29	HASL300
RBB140508	BISMUTH-214	1.39	pCi/g		0.74	0.6	HASL300
RBB370508	BISMUTH-214	1.39	pCi/g		0.28	0.39	HASL300
RBC240005	BISMUTH-214	1.39	pCi/g		0.33	0.45	HASL300
RBC321620	BISMUTH-214	1.39	pCi/g		0.32	0.44	HASL300
RBZ022025	BISMUTH-214	1.39	pCi/g	J	0.34	0.51	HASL300
RBA020004	BISMUTH-214	1.38	pCi/g		0.4	0.51	HASL300
RBB302428	BISMUTH-214	1.38	pCi/g		0.35	0.35	HASL300
RBA121620	BISMUTH-214	1.37	pCi/g		0.29	0.4	HASL300
RBB242428	BISMUTH-214	1.37	pCi/g		0.27	0.39	HASL300
RBB290005	BISMUTH-214	1.37	pCi/g		0.22	0.32	HASL300
RBB380005	BISMUTH-214	1.37	pCi/g		0.33	0.46	HASL300
RBC100509	BISMUTH-214	1.37	pCi/g		0.28	0.36	HASL300
RBC462530	BISMUTH-214	1.37	pCi/g		0.37	0.43	HASL300
RBA141216	BISMUTH-214	1.36	pCi/g		0.43	0.46	HASL300
RBC080005	BISMUTH-214	1.36	pCi/g		0.39	0.49	HASL300
RBC250005	BISMUTH-214	1.36	pCi/g		0.29	0.42	HASL300
RBA100812	BISMUTH-214	1.35	pCi/g		0.22	0.35	HASL300
RBB142024	BISMUTH-214	1.35	pCi/g		0.41	0.42	HASL300
RBB252428	BISMUTH-214	1.35	pCi/g		0.33	0.39	HASL300
RBB360812	BISMUTH-214	1.35	pCi/g		0.45	0.57	HASL300
RBC060005	BISMUTH-214	1.35	pCi/g		0.37	0.35	HASL300
RBC320005	BISMUTH-214	1.35	pCi/g		0.29	0.44	HASL300
RBC340005	BISMUTH-214	1.35	pCi/g	J	0.45	0.55	HASL300
RBA030508	BISMUTH-214	1.34	pCi/g		0.42	0.49	HASL300
RBA051620	BISMUTH-214	1.34	pCi/g		0.53	0.43	HASL300
RBA132630	BISMUTH-214	1.34	pCi/g		0.29	0.38	HASL300
RBB032428	BISMUTH-214	1.34	pCi/g		0.24	0.37	HASL300
RBC190913	BISMUTH-214	1.34	pCi/g		0.58	0.61	HASL300
RBM062428	BISMUTH-214	1.34	pCi/g		0.24	0.29	HASL300
RBM132024	BISMUTH-214	1.34	pCi/g		0.37	0.45	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB212428	BISMUTH-214	1.33	pCi/g	J	0.34	0.44	HASL300
RBB270005	BISMUTH-214	1.33	pCi/g		0.38	0.36	HASL300
RBB280508	BISMUTH-214	1.33	pCi/g		0.22	0.31	HASL300
RBB370005	BISMUTH-214	1.33	pCi/g		0.29	0.41	HASL300
RBB010005	BISMUTH-214	1.32	pCi/g		0.54	0.63	HASL300
RBB200812	BISMUTH-214	1.32	pCi/g	J	0.35	0.34	HASL300
RBB220508	BISMUTH-214	1.32	pCi/g	J	0.37	0.48	HASL300
RBB360005	BISMUTH-214	1.32	pCi/g		0.4	0.36	HASL300
RBB440005	BISMUTH-214	1.32	pCi/g		0.31	0.39	HASL300
RBM052428	BISMUTH-214	1.32	pCi/g		0.27	0.38	HASL300
RBA122630	BISMUTH-214	1.31	pCi/g		0.35	0.49	HASL300
RBB102024	BISMUTH-214	1.31	pCi/g		0.65	0.63	HASL300
RBB352428	BISMUTH-214	1.31	pCi/g		0.29	0.39	HASL300
RBC140005	BISMUTH-214	1.31	pCi/g		0.26	0.3	HASL300
RBB152024	BISMUTH-214	1.3	pCi/g		0.52	0.57	HASL300
RBB030508	BISMUTH-214	1.29	pCi/g		0.31	0.43	HASL300
RBB250005	BISMUTH-214	1.29	pCi/g		0.29	0.39	HASL300
RBD040001	BISMUTH-214	1.29	pCi/g		0.34	0.44	HASL300
RBZ020005	BISMUTH-214	1.29	pCi/g	J	0.34	0.4	HASL300
RBB092630	BISMUTH-214	1.27	pCi/g		0.56	0.58	HASL300
RBA142630	BISMUTH-214	1.26	pCi/g		0.29	0.35	HASL300
RBB130005	BISMUTH-214	1.26	pCi/g		0.63	0.51	HASL300
RBB390508	BISMUTH-214	1.26	pCi/g		0.26	0.31	HASL300
RBC400005	BISMUTH-214	1.26	pCi/g		0.32	0.37	HASL300
RBA070812	BISMUTH-214	1.25	pCi/g		0.48	0.41	HASL300
RBC241620	BISMUTH-214	1.25	pCi/g		0.27	0.34	HASL300
RBC290005	BISMUTH-214	1.25	pCi/g		0.32	0.39	HASL300
RBC380005	BISMUTH-214	1.25	pCi/g		0.37	0.42	HASL300
RBA081216	BISMUTH-214	1.23	pCi/g		0.62	0.52	HASL300
RBA173035	BISMUTH-214	1.23	pCi/g		0.31	0.39	HASL300
RBB050005	BISMUTH-214	1.23	pCi/g		0.29	0.41	HASL300
RBB222428	BISMUTH-214	1.23	pCi/g	J	0.37	0.46	HASL300
RBB290812	BISMUTH-214	1.23	pCi/g		0.23	0.28	HASL300
RBB070508	BISMUTH-214	1.22	pCi/g		0.34	0.34	HASL300
RBB250508	BISMUTH-214	1.22	pCi/g		0.28	0.4	HASL300
RBC462025	BISMUTH-214	1.22	pCi/g		0.22	0.31	HASL300
RBB272428	BISMUTH-214	1.21	pCi/g		0.26	0.35	HASL300
RBB070005	BISMUTH-214	1.2	pCi/g		0.23	0.3	HASL300
RBB072630	BISMUTH-214	1.2	pCi/g		0.28	0.36	HASL300
RBB372428	BISMUTH-214	1.2	pCi/g		0.31	0.38	HASL300
RBC120005	BISMUTH-214	1.2	pCi/g		0.31	0.31	HASL300
RBC230005	BISMUTH-214	1.2	pCi/g		0.28	0.37	HASL300
RBA011620	BISMUTH-214	1.19	pCi/g		0.52	0.43	HASL300
RBA130005	BISMUTH-214	1.19	pCi/g		0.16	0.27	HASL300
RBA140005	BISMUTH-214	1.19	pCi/g		0.3	0.37	HASL300
RBB230005	BISMUTH-214	1.19	pCi/g	J	0.29	0.3	HASL300
RBB230508	BISMUTH-214	1.19	pCi/g	J	0.32	0.42	HASL300
RBB270508	BISMUTH-214	1.19	pCi/g		0.28	0.34	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [3]	Detection Limit	Error	Test Method
RBC081216	BISMUTH-214	1.19	pCi/g		0.28	0.28	HASL300
RBC111620	BISMUTH-214	1.19	pCi/g		0.38	0.52	HASL300
RBC071216	BISMUTH-214	1.18	pCi/g		0.3	0.37	HASL300
RBC090005	BISMUTH-214	1.17	pCi/g		0.26	0.29	HASL300
RBC410005	BISMUTH-214	1.17	pCi/g		0.53	0.53	HASL300
RBB220005	BISMUTH-214	1.16	pCi/g	J	0.4	0.45	HASL300
RBB310812	BISMUTH-214	1.16	pCi/g		0.28	0.28	HASL300
RBC220005	BISMUTH-214	1.15	pCi/g		0.28	0.36	HASL300
RBC451216	BISMUTH-214	1.15	pCi/g		0.46	0.49	HASL300
RBA110005	BISMUTH-214	1.14	pCi/g		0.28	0.37	HASL300
RBB442025	BISMUTH-214	1.14	pCi/g		0.44	0.4	HASL300
RBC280005	BISMUTH-214	1.14	pCi/g		0.21	0.3	HASL300
RBC391216	BISMUTH-214	1.14	pCi/g		0.27	0.34	HASL300
RBZ025560	BISMUTH-214	1.14	pCi/g	J	0.32	0.38	HASL300
RBA050005	BISMUTH-214	1.13	pCi/g		0.43	0.31	HASL300
RBA080005	BISMUTH-214	1.13	pCi/g		0.55	0.44	HASL300
RBC380509	BISMUTH-214	1.13	pCi/g		0.25	0.31	HASL300
RBB281216	BISMUTH-214	1.12	pCi/g		0.27	0.35	HASL300
RBC070005	BISMUTH-214	1.12	pCi/g		0.39	0.34	HASL300
RBB052630	BISMUTH-214	1.11	pCi/g		0.31	0.29	HASL300
RBB300005	BISMUTH-214	1.11	pCi/g		0.38	0.41	HASL300
RBC270005	BISMUTH-214	1.11	pCi/g		0.3	0.34	HASL300
RBA042630	BISMUTH-214	1.1	pCi/g		0.54	0.3	HASL300
RBB350508	BISMUTH-214	1.1	pCi/g		0.3	0.34	HASL300
RBC011216	BISMUTH-214	1.1	pCi/g		0.49	0.5	HASL300
RBC061216	BISMUTH-214	1.1	pCi/g		0.3	0.35	HASL300
RBC370812	BISMUTH-214	1.1	pCi/g		0.28	0.29	HASL300
RBB442530	BISMUTH-214	1.09	pCi/g		0.25	0.3	HASL300
RBC441216	BISMUTH-214	1.09	pCi/g		0.39	0.37	HASL300
RBM090001	BISMUTH-214	1.09	pCi/g		0.37	0.44	HASL300
RBB150005	BISMUTH-214	1.08	pCi/g		0.38	0.38	HASL300
RBB171216	BISMUTH-214	1.08	pCi/g		0.37	0.32	HASL300
RBB320005	BISMUTH-214	1.08	pCi/g		0.42	0.43	HASL300
RBC192024	BISMUTH-214	1.08	pCi/g		0.41	0.45	HASL300
RBC390005	BISMUTH-214	1.08	pCi/g		0.31	0.32	HASL300
RBC130005	BISMUTH-214	1.06	pCi/g		0.28	0.28	HASL300
RBB390005	BISMUTH-214	1.05	pCi/g		0.26	0.36	HASL300
RBZ010005	BISMUTH-214	1.05	pCi/g		0.35	0.38	HASL300
RBB260812	BISMUTH-214	1.04	pCi/g		0.2	0.26	HASL300
RBZ013539	BISMUTH-214	1.04	pCi/g		0.31	0.33	HASL300
RBA131216	BISMUTH-214	1.03	pCi/g		0.36	0.37	HASL300
RBB322428	BISMUTH-214	1.03	pCi/g		0.22	0.26	HASL300
RBB342428	BISMUTH-214	1.03	pCi/g		0.28	0.37	HASL300
RBB170005	BISMUTH-214	1.01	pCi/g		0.24	0.27	HASL300
RBC261620	BISMUTH-214	1.01	pCi/g		0.38	0.44	HASL300
RBC360005	BISMUTH-214	1.01	pCi/g	J	0.42	0.32	HASL300
RBB292428	BISMUTH-214	1	pCi/g		0.2	0.24	HASL300
RBC460005	BISMUTH-214	1	pCi/g		0.25	0.3	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB280005	BISMUTH-214	0.98	pCi/g		0.42	0.34	HASL300
RBB400005	BISMUTH-214	0.98	pCi/g		0.51	0.43	HASL300
RBC341620	BISMUTH-214	0.98	pCi/g	J	0.49	0.43	HASL300
RBC110005	BISMUTH-214	0.97	pCi/g		0.37	0.3	HASL300
RBB062630	BISMUTH-214	0.96	pCi/g		0.28	0.34	HASL300
RBC310005	BISMUTH-214	0.96	pCi/g	J	0.5	0.44	HASL300
RBD080001	BISMUTH-214	0.96	pCi/g		0.26	0.29	HASL300
RBC370005	BISMUTH-214	0.94	pCi/g		0.24	0.28	HASL300
RBB210005	BISMUTH-214	0.93	pCi/g	J	0.35	0.28	HASL300
RBC441620	BISMUTH-214	0.93	pCi/g		0.52	0.41	HASL300
RBC031216	BISMUTH-214	0.92	pCi/g		0.5	0.4	HASL300
RBC150005	BISMUTH-214	0.92	pCi/g		0.51	0.37	HASL300
RBD060001	BISMUTH-214	0.91	pCi/g		0.22	0.23	HASL300
RBB050508	BISMUTH-214	0.9	pCi/g		0.3	0.33	HASL300
RBB200005	BISMUTH-214	0.9	pCi/g	J	0.31	0.32	HASL300
RBC100005	BISMUTH-214	0.9	pCi/g		0.39	0.36	HASL300
RBC170005	BISMUTH-214	0.9	pCi/g		0.45	0.44	HASL300
RBD010001	BISMUTH-214	0.89	pCi/g		0.25	0.29	HASL300
RBD090001	BISMUTH-214	0.89	pCi/g		0.24	0.3	HASL300
RBA120005	BISMUTH-214	0.88	pCi/g		0.33	0.36	HASL300
RBC222024	BISMUTH-214	0.86	pCi/g		0.32	0.31	HASL300
RBD100001	BISMUTH-214	0.85	pCi/g		0.28	0.32	HASL300
RBB170508	BISMUTH-214	0.84	pCi/g		0.33	0.32	HASL300
RBB232428	BISMUTH-214	0.84	pCi/g	J	0.33	0.35	HASL300
RBC271620	BISMUTH-214	0.83	pCi/g		0.28	0.27	HASL300
RBD020001	BISMUTH-214	0.82	pCi/g		0.22	0.28	HASL300
RBD030001	BISMUTH-214	0.82	pCi/g		0.36	0.33	HASL300
RBD070001	BISMUTH-214	0.77	pCi/g		0.39	0.36	HASL300
RBB202428	BISMUTH-214	0.74	pCi/g	J	0.3	0.28	HASL300
RBD050001	BISMUTH-214	0.7	pCi/g		0.23	0.28	HASL300
RBD040001	CESIUM-137	0.55	pCi/g		0.13	0.2	HASL300
RBC400005	CESIUM-137	0.45	pCi/g		0.15	0.21	HASL300
RBD070001	CESIUM-137	0.45	pCi/g		0.15	0.15	HASL300
RBA160005	CESIUM-137	0.39	pCi/g		0.19	0.18	HASL300
RBB210812	CESIUM-137	0.39	pCi/g		0.14	0.16	HASL300
RBM090001	CESIUM-137	0.37	pCi/g		0.16	0.17	HASL300
RBC460005	CESIUM-137	0.36	pCi/g		0.13	0.15	HASL300
RBD090001	CESIUM-137	0.35	pCi/g		0.12	0.13	HASL300
RBC240005	CESIUM-137	0.33	pCi/g		0.14	0.18	HASL300
RBB250005	CESIUM-137	0.22	pCi/g		0.096	0.1	HASL300
RBC260005	POTASSIUM-40	30.9	pCi/g	J	1.5	4.6	HASL300
RBA040812	POTASSIUM-40	29.6	pCi/g		3.8	6.3	HASL300
RBB080005	POTASSIUM-40	29	pCi/g		3.5	5	HASL300
RBA151620	POTASSIUM-40	28.8	pCi/g		3.5	6.5	HASL300
RBC190913	POTASSIUM-40	28.6	pCi/g		2.7	4.6	HASL300
RBB410005	POTASSIUM-40	28.5	pCi/g		2.5	4.7	HASL300
RBB280005	POTASSIUM-40	27.7	pCi/g		3.2	5.1	HASL300
RBB370005	POTASSIUM-40	27.4	pCi/g		1.2	4	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBA020004	POTASSIUM-40	27.2	pCi/g		2.6	4.3	HASL300
RBC051216	POTASSIUM-40	27.2	pCi/g		1.2	3.9	HASL300
RBC171216	POTASSIUM-40	27.1	pCi/g		3.7	6.5	HASL300
RBA070005	POTASSIUM-40	27	pCi/g		3.2	5.9	HASL300
RBA011620	POTASSIUM-40	26.8	pCi/g		2.3	4.3	HASL300
RBB012830	POTASSIUM-40	26.8	pCi/g		3.3	5.4	HASL300
RBC010005	POTASSIUM-40	26.6	pCi/g		2.8	4.7	HASL300
RBB012428	POTASSIUM-40	26.5	pCi/g		3.8	5.9	HASL300
RBB401216	POTASSIUM-40	26.5	pCi/g		3.8	6.2	HASL300
RBC160005	POTASSIUM-40	26.5	pCi/g		2.5	4.8	HASL300
RBA160508	POTASSIUM-40	26.4	pCi/g		2.2	4.2	HASL300
RBB162428	POTASSIUM-40	26.4	pCi/g		3.7	5.8	HASL300
RBB210508	POTASSIUM-40	26.4	pCi/g		1.3	3.8	HASL300
RBC020509	POTASSIUM-40	26.4	pCi/g		3.1	4.6	HASL300
RBC111620	POTASSIUM-40	26.4	pCi/g		1.3	3.9	HASL300
RBB102024	POTASSIUM-40	26.1	pCi/g		3.2	5.3	HASL300
RBC021620	POTASSIUM-40	26.1	pCi/g		2.5	4.3	HASL300
RBC021314	POTASSIUM-40	26	pCi/g		2.6	4.3	HASL300
RBC240005	POTASSIUM-40	26	pCi/g		1.2	3.7	HASL300
RBA100812	POTASSIUM-40	25.9	pCi/g		2.8	5.3	HASL300
RBB110005	POTASSIUM-40	25.9	pCi/g		3.2	4.5	HASL300
RBB390812	POTASSIUM-40	25.9	pCi/g		1.4	3.8	HASL300
RBC041216	POTASSIUM-40	25.9	pCi/g		2.6	4.9	HASL300
RBC172428	POTASSIUM-40	25.9	pCi/g		3.8	4.8	HASL300
RBC420005	POTASSIUM-40	25.9	pCi/g		2.7	4.7	HASL300
RBA060005	POTASSIUM-40	25.8	pCi/g		2.8	4.3	HASL300
RBB411216	POTASSIUM-40	25.6	pCi/g		3	5.1	HASL300
RBZ025560	POTASSIUM-40	25.6	pCi/g		1	3.6	HASL300
RBC180005	POTASSIUM-40	25.5	pCi/g		2.3	4.7	HASL300
RBC400005	POTASSIUM-40	25.5	pCi/g		0.98	3.6	HASL300
RBA042630	POTASSIUM-40	25.4	pCi/g		2.5	4.2	HASL300
RBA091216	POTASSIUM-40	25.4	pCi/g		3.6	5.6	HASL300
RBB240005	POTASSIUM-40	25.4	pCi/g		1.2	3.7	HASL300
RBA030508	POTASSIUM-40	25.3	pCi/g		3	5.3	HASL300
RBC310005	POTASSIUM-40	25.3	pCi/g		3.4	4.8	HASL300
RBC450005	POTASSIUM-40	25.3	pCi/g		2.2	4.1	HASL300
RBB160005	POTASSIUM-40	25.2	pCi/g		3.3	5.2	HASL300
RBC020005	POTASSIUM-40	25.2	pCi/g		3.1	4.8	HASL300
RBA142630	POTASSIUM-40	25.1	pCi/g		1.5	4.3	HASL300
RBB140005	POTASSIUM-40	25.1	pCi/g		3.1	4.3	HASL300
RBC030005	POTASSIUM-40	24.9	pCi/g		2.8	4.9	HASL300
RBC440005	POTASSIUM-40	24.9	pCi/g		2.1	3.9	HASL300
RBC170005	POTASSIUM-40	24.8	pCi/g		2	4.9	HASL300
RBB150005	POTASSIUM-40	24.7	pCi/g		3.5	5.9	HASL300
RBB382024	POTASSIUM-40	24.7	pCi/g		1.3	3.6	HASL300
RBC190005	POTASSIUM-40	24.7	pCi/g		2.8	5.5	HASL300
RBB130005	POTASSIUM-40	24.6	pCi/g		3	5.1	HASL300
RBB310005	POTASSIUM-40	24.6	pCi/g		1.2	3.6	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB420005	POTASSIUM-40	24.6	pCi/g		3.1	4.6	HASL300
RBM030508	POTASSIUM-40	24.6	pCi/g		2.9	4.3	HASL300
RBM060005	POTASSIUM-40	24.6	pCi/g		2.5	5.1	HASL300
RBB260508	POTASSIUM-40	24.5	pCi/g		1	3.5	HASL300
RBB400005	POTASSIUM-40	24.5	pCi/g		2.5	5.1	HASL300
RBA081216	POTASSIUM-40	24.4	pCi/g		3.7	5.5	HASL300
RBA141216	POTASSIUM-40	24.4	pCi/g		1.6	4.5	HASL300
RBC131620	POTASSIUM-40	24.4	pCi/g		1.3	3.6	HASL300
RBC400812	POTASSIUM-40	24.4	pCi/g		1.4	4.4	HASL300
RBC350005	POTASSIUM-40	24.3	pCi/g		3.3	5.8	HASL300
RBA020408	POTASSIUM-40	24.2	pCi/g		2.9	4.8	HASL300
RBB112024	POTASSIUM-40	24.2	pCi/g		3.2	5.4	HASL300
RBB380005	POTASSIUM-40	24.2	pCi/g		1.3	4.3	HASL300
RBC150005	POTASSIUM-40	24.2	pCi/g		2.5	4.7	HASL300
RBA050005	POTASSIUM-40	24.1	pCi/g		2.5	3.9	HASL300
RBB320508	POTASSIUM-40	24.1	pCi/g		1.4	3.6	HASL300
RBB340508	POTASSIUM-40	24.1	pCi/g		1.4	3.6	HASL300
RBC011216	POTASSIUM-40	24.1	pCi/g		2.5	4	HASL300
RBC340005	POTASSIUM-40	24.1	pCi/g		2.5	4	HASL300
RBA072630	POTASSIUM-40	24	pCi/g		3.1	4.4	HASL300
RBA090005	POTASSIUM-40	24	pCi/g		3.7	5.4	HASL300
RBA110005	POTASSIUM-40	24	pCi/g		1.2	3.8	HASL300
RBA112630	POTASSIUM-40	24	pCi/g		1.6	4.4	HASL300
RBB260005	POTASSIUM-40	24	pCi/g		1.2	3.5	HASL300
RBB312428	POTASSIUM-40	24	pCi/g		1.3	4.1	HASL300
RBC210005	POTASSIUM-40	24	pCi/g		3	5.5	HASL300
RBC421216	POTASSIUM-40	23.9	pCi/g		4.5	5.5	HASL300
RBA070812	POTASSIUM-40	23.8	pCi/g		3.4	5.3	HASL300
RBA173035	POTASSIUM-40	23.8	pCi/g		1.3	3.8	HASL300
RBB430005	POTASSIUM-40	23.8	pCi/g		4.1	6	HASL300
RBC270005	POTASSIUM-40	23.8	pCi/g		1.1	3.8	HASL300
RBB030508	POTASSIUM-40	23.7	pCi/g		1.2	3.8	HASL300
RBB240508	POTASSIUM-40	23.7	pCi/g		1.2	3.5	HASL300
RBC200005	POTASSIUM-40	23.7	pCi/g		2.3	4.5	HASL300
RBA030005	POTASSIUM-40	23.6	pCi/g		2.6	3.9	HASL300
RBA100005	POTASSIUM-40	23.6	pCi/g		2.9	4.1	HASL300
RBB092630	POTASSIUM-40	23.6	pCi/g		3.7	4.3	HASL300
RBC230005	POTASSIUM-40	23.6	pCi/g		0.95	3.4	HASL300
RBA082630	POTASSIUM-40	23.5	pCi/g		3	4.3	HASL300
RBA150005	POTASSIUM-40	23.5	pCi/g		2.8	4.7	HASL300
RBA160005	POTASSIUM-40	23.5	pCi/g		3.7	5.4	HASL300
RBB020005	POTASSIUM-40	23.5	pCi/g		1.1	3.9	HASL300
RBB030005	POTASSIUM-40	23.5	pCi/g		1.3	3.5	HASL300
RBZ020005	POTASSIUM-40	23.5	pCi/g		1.1	3.4	HASL300
RBA140005	POTASSIUM-40	23.4	pCi/g		0.84	3.3	HASL300
RBB152024	POTASSIUM-40	23.4	pCi/g		3.1	4.1	HASL300
RBB220005	POTASSIUM-40	23.4	pCi/g		1.5	4.1	HASL300
RBC090005	POTASSIUM-40	23.4	pCi/g		1	3.4	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC192024	POTASSIUM-40	23.4	pCi/g		2.7	4	HASL300
RBC220005	POTASSIUM-40	23.4	pCi/g		0.92	3.8	HASL300
RBC360005	POTASSIUM-40	23.4	pCi/g		2.9	4.3	HASL300
RBM171215	POTASSIUM-40	23.4	pCi/g		1.5	3.9	HASL300
RBA092630	POTASSIUM-40	23.3	pCi/g		3.2	4.1	HASL300
RBA110812	POTASSIUM-40	23.3	pCi/g		1.1	3.9	HASL300
RBA121620	POTASSIUM-40	23.3	pCi/g		1.2	3.5	HASL300
RBB042630	POTASSIUM-40	23.2	pCi/g		0.98	3.3	HASL300
RBB220508	POTASSIUM-40	23.2	pCi/g		1.2	3.4	HASL300
RBB250005	POTASSIUM-40	23.2	pCi/g		1.2	3.4	HASL300
RBC252024	POTASSIUM-40	23.2	pCi/g		1.5	3.6	HASL300
RBM132024	POTASSIUM-40	23.2	pCi/g		1.3	4.1	HASL300
RBC371620	POTASSIUM-40	23.1	pCi/g		1.1	3.4	HASL300
RBC460005	POTASSIUM-40	23.1	pCi/g		1.1	3.7	HASL300
RBZ010005	POTASSIUM-40	23.1	pCi/g		1.4	4	HASL300
RBA102630	POTASSIUM-40	23	pCi/g		4	5.8	HASL300
RBB200005	POTASSIUM-40	23	pCi/g		1.2	3.7	HASL300
RBC351620	POTASSIUM-40	23	pCi/g		3.4	4.9	HASL300
RBM141620	POTASSIUM-40	23	pCi/g		3.7	5.9	HASL300
RBZ023034	POTASSIUM-40	23	pCi/g		0.97	3.3	HASL300
RBC410005	POTASSIUM-40	22.9	pCi/g		2.6	4.5	HASL300
RBM020005	POTASSIUM-40	22.9	pCi/g		2.8	4.7	HASL300
RBB250508	POTASSIUM-40	22.8	pCi/g		1	3.6	HASL300
RBC040005	POTASSIUM-40	22.8	pCi/g		2.9	4	HASL300
RBC151620	POTASSIUM-40	22.8	pCi/g		3.1	5.4	HASL300
RBC241620	POTASSIUM-40	22.8	pCi/g		1.2	3.7	HASL300
RBC091620	POTASSIUM-40	22.7	pCi/g		1.1	3.8	HASL300
RBA040005	POTASSIUM-40	22.6	pCi/g		3.3	5.3	HASL300
RBB150508	POTASSIUM-40	22.6	pCi/g		3.2	4.1	HASL300
RBB270005	POTASSIUM-40	22.6	pCi/g		1.1	3.8	HASL300
RBC411216	POTASSIUM-40	22.6	pCi/g		4.1	6	HASL300
RBM072428	POTASSIUM-40	22.6	pCi/g		3.7	5.7	HASL300
RBA170005	POTASSIUM-40	22.5	pCi/g		0.95	3.5	HASL300
RBB130508	POTASSIUM-40	22.5	pCi/g		3.4	5.3	HASL300
RBB290005	POTASSIUM-40	22.5	pCi/g		1.1	3.8	HASL300
RBB360005	POTASSIUM-40	22.5	pCi/g		1.2	3.7	HASL300
RBC050005	POTASSIUM-40	22.5	pCi/g		2.3	4.5	HASL300
RBC080005	POTASSIUM-40	22.5	pCi/g		1.4	3.7	HASL300
RBC311620	POTASSIUM-40	22.5	pCi/g		3.5	5.7	HASL300
RBC331620	POTASSIUM-40	22.5	pCi/g		3.2	4.1	HASL300
RBC232024	POTASSIUM-40	22.4	pCi/g		1.4	3.7	HASL300
RBM110005	POTASSIUM-40	22.4	pCi/g		1.3	3.7	HASL300
RBB050508	POTASSIUM-40	22.3	pCi/g		1.1	3.7	HASL300
RBB242428	POTASSIUM-40	22.3	pCi/g		1.1	3.3	HASL300
RBA010005	POTASSIUM-40	22.2	pCi/g		3.5	5.1	HASL300
RBB070508	POTASSIUM-40	22.2	pCi/g		1.5	4.1	HASL300
RBC280005	POTASSIUM-40	22.2	pCi/g		1.4	3.7	HASL300
RBA061620	POTASSIUM-40	22.1	pCi/g		3.1	4.6	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB370508	POTASSIUM-40	22.1	pCi/g		1.1	3.6	HASL300
RBB390005	POTASSIUM-40	22.1	pCi/g		1.1	3.6	HASL300
RBB122024	POTASSIUM-40	22	pCi/g		3.8	4.3	HASL300
RBB272428	POTASSIUM-40	22	pCi/g		1	3.2	HASL300
RBB350005	POTASSIUM-40	22	pCi/g		1.4	3.8	HASL300
RBZ013539	POTASSIUM-40	22	pCi/g		1.5	3.9	HASL300
RBC361620	POTASSIUM-40	21.9	pCi/g		3	4.6	HASL300
RBB010005	POTASSIUM-40	21.8	pCi/g		2.7	4.8	HASL300
RBB302428	POTASSIUM-40	21.8	pCi/g		1.4	3.8	HASL300
RBC441620	POTASSIUM-40	21.8	pCi/g		2.5	4.8	HASL300
RBA051620	POTASSIUM-40	21.7	pCi/g		3	4.8	HASL300
RBB140508	POTASSIUM-40	21.7	pCi/g		3	4.7	HASL300
RBB260812	POTASSIUM-40	21.7	pCi/g		1	3.2	HASL300
RBB290812	POTASSIUM-40	21.7	pCi/g		0.87	3.1	HASL300
RBB300005	POTASSIUM-40	21.7	pCi/g		1.3	3.8	HASL300
RBB320005	POTASSIUM-40	21.7	pCi/g		1.6	4.1	HASL300
RBB332428	POTASSIUM-40	21.7	pCi/g		1.4	3.4	HASL300
RBB390508	POTASSIUM-40	21.7	pCi/g		1.2	3.8	HASL300
RBC060005	POTASSIUM-40	21.7	pCi/g		1.8	3.9	HASL300
RBA174549	POTASSIUM-40	21.6	pCi/g		1.5	3.9	HASL300
RBB080812	POTASSIUM-40	21.6	pCi/g		3.4	4.8	HASL300
RBB230005	POTASSIUM-40	21.6	pCi/g		1.4	3.9	HASL300
RBB310812	POTASSIUM-40	21.6	pCi/g		1.3	3.6	HASL300
RBC121620	POTASSIUM-40	21.6	pCi/g		1.3	3.9	HASL300
RBC140005	POTASSIUM-40	21.6	pCi/g		1.1	3.5	HASL300
RBM012630	POTASSIUM-40	21.6	pCi/g		3.8	4.1	HASL300
RBZ022025	POTASSIUM-40	21.6	pCi/g		1	3.1	HASL300
RBC451216	POTASSIUM-40	21.5	pCi/g		2.7	3.8	HASL300
RBM162025	POTASSIUM-40	21.5	pCi/g		2.2	4.6	HASL300
RBB061620	POTASSIUM-40	21.4	pCi/g		1.2	3.2	HASL300
RBB280508	POTASSIUM-40	21.4	pCi/g		1.2	3.6	HASL300
RBC110005	POTASSIUM-40	21.4	pCi/g		1.4	3.9	HASL300
RBC250005	POTASSIUM-40	21.4	pCi/g		1.1	3.8	HASL300
RBC390005	POTASSIUM-40	21.4	pCi/g		1.3	3.9	HASL300
RBA120005	POTASSIUM-40	21.3	pCi/g		1.1	3.6	HASL300
RBB300508	POTASSIUM-40	21.3	pCi/g		1.7	4.1	HASL300
RBB342428	POTASSIUM-40	21.3	pCi/g		1.4	3.3	HASL300
RBC261620	POTASSIUM-40	21.3	pCi/g		1.2	3.9	HASL300
RBC341620	POTASSIUM-40	21.3	pCi/g		2.5	4.8	HASL300
RBB431216	POTASSIUM-40	21.22	pCi/g	J	2.64	4.4	HASL300
RBA052630	POTASSIUM-40	21.2	pCi/g		4.2	5.6	HASL300
RBB062630	POTASSIUM-40	21.2	pCi/g		1	3.4	HASL300
RBB090005	POTASSIUM-40	21.2	pCi/g		3.7	5.5	HASL300
RBB360812	POTASSIUM-40	21.2	pCi/g		1.5	4.1	HASL300
RBC320005	POTASSIUM-40	21.2	pCi/g		0.97	3.3	HASL300
RBB132024	POTASSIUM-40	21.1	pCi/g		4.3	5.8	HASL300
RBC290005	POTASSIUM-40	21.1	pCi/g		1.3	3.8	HASL300
RBC370005	POTASSIUM-40	21.1	pCi/g		1.4	3.5	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBA131216	POTASSIUM-40	21	pCi/g		1.4	3.9	HASL300
RBB330005	POTASSIUM-40	21	pCi/g		1.4	3.6	HASL300
RBB440005	POTASSIUM-40	21	pCi/g		1.4	3.8	HASL300
RBC070005	POTASSIUM-40	21	pCi/g		1.7	4	HASL300
RBC071216	POTASSIUM-40	21	pCi/g		1.3	3.3	HASL300
RBC391216	POTASSIUM-40	21	pCi/g		1.4	3.6	HASL300
RBB100005	POTASSIUM-40	20.9	pCi/g		3	4.5	HASL300
RBB200812	POTASSIUM-40	20.9	pCi/g		1.5	3.8	HASL300
RBB382428	POTASSIUM-40	20.9	pCi/g		1.3	3.2	HASL300
RBA172025	POTASSIUM-40	20.7	pCi/g		1.5	3.8	HASL300
RBB052630	POTASSIUM-40	20.7	pCi/g		1.3	3.8	HASL300
RBB070005	POTASSIUM-40	20.7	pCi/g		1.1	3.5	HASL300
RBB110508	POTASSIUM-40	20.7	pCi/g		3.9	5.2	HASL300
RBB210005	POTASSIUM-40	20.7	pCi/g		1.4	3.7	HASL300
RBB281216	POTASSIUM-40	20.7	pCi/g		1	3.5	HASL300
RBB292428	POTASSIUM-40	20.7	pCi/g		1.1	3.1	HASL300
RBD080001	POTASSIUM-40	20.7	pCi/g		0.87	3	HASL300
RBA062630	POTASSIUM-40	20.6	pCi/g		3	4.6	HASL300
RBA122630	POTASSIUM-40	20.6	pCi/g		1.2	3.4	HASL300
RBB120005	POTASSIUM-40	20.6	pCi/g		4.7	5.5	HASL300
RBC120005	POTASSIUM-40	20.6	pCi/g		1.2	3.4	HASL300
RBM062428	POTASSIUM-40	20.6	pCi/g		1.2	3.5	HASL300
RBA080005	POTASSIUM-40	20.5	pCi/g		2.8	4.2	HASL300
RBB270508	POTASSIUM-40	20.5	pCi/g		1.1	3.4	HASL300
RBC100005	POTASSIUM-40	20.5	pCi/g		1.4	3.8	HASL300
RBB040005	POTASSIUM-40	20.4	pCi/g		1.4	3.8	HASL300
RBB100812	POTASSIUM-40	20.4	pCi/g		3.6	4.9	HASL300
RBB322428	POTASSIUM-40	20.4	pCi/g		1.3	3.1	HASL300
RBB352428	POTASSIUM-40	20.4	pCi/g		1.4	3.9	HASL300
RBB372428	POTASSIUM-40	20.4	pCi/g		1.4	3.6	HASL300
RBC101620	POTASSIUM-40	20.4	pCi/g		1.5	3.7	HASL300
RBM052428	POTASSIUM-40	20.4	pCi/g		1.1	3.4	HASL300
RBB142024	POTASSIUM-40	20.3	pCi/g		2.9	4.7	HASL300
RBC081216	POTASSIUM-40	20.3	pCi/g		1.1	3.5	HASL300
RBC321620	POTASSIUM-40	20.3	pCi/g		0.99	3.4	HASL300
RBD070001	POTASSIUM-40	20.3	pCi/g		1.5	3.8	HASL300
RBB252428	POTASSIUM-40	20.2	pCi/g		1.1	3.5	HASL300
RBB170005	POTASSIUM-40	20.1	pCi/g		1.6	3.6	HASL300
RBB350508	POTASSIUM-40	20.1	pCi/g		1.6	3.6	HASL300
RBC370812	POTASSIUM-40	20.1	pCi/g		1.1	3.6	HASL300
RBB090508	POTASSIUM-40	20	pCi/g		4.4	5.3	HASL300
RBB421620	POTASSIUM-40	20	pCi/g		2.9	4.7	HASL300
RBC130005	POTASSIUM-40	20	pCi/g		1.4	3.7	HASL300
RBC141620	POTASSIUM-40	20	pCi/g		1.2	3.5	HASL300
RBC430005	POTASSIUM-40	20	pCi/g		2.6	4.2	HASL300
RBA130005	POTASSIUM-40	19.9	pCi/g		0.99	3.3	HASL300
RBB362428	POTASSIUM-40	19.9	pCi/g		3	4.4	HASL300
RBC380005	POTASSIUM-40	19.9	pCi/g		1.2	3.6	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBA132630	POTASSIUM-40	19.8	pCi/g		1.5	3.6	HASL300
RBC222024	POTASSIUM-40	19.8	pCi/g		1.3	3.7	HASL300
RBB072630	POTASSIUM-40	19.7	pCi/g		1.4	3.5	HASL300
RBC161620	POTASSIUM-40	19.7	pCi/g		2.7	4.2	HASL300
RBD090001	POTASSIUM-40	19.6	pCi/g		1.1	3.2	HASL300
RBM101216	POTASSIUM-40	19.6	pCi/g		4.7	5.7	HASL300
RBB120812	POTASSIUM-40	19.51	pCi/g	J	3.52	4.45	HASL300
RBB230508	POTASSIUM-40	19.5	pCi/g		1.9	4	HASL300
RBD020001	POTASSIUM-40	19.5	pCi/g		1	3.3	HASL300
RBM041620	POTASSIUM-40	19.5	pCi/g		3.7	5.2	HASL300
RBB022428	POTASSIUM-40	19.4	pCi/g		1.6	3.6	HASL300
RBB040508	POTASSIUM-40	19.4	pCi/g		1.6	3.6	HASL300
RBC100509	POTASSIUM-40	19.4	pCi/g		2	3	HASL300
RBM122024	POTASSIUM-40	19.4	pCi/g		1.7	3.5	HASL300
RBB232428	POTASSIUM-40	19.3	pCi/g		1.4	3.5	HASL300
RBC330005	POTASSIUM-40	19.3	pCi/g		3.1	4.9	HASL300
RBC462530	POTASSIUM-40	19.3	pCi/g		1.6	3.5	HASL300
RBD030001	POTASSIUM-40	19.2	pCi/g		1.4	3.6	HASL300
RBB212428	POTASSIUM-40	19.1	pCi/g		1.3	3.5	HASL300
RBD060001	POTASSIUM-40	19.1	pCi/g		0.94	3.2	HASL300
RBZ012025	POTASSIUM-40	19.1	pCi/g		2.2	4.2	HASL300
RBB050005	POTASSIUM-40	19	pCi/g		1	3.1	HASL300
RBB032428	POTASSIUM-40	18.9	pCi/g		1.3	3.5	HASL300
RBB222428	POTASSIUM-40	18.9	pCi/g		1.3	3.3	HASL300
RBA151216	POTASSIUM-40	18.8	pCi/g		3.5	4.8	HASL300
RBD010001	POTASSIUM-40	18.7	pCi/g		1.2	3.1	HASL300
RBD040001	POTASSIUM-40	18.7	pCi/g		1.1	2.8	HASL300
RBB060005	POTASSIUM-40	18.5	pCi/g		1.4	3.3	HASL300
RBB330508	POTASSIUM-40	18.5	pCi/g		1.6	3.7	HASL300
RBC381216	POTASSIUM-40	18.4	pCi/g		1.5	3.5	HASL300
RBC461215	POTASSIUM-40	18.4	pCi/g		1.7	3.7	HASL300
RBC462025	POTASSIUM-40	18.4	pCi/g		1.8	3.7	HASL300
RBB442530	POTASSIUM-40	18.3	pCi/g		1.6	3.6	HASL300
RBC061216	POTASSIUM-40	18	pCi/g		1	3.1	HASL300
RBC031216	POTASSIUM-40	17.73	pCi/g	J	3.21	4.93	HASL300
RBB210812	POTASSIUM-40	17.7	pCi/g		1.2	3.1	HASL300
RBB442025	POTASSIUM-40	17.7	pCi/g		2	3.9	HASL300
RBB340005	POTASSIUM-40	17.6	pCi/g		1.6	3.7	HASL300
RBB171216	POTASSIUM-40	17.5	pCi/g		1.5	3.3	HASL300
RBC271620	POTASSIUM-40	17.5	pCi/g		1.2	3.3	HASL300
RBB020508	POTASSIUM-40	17.3	pCi/g		1.6	3.5	HASL300
RBC291620	POTASSIUM-40	17.1	pCi/g		1.3	2.7	HASL300
RBB443539	POTASSIUM-40	17	pCi/g		2.7	4.3	HASL300
RBM090001	POTASSIUM-40	16.8	pCi/g		1.4	3.2	HASL300
RBC340509	POTASSIUM-40	16.7	pCi/g		2.7	3.8	HASL300
RBC242428	POTASSIUM-40	16.3	pCi/g		1.9	3.2	HASL300
RBC380509	POTASSIUM-40	16.2	pCi/g		1	2.7	HASL300
RBD100001	POTASSIUM-40	16.1	pCi/g		1	2.9	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB170508	POTASSIUM-40	15.8	pCi/g		1.4	3.2	HASL300
RBD050001	POTASSIUM-40	15.6	pCi/g		1.1	2.7	HASL300
RBC441216	POTASSIUM-40	15.41	pCi/g	J	4.12	4.81	HASL300
RBB011216	POTASSIUM-40	13.9	pCi/g		4.7	4.8	HASL300
RBC431216	POTASSIUM-40	13.89	pCi/g	J	5.42	5.49	HASL300
RBB202428	POTASSIUM-40	13.3	pCi/g		1.3	2.8	HASL300
RBC432024	POTASSIUM-40	12.6	pCi/g		5.7	5.2	HASL300
RBC202024	POTASSIUM-40	10.5	pCi/g		2.5	2.9	HASL300
RBM152024	POTASSIUM-40	5.87	pCi/g	J	3.04	2.35	HASL300
RBC281620	POTASSIUM-40	5.2	pCi/g		1.6	1.7	HASL300
RBB102024	LEAD-212	2.44	pCi/g		0.42	0.57	HASL300
RBC120005	LEAD-212	2.37	pCi/g		0.23	0.57	HASL300
RBB132024	LEAD-212	2.3	pCi/g		0.54	0.69	HASL300
RBC411216	LEAD-212	2.27	pCi/g		0.61	0.63	HASL300
RBC431216	LEAD-212	2.17	pCi/g		0.76	0.71	HASL300
RBB072630	LEAD-212	2.11	pCi/g	J	0.34	0.61	HASL300
RBA151216	LEAD-212	2.04	pCi/g		0.56	0.68	HASL300
RBZ025560	LEAD-212	2.04	pCi/g		0.16	0.31	HASL300
RBB040508	LEAD-212	2	pCi/g	J	0.32	0.43	HASL300
RBB200812	LEAD-212	1.99	pCi/g		0.38	0.5	HASL300
RBM101216	LEAD-212	1.99	pCi/g		0.67	0.76	HASL300
RBB070508	LEAD-212	1.98	pCi/g	J	0.4	0.56	HASL300
RBC041216	LEAD-212	1.97	pCi/g		0.38	0.56	HASL300
RBB360812	LEAD-212	1.94	pCi/g		0.35	0.48	HASL300
RBC190005	LEAD-212	1.94	pCi/g		0.44	0.55	HASL300
RBA122630	LEAD-212	1.92	pCi/g	J	0.26	0.54	HASL300
RBB401216	LEAD-212	1.92	pCi/g		0.51	0.6	HASL300
RBB112024	LEAD-212	1.89	pCi/g		0.47	0.55	HASL300
RBC150005	LEAD-212	1.89	pCi/g		0.38	0.51	HASL300
RBC172428	LEAD-212	1.89	pCi/g		0.56	0.73	HASL300
RBB110508	LEAD-212	1.88	pCi/g		0.55	0.77	HASL300
RBA151620	LEAD-212	1.87	pCi/g		0.56	0.57	HASL300
RBB420005	LEAD-212	1.87	pCi/g		0.41	0.53	HASL300
RBB330508	LEAD-212	1.85	pCi/g		0.37	0.48	HASL300
RBA160005	LEAD-212	1.84	pCi/g		0.52	0.61	HASL300
RBM060005	LEAD-212	1.84	pCi/g		0.52	0.63	HASL300
RBB100005	LEAD-212	1.81	pCi/g		0.4	0.48	HASL300
RBB440005	LEAD-212	1.81	pCi/g		0.28	0.38	HASL300
RBM162025	LEAD-212	1.81	pCi/g		0.41	0.52	HASL300
RBB300005	LEAD-212	1.8	pCi/g		0.3	0.42	HASL300
RBC450005	LEAD-212	1.8	pCi/g		0.34	0.45	HASL300
RBB092630	LEAD-212	1.79	pCi/g		0.55	0.65	HASL300
RBB310812	LEAD-212	1.79	pCi/g		0.32	0.43	HASL300
RBM020005	LEAD-212	1.79	pCi/g		0.48	0.52	HASL300
RBA030508	LEAD-212	1.78	pCi/g		0.45	0.56	HASL300
RBB360005	LEAD-212	1.78	pCi/g		0.33	0.47	HASL300
RBA141216	LEAD-212	1.77	pCi/g	J	0.39	0.48	HASL300
RBC030005	LEAD-212	1.75	pCi/g		0.43	0.51	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC060005	LEAD-212	1.74	pCi/g		0.3	0.41	HASL300
RBM072428	LEAD-212	1.74	pCi/g		0.53	0.59	HASL300
RBA051620	LEAD-212	1.72	pCi/g		0.48	0.57	HASL300
RBB252428	LEAD-212	1.72	pCi/g		0.29	0.4	HASL300
RBB030005	LEAD-212	1.71	pCi/g	J	0.26	0.48	HASL300
RBB080812	LEAD-212	1.71	pCi/g		0.55	0.63	HASL300
RBC020509	LEAD-212	1.69	pCi/g		0.49	0.76	HASL300
RBA082630	LEAD-212	1.68	pCi/g		0.43	0.48	HASL300
RBC121620	LEAD-212	1.68	pCi/g		0.31	0.42	HASL300
RBC370812	LEAD-212	1.68	pCi/g		0.3	0.4	HASL300
RBC400812	LEAD-212	1.68	pCi/g		0.31	0.39	HASL300
RBC421216	LEAD-212	1.68	pCi/g		0.52	0.58	HASL300
RBA020004	LEAD-212	1.67	pCi/g		0.33	0.4	HASL300
RBA174549	LEAD-212	1.67	pCi/g	J	0.29	0.4	HASL300
RBB430005	LEAD-212	1.67	pCi/g		0.61	0.66	HASL300
RBC261620	LEAD-212	1.67	pCi/g		0.32	0.42	HASL300
RBC341620	LEAD-212	1.67	pCi/g		0.47	0.55	HASL300
RBC462025	LEAD-212	1.67	pCi/g	J	0.34	0.43	HASL300
RBC031216	LEAD-212	1.66	pCi/g		0.53	0.59	HASL300
RBA142630	LEAD-212	1.65	pCi/g	J	0.3	0.39	HASL300
RBB050508	LEAD-212	1.65	pCi/g	J	0.29	0.4	HASL300
RBB130508	LEAD-212	1.65	pCi/g		0.52	0.61	HASL300
RBA062630	LEAD-212	1.64	pCi/g		0.39	0.47	HASL300
RBC101620	LEAD-212	1.64	pCi/g		0.33	0.41	HASL300
RBB040005	LEAD-212	1.62	pCi/g	J	0.32	0.4	HASL300
RBB110005	LEAD-212	1.62	pCi/g		0.49	0.81	HASL300
RBB230005	LEAD-212	1.62	pCi/g		0.37	0.46	HASL300
RBC220005	LEAD-212	1.62	pCi/g		0.26	0.35	HASL300
RBM122024	LEAD-212	1.62	pCi/g		0.35	0.48	HASL300
RBB210812	LEAD-212	1.61	pCi/g		0.19	0.28	HASL300
RBB020005	LEAD-212	1.6	pCi/g	J	0.27	0.36	HASL300
RBB372428	LEAD-212	1.6	pCi/g		0.27	0.36	HASL300
RBM012630	LEAD-212	1.6	pCi/g		0.49	0.56	HASL300
RBA070005	LEAD-212	1.59	pCi/g		0.42	0.48	HASL300
RBA092630	LEAD-212	1.59	pCi/g		0.41	0.45	HASL300
RBB340508	LEAD-212	1.59	pCi/g		0.17	0.26	HASL300
RBB400005	LEAD-212	1.59	pCi/g		0.45	0.56	HASL300
RBC050005	LEAD-212	1.59	pCi/g		0.39	0.46	HASL300
RBC110005	LEAD-212	1.59	pCi/g		0.32	0.4	HASL300
RBC210005	LEAD-212	1.59	pCi/g		0.46	0.5	HASL300
RBC360005	LEAD-212	1.59	pCi/g		0.39	0.46	HASL300
RBA020408	LEAD-212	1.58	pCi/g		0.4	0.46	HASL300
RBB032428	LEAD-212	1.58	pCi/g	J	0.29	0.39	HASL300
RBB443539	LEAD-212	1.58	pCi/g		0.47	0.56	HASL300
RBC440005	LEAD-212	1.58	pCi/g		0.27	0.34	HASL300
RBC461215	LEAD-212	1.58	pCi/g	J	0.34	0.41	HASL300
RBB080005	LEAD-212	1.57	pCi/g		0.45	0.48	HASL300
RBB140005	LEAD-212	1.57	pCi/g		0.41	0.45	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB230508	LEAD-212	1.57	pCi/g		0.38	0.43	HASL300
RBC141620	LEAD-212	1.57	pCi/g		0.32	0.38	HASL300
RBB421620	LEAD-212	1.56	pCi/g		0.46	0.53	HASL300
RBC250005	LEAD-212	1.56	pCi/g		0.3	0.37	HASL300
RBC340005	LEAD-212	1.56	pCi/g		0.33	0.39	HASL300
RBB022428	LEAD-212	1.55	pCi/g	J	0.31	0.39	HASL300
RBB030508	LEAD-212	1.55	pCi/g	J	0.26	0.32	HASL300
RBB130005	LEAD-212	1.55	pCi/g		0.43	0.45	HASL300
RBC051216	LEAD-212	1.55	pCi/g		0.18	0.26	HASL300
RBC091620	LEAD-212	1.55	pCi/g		0.3	0.38	HASL300
RBC311620	LEAD-212	1.55	pCi/g		0.44	0.5	HASL300
RBA070812	LEAD-212	1.54	pCi/g		0.47	0.49	HASL300
RBA132630	LEAD-212	1.54	pCi/g	J	0.35	0.43	HASL300
RBB342428	LEAD-212	1.54	pCi/g		0.22	0.31	HASL300
RBC350005	LEAD-212	1.54	pCi/g		0.52	0.54	HASL300
RBA052630	LEAD-212	1.53	pCi/g		0.65	0.65	HASL300
RBA102630	LEAD-212	1.53	pCi/g		0.46	0.46	HASL300
RBA120005	LEAD-212	1.53	pCi/g	J	0.16	0.27	HASL300
RBB280005	LEAD-212	1.53	pCi/g		0.29	0.31	HASL300
RBC361620	LEAD-212	1.53	pCi/g		0.38	0.43	HASL300
RBC390005	LEAD-212	1.53	pCi/g		0.32	0.39	HASL300
RBB260005	LEAD-212	1.52	pCi/g		0.15	0.26	HASL300
RBA110812	LEAD-212	1.51	pCi/g	J	0.29	0.38	HASL300
RBC130005	LEAD-212	1.51	pCi/g		0.27	0.33	HASL300
RBC020005	LEAD-212	1.5	pCi/g		0.32	0.35	HASL300
RBC070005	LEAD-212	1.49	pCi/g		0.35	0.42	HASL300
RBB070005	LEAD-212	1.48	pCi/g	J	0.27	0.35	HASL300
RBB210005	LEAD-212	1.48	pCi/g		0.32	0.4	HASL300
RBC081216	LEAD-212	1.48	pCi/g		0.28	0.34	HASL300
RBC151620	LEAD-212	1.48	pCi/g		0.53	0.59	HASL300
RBC222024	LEAD-212	1.48	pCi/g		0.36	0.46	HASL300
RBA100812	LEAD-212	1.47	pCi/g		0.49	0.59	HASL300
RBA172025	LEAD-212	1.47	pCi/g	J	0.25	0.32	HASL300
RBB302428	LEAD-212	1.47	pCi/g		0.32	0.4	HASL300
RBC011216	LEAD-212	1.47	pCi/g		0.39	0.43	HASL300
RBA050005	LEAD-212	1.46	pCi/g		0.33	0.4	HASL300
RBA100005	LEAD-212	1.46	pCi/g		0.32	0.35	HASL300
RBB020508	LEAD-212	1.46	pCi/g	J	0.36	0.42	HASL300
RBB340005	LEAD-212	1.46	pCi/g		0.21	0.29	HASL300
RBB380005	LEAD-212	1.46	pCi/g		0.35	0.44	HASL300
RBC430005	LEAD-212	1.46	pCi/g		0.45	0.56	HASL300
RBB310005	LEAD-212	1.45	pCi/g		0.16	0.24	HASL300
RBC200005	LEAD-212	1.45	pCi/g		0.42	0.52	HASL300
RBA061620	LEAD-212	1.44	pCi/g		0.44	0.47	HASL300
RBB150005	LEAD-212	1.44	pCi/g		0.55	0.57	HASL300
RBZ010005	LEAD-212	1.44	pCi/g		0.33	0.4	HASL300
RBB122024	LEAD-212	1.43	pCi/g		0.51	0.54	HASL300
RBB170005	LEAD-212	1.43	pCi/g		0.26	0.33	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB370005	LEAD-212	1.43	pCi/g		0.19	0.25	HASL300
RBC260005	LEAD-212	1.43	pCi/g	J	0.19	0.25	HASL300
RBD020001	LEAD-212	1.43	pCi/g		0.28	0.38	HASL300
RBB012428	LEAD-212	1.42	pCi/g		0.55	0.6	HASL300
RBB260508	LEAD-212	1.42	pCi/g		0.15	0.23	HASL300
RBC010005	LEAD-212	1.42	pCi/g		0.37	0.4	HASL300
RBC111620	LEAD-212	1.42	pCi/g		0.15	0.23	HASL300
RBC441620	LEAD-212	1.42	pCi/g		0.52	0.6	HASL300
RBA090005	LEAD-212	1.41	pCi/g		0.39	0.4	HASL300
RBB320005	LEAD-212	1.4	pCi/g		0.21	0.28	HASL300
RBB010005	LEAD-212	1.39	pCi/g		0.42	0.47	HASL300
RBC202024	LEAD-212	1.39	pCi/g		0.31	0.37	HASL300
RBC242428	LEAD-212	1.39	pCi/g		0.29	0.35	HASL300
RBA040005	LEAD-212	1.38	pCi/g		0.45	0.48	HASL300
RBC040005	LEAD-212	1.38	pCi/g		0.27	0.28	HASL300
RBC100509	LEAD-212	1.38	pCi/g		0.16	0.23	HASL300
RBM041620	LEAD-212	1.38	pCi/g		0.58	0.61	HASL300
RBA060005	LEAD-212	1.37	pCi/g		0.39	0.47	HASL300
RBB200005	LEAD-212	1.37	pCi/g		0.19	0.28	HASL300
RBB240005	LEAD-212	1.37	pCi/g		0.16	0.22	HASL300
RBC080005	LEAD-212	1.37	pCi/g		0.32	0.37	HASL300
RBC192024	LEAD-212	1.37	pCi/g		0.37	0.41	HASL300
RBC310005	LEAD-212	1.37	pCi/g		0.43	0.45	HASL300
RBM030508	LEAD-212	1.37	pCi/g		0.29	0.29	HASL300
RBB270005	LEAD-212	1.36	pCi/g		0.21	0.26	HASL300
RBB390812	LEAD-212	1.36	pCi/g		0.19	0.24	HASL300
RBC321620	LEAD-212	1.36	pCi/g		0.24	0.29	HASL300
RBD070001	LEAD-212	1.36	pCi/g		0.32	0.38	HASL300
RBB061620	LEAD-212	1.35	pCi/g	J	0.15	0.23	HASL300
RBB320508	LEAD-212	1.34	pCi/g		0.17	0.23	HASL300
RBB382024	LEAD-212	1.34	pCi/g		0.18	0.23	HASL300
RBC170005	LEAD-212	1.34	pCi/g		0.37	0.43	HASL300
RBC240005	LEAD-212	1.34	pCi/g		0.15	0.22	HASL300
RBC290005	LEAD-212	1.34	pCi/g		0.15	0.25	HASL300
RBZ023034	LEAD-212	1.34	pCi/g		0.14	0.22	HASL300
RBB150508	LEAD-212	1.33	pCi/g		0.34	0.31	HASL300
RBB160005	LEAD-212	1.32	pCi/g		0.5	0.52	HASL300
RBB161620	LEAD-212	1.32	pCi/g		0.41	0.41	HASL300
RBC241620	LEAD-212	1.32	pCi/g		0.18	0.25	HASL300
RBD010001	LEAD-212	1.32	pCi/g		0.26	0.32	HASL300
RBM141620	LEAD-212	1.31	pCi/g		0.49	0.46	HASL300
RBB142024	LEAD-212	1.3	pCi/g		0.49	0.52	HASL300
RBB280508	LEAD-212	1.3	pCi/g		0.18	0.24	HASL300
RBC131620	LEAD-212	1.3	pCi/g		0.16	0.22	HASL300
RBC451216	LEAD-212	1.3	pCi/g		0.36	0.37	HASL300
RBM090001	LEAD-212	1.3	pCi/g		0.33	0.42	HASL300
RBM110005	LEAD-212	1.3	pCi/g		0.22	0.27	HASL300
RBB350005	LEAD-212	1.29	pCi/g		0.2	0.25	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC370005	LEAD-212	1.29	pCi/g		0.16	0.23	HASL300
RBB100812	LEAD-212	1.28	pCi/g		0.48	0.5	HASL300
RBB120812	LEAD-212	1.28	pCi/g		0.35	0.31	HASL300
RBB270508	LEAD-212	1.28	pCi/g		0.19	0.24	HASL300
RBB300508	LEAD-212	1.28	pCi/g		0.21	0.26	HASL300
RBB330005	LEAD-212	1.28	pCi/g		0.24	0.27	HASL300
RBC252024	LEAD-212	1.28	pCi/g		0.16	0.23	HASL300
RBC330005	LEAD-212	1.28	pCi/g		0.41	0.42	HASL300
RBA072630	LEAD-212	1.27	pCi/g		0.3	0.28	HASL300
RBB012830	LEAD-212	1.27	pCi/g		0.3	0.29	HASL300
RBB090005	LEAD-212	1.27	pCi/g		0.52	0.51	HASL300
RBB171216	LEAD-212	1.27	pCi/g		0.2	0.25	HASL300
RBZ020005	LEAD-212	1.27	pCi/g		0.13	0.2	HASL300
RBC270005	LEAD-212	1.26	pCi/g		0.18	0.24	HASL300
RBC400005	LEAD-212	1.26	pCi/g		0.15	0.21	HASL300
RBM132024	LEAD-212	1.26	pCi/g		0.2	0.25	HASL300
RBB062630	LEAD-212	1.24	pCi/g	J	0.17	0.23	HASL300
RBB220508	LEAD-212	1.24	pCi/g		0.15	0.21	HASL300
RBC230005	LEAD-212	1.24	pCi/g		0.15	0.21	HASL300
RBC371620	LEAD-212	1.24	pCi/g		0.15	0.21	HASL300
RBA040812	LEAD-212	1.23	pCi/g		0.34	0.32	HASL300
RBA131216	LEAD-212	1.23	pCi/g	J	0.2	0.25	HASL300
RBB240508	LEAD-212	1.23	pCi/g		0.15	0.21	HASL300
RBA160508	LEAD-212	1.22	pCi/g		0.25	0.25	HASL300
RBB202428	LEAD-212	1.22	pCi/g		0.28	0.35	HASL300
RBB242428	LEAD-212	1.22	pCi/g		0.15	0.21	HASL300
RBB431216	LEAD-212	1.22	pCi/g		0.26	0.26	HASL300
RBB390005	LEAD-212	1.21	pCi/g		0.15	0.22	HASL300
RBC090005	LEAD-212	1.21	pCi/g		0.14	0.2	HASL300
RBM171215	LEAD-212	1.21	pCi/g	J	0.22	0.26	HASL300
RBA042630	LEAD-212	1.2	pCi/g		0.28	0.26	HASL300
RBA150005	LEAD-212	1.2	pCi/g		0.32	0.3	HASL300
RBB290812	LEAD-212	1.2	pCi/g		0.12	0.19	HASL300
RBA112630	LEAD-212	1.19	pCi/g	J	0.22	0.25	HASL300
RBB210508	LEAD-212	1.19	pCi/g		0.17	0.21	HASL300
RBB281216	LEAD-212	1.19	pCi/g		0.2	0.23	HASL300
RBB411216	LEAD-212	1.19	pCi/g		0.29	0.29	HASL300
RBC100005	LEAD-212	1.19	pCi/g		0.19	0.24	HASL300
RBZ022025	LEAD-212	1.19	pCi/g		0.15	0.2	HASL300
RBA091216	LEAD-212	1.18	pCi/g		0.29	0.27	HASL300
RBB120005	LEAD-212	1.18	pCi/g		0.43	0.36	HASL300
RBB350508	LEAD-212	1.18	pCi/g		0.19	0.24	HASL300
RBA140005	LEAD-212	1.17	pCi/g	J	0.13	0.19	HASL300
RBB140508	LEAD-212	1.17	pCi/g		0.48	0.49	HASL300
RBA130005	LEAD-212	1.16	pCi/g	J	0.17	0.22	HASL300
RBB232428	LEAD-212	1.16	pCi/g		0.19	0.23	HASL300
RBB250005	LEAD-212	1.16	pCi/g		0.15	0.2	HASL300
RBB250508	LEAD-212	1.16	pCi/g		0.18	0.22	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB292428	LEAD-212	1.16	pCi/g		0.15	0.2	HASL300
RBC140005	LEAD-212	1.16	pCi/g		0.18	0.22	HASL300
RBC351620	LEAD-212	1.16	pCi/g		0.31	0.28	HASL300
RBA011620	LEAD-212	1.15	pCi/g		0.25	0.24	HASL300
RBB312428	LEAD-212	1.15	pCi/g		0.22	0.24	HASL300
RBB442025	LEAD-212	1.15	pCi/g		0.2	0.27	HASL300
RBC280005	LEAD-212	1.15	pCi/g		0.18	0.22	HASL300
RBC420005	LEAD-212	1.14	pCi/g		0.26	0.25	HASL300
RBM052428	LEAD-212	1.13	pCi/g		0.19	0.22	HASL300
RBB260812	LEAD-212	1.12	pCi/g		0.14	0.19	HASL300
RBB272428	LEAD-212	1.12	pCi/g		0.13	0.19	HASL300
RBB290005	LEAD-212	1.12	pCi/g		0.19	0.23	HASL300
RBB382428	LEAD-212	1.12	pCi/g		0.15	0.19	HASL300
RBC071216	LEAD-212	1.12	pCi/g		0.16	0.2	HASL300
RBC391216	LEAD-212	1.12	pCi/g		0.18	0.22	HASL300
RBA121620	LEAD-212	1.11	pCi/g	J	0.14	0.19	HASL300
RBB060005	LEAD-212	1.11	pCi/g	J	0.16	0.22	HASL300
RBB370508	LEAD-212	1.11	pCi/g		0.19	0.22	HASL300
RBB042630	LEAD-212	1.1	pCi/g	J	0.14	0.19	HASL300
RBB220005	LEAD-212	1.1	pCi/g		0.2	0.23	HASL300
RBM062428	LEAD-212	1.1	pCi/g		0.19	0.22	HASL300
RBA081216	LEAD-212	1.09	pCi/g		0.35	0.3	HASL300
RBB332428	LEAD-212	1.09	pCi/g		0.16	0.2	HASL300
RBC171216	LEAD-212	1.09	pCi/g		0.36	0.33	HASL300
RBC271620	LEAD-212	1.09	pCi/g		0.27	0.3	HASL300
RBC381216	LEAD-212	1.08	pCi/g		0.2	0.23	HASL300
RBA170005	LEAD-212	1.07	pCi/g	J	0.16	0.21	HASL300
RBB090508	LEAD-212	1.07	pCi/g		0.4	0.34	HASL300
RBB222428	LEAD-212	1.07	pCi/g		0.2	0.22	HASL300
RBB352428	LEAD-212	1.07	pCi/g		0.21	0.24	HASL300
RBC190913	LEAD-212	1.07	pCi/g		0.27	0.25	HASL300
RBC340509	LEAD-212	1.07	pCi/g		0.28	0.27	HASL300
RBZ012025	LEAD-212	1.07	pCi/g		0.27	0.28	HASL300
RBZ013539	LEAD-212	1.07	pCi/g		0.24	0.25	HASL300
RBB050005	LEAD-212	1.06	pCi/g	J	0.17	0.2	HASL300
RBB052630	LEAD-212	1.06	pCi/g	J	0.18	0.22	HASL300
RBC410005	LEAD-212	1.06	pCi/g		0.26	0.26	HASL300
RBB162428	LEAD-212	1.05	pCi/g		0.37	0.31	HASL300
RBB390508	LEAD-212	1.05	pCi/g		0.2	0.22	HASL300
RBC160005	LEAD-212	1.05	pCi/g		0.23	0.23	HASL300
RBC380005	LEAD-212	1.05	pCi/g		0.2	0.22	HASL300
RBD090001	LEAD-212	1.05	pCi/g		0.19	0.22	HASL300
RBC061216	LEAD-212	1.04	pCi/g		0.18	0.21	HASL300
RBC291620	LEAD-212	1.03	pCi/g		0.18	0.2	HASL300
RBC441216	LEAD-212	1.03	pCi/g		0.42	0.35	HASL300
RBC320005	LEAD-212	1.02	pCi/g		0.18	0.2	HASL300
RBB152024	LEAD-212	1.01	pCi/g		0.28	0.25	HASL300
RBB322428	LEAD-212	1.01	pCi/g		0.16	0.19	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC232024	LEAD-212	1.01	pCi/g		0.19	0.21	HASL300
RBA010005	LEAD-212	0.99	pCi/g		0.33	0.28	HASL300
RBA110005	LEAD-212	0.99	pCi/g	J	0.17	0.19	HASL300
RBB212428	LEAD-212	0.99	pCi/g		0.22	0.22	HASL300
RBD040001	LEAD-212	0.99	pCi/g		0.14	0.18	HASL300
RBC460005	LEAD-212	0.98	pCi/g	J	0.19	0.2	HASL300
RBD060001	LEAD-212	0.98	pCi/g		0.16	0.19	HASL300
RBD030001	LEAD-212	0.97	pCi/g		0.16	0.2	HASL300
RBB442530	LEAD-212	0.96	pCi/g		0.25	0.24	HASL300
RBB011216	LEAD-212	0.95	pCi/g		0.5	0.37	HASL300
RBB362428	LEAD-212	0.95	pCi/g		0.31	0.28	HASL300
RBA173035	LEAD-212	0.94	pCi/g	J	0.17	0.19	HASL300
RBC180005	LEAD-212	0.93	pCi/g		0.26	0.25	HASL300
RBD080001	LEAD-212	0.92	pCi/g		0.13	0.16	HASL300
RBC380509	LEAD-212	0.91	pCi/g		0.17	0.19	HASL300
RBC462530	LEAD-212	0.91	pCi/g	J	0.22	0.22	HASL300
RBA080005	LEAD-212	0.89	pCi/g		0.26	0.23	HASL300
RBC161620	LEAD-212	0.89	pCi/g		0.27	0.25	HASL300
RBC331620	LEAD-212	0.89	pCi/g		0.33	0.26	HASL300
RBD100001	LEAD-212	0.86	pCi/g		0.17	0.19	HASL300
RBD050001	LEAD-212	0.82	pCi/g		0.16	0.17	HASL300
RBB170508	LEAD-212	0.79	pCi/g		0.19	0.19	HASL300
RBC281620	LEAD-212	0.77	pCi/g		0.28	0.23	HASL300
RBA030005	LEAD-212	0.73	pCi/g		0.34	0.24	HASL300
RBB011216	LEAD-214	2.42	pCi/g		0.46	0.57	HASL300
RBM020005	LEAD-214	2.38	pCi/g		0.51	0.57	HASL300
RBA151620	LEAD-214	2.21	pCi/g		0.68	0.68	HASL300
RBA150005	LEAD-214	2.13	pCi/g		0.55	0.62	HASL300
RBB120005	LEAD-214	1.88	pCi/g		0.8	0.76	HASL300
RBC411216	LEAD-214	1.87	pCi/g		0.41	0.46	HASL300
RBC151620	LEAD-214	1.8	pCi/g		0.31	0.42	HASL300
RBB300508	LEAD-214	1.72	pCi/g		0.44	0.51	HASL300
RBB320005	LEAD-214	1.7	pCi/g		0.41	0.48	HASL300
RBC370812	LEAD-214	1.7	pCi/g		0.35	0.47	HASL300
RBB120812	LEAD-214	1.68	pCi/g		0.77	0.78	HASL300
RBM072428	LEAD-214	1.65	pCi/g		0.63	0.59	HASL300
RBB132024	LEAD-214	1.64	pCi/g		0.55	0.55	HASL300
RBB210812	LEAD-214	1.64	pCi/g		0.3	0.42	HASL300
RBB020508	LEAD-214	1.63	pCi/g		0.38	0.43	HASL300
RBC020509	LEAD-214	1.62	pCi/g		0.51	0.55	HASL300
RBC031216	LEAD-214	1.61	pCi/g		0.67	0.67	HASL300
RBB431216	LEAD-214	1.58	pCi/g		0.61	0.57	HASL300
RBB312428	LEAD-214	1.57	pCi/g		0.39	0.48	HASL300
RBB280005	LEAD-214	1.56	pCi/g		0.45	0.43	HASL300
RBM060005	LEAD-214	1.55	pCi/g		0.59	0.59	HASL300
RBB443539	LEAD-214	1.53	pCi/g		0.48	0.5	HASL300
RBB012830	LEAD-214	1.5	pCi/g		0.65	0.53	HASL300
RBB040508	LEAD-214	1.49	pCi/g		0.39	0.47	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC171216	LEAD-214	1.49	pCi/g		0.67	0.68	HASL300
RBB230508	LEAD-214	1.48	pCi/g		0.39	0.51	HASL300
RBB252428	LEAD-214	1.46	pCi/g		0.37	0.43	HASL300
RBC170005	LEAD-214	1.46	pCi/g		0.43	0.42	HASL300
RBB080812	LEAD-214	1.45	pCi/g		0.61	0.59	HASL300
RBB411216	LEAD-214	1.45	pCi/g		0.56	0.52	HASL300
RBC241620	LEAD-214	1.45	pCi/g		0.31	0.38	HASL300
RBC441620	LEAD-214	1.44	pCi/g		0.58	0.49	HASL300
RBA160508	LEAD-214	1.43	pCi/g		0.5	0.39	HASL300
RBC180005	LEAD-214	1.43	pCi/g		0.45	0.49	HASL300
RBC070005	LEAD-214	1.42	pCi/g		0.49	0.51	HASL300
RBC161620	LEAD-214	1.42	pCi/g		0.57	0.55	HASL300
RBC341620	LEAD-214	1.42	pCi/g		0.62	0.6	HASL300
RBA142630	LEAD-214	1.41	pCi/g		0.35	0.37	HASL300
RBB010005	LEAD-214	1.41	pCi/g		0.6	0.68	HASL300
RBA174549	LEAD-214	1.4	pCi/g		0.44	0.41	HASL300
RBB140508	LEAD-214	1.4	pCi/g		0.51	0.54	HASL300
RBB300005	LEAD-214	1.4	pCi/g		0.32	0.34	HASL300
RBA051620	LEAD-214	1.39	pCi/g		0.47	0.51	HASL300
RBB430005	LEAD-214	1.39	pCi/g		0.69	0.63	HASL300
RBB070508	LEAD-214	1.38	pCi/g		0.35	0.39	HASL300
RBC121620	LEAD-214	1.38	pCi/g		0.33	0.32	HASL300
RBB012428	LEAD-214	1.37	pCi/g		0.66	0.57	HASL300
RBB110005	LEAD-214	1.37	pCi/g		0.53	0.51	HASL300
RBB130005	LEAD-214	1.37	pCi/g		0.54	0.55	HASL300
RBB370005	LEAD-214	1.37	pCi/g		0.22	0.29	HASL300
RBC041216	LEAD-214	1.37	pCi/g		0.48	0.52	HASL300
RBA091216	LEAD-214	1.36	pCi/g		0.66	0.59	HASL300
RBB390812	LEAD-214	1.36	pCi/g		0.26	0.31	HASL300
RBC050005	LEAD-214	1.36	pCi/g		0.45	0.45	HASL300
RBC250005	LEAD-214	1.36	pCi/g		0.35	0.42	HASL300
RBC420005	LEAD-214	1.36	pCi/g		0.56	0.51	HASL300
RBA132630	LEAD-214	1.35	pCi/g		0.32	0.37	HASL300
RBB100005	LEAD-214	1.35	pCi/g		0.52	0.51	HASL300
RBB200812	LEAD-214	1.35	pCi/g		0.29	0.38	HASL300
RBB240005	LEAD-214	1.35	pCi/g		0.31	0.26	HASL300
RBB360812	LEAD-214	1.35	pCi/g		0.3	0.36	HASL300
RBZ013539	LEAD-214	1.35	pCi/g		0.31	0.36	HASL300
RBC441216	LEAD-214	1.34	pCi/g		0.59	0.53	HASL300
RBB022428	LEAD-214	1.33	pCi/g		0.4	0.38	HASL300
RBB092630	LEAD-214	1.33	pCi/g		0.61	0.53	HASL300
RBB210005	LEAD-214	1.33	pCi/g		0.34	0.41	HASL300
RBB330005	LEAD-214	1.33	pCi/g		0.44	0.48	HASL300
RBM110005	LEAD-214	1.33	pCi/g		0.41	0.41	HASL300
RBM122024	LEAD-214	1.33	pCi/g		0.36	0.4	HASL300
RBA030005	LEAD-214	1.32	pCi/g		0.44	0.45	HASL300
RBA052630	LEAD-214	1.32	pCi/g		0.7	0.57	HASL300
RBM162025	LEAD-214	1.32	pCi/g		0.48	0.43	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB040005	LEAD-214	1.31	pCi/g		0.33	0.37	HASL300
RBB352428	LEAD-214	1.31	pCi/g		0.33	0.39	HASL300
RBC310005	LEAD-214	1.31	pCi/g		0.46	0.48	HASL300
RBC462530	LEAD-214	1.31	pCi/g		0.4	0.45	HASL300
RBB102024	LEAD-214	1.3	pCi/g		0.56	0.47	HASL300
RBB130508	LEAD-214	1.3	pCi/g		0.53	0.54	HASL300
RBC160005	LEAD-214	1.3	pCi/g		0.47	0.37	HASL300
RBC381216	LEAD-214	1.3	pCi/g		0.27	0.32	HASL300
RBM132024	LEAD-214	1.3	pCi/g		0.33	0.37	HASL300
RBA160005	LEAD-214	1.29	pCi/g		0.57	0.48	HASL300
RBB260508	LEAD-214	1.29	pCi/g		0.3	0.25	HASL300
RBB320508	LEAD-214	1.29	pCi/g		0.38	0.31	HASL300
RBC091620	LEAD-214	1.29	pCi/g		0.3	0.34	HASL300
RBC260005	LEAD-214	1.29	pCi/g	J	0.33	0.27	HASL300
RBC462025	LEAD-214	1.29	pCi/g		0.41	0.36	HASL300
RBA092630	LEAD-214	1.28	pCi/g		0.4	0.4	HASL300
RBB061620	LEAD-214	1.28	pCi/g		0.33	0.26	HASL300
RBB230005	LEAD-214	1.28	pCi/g		0.42	0.38	HASL300
RBB270005	LEAD-214	1.28	pCi/g		0.41	0.45	HASL300
RBB362428	LEAD-214	1.28	pCi/g		0.55	0.54	HASL300
RBC141620	LEAD-214	1.28	pCi/g		0.36	0.4	HASL300
RBA011620	LEAD-214	1.27	pCi/g		0.55	0.47	HASL300
RBA102630	LEAD-214	1.27	pCi/g		0.71	0.51	HASL300
RBB222428	LEAD-214	1.27	pCi/g		0.29	0.35	HASL300
RBC190005	LEAD-214	1.27	pCi/g		0.5	0.47	HASL300
RBB112024	LEAD-214	1.26	pCi/g		0.52	0.56	HASL300
RBA173035	LEAD-214	1.25	pCi/g		0.31	0.32	HASL300
RBB072630	LEAD-214	1.25	pCi/g		0.27	0.3	HASL300
RBB281216	LEAD-214	1.25	pCi/g		0.26	0.28	HASL300
RBC111620	LEAD-214	1.25	pCi/g		0.34	0.26	HASL300
RBC400812	LEAD-214	1.25	pCi/g		0.33	0.38	HASL300
RBM101216	LEAD-214	1.25	pCi/g		0.7	0.53	HASL300
RBM171215	LEAD-214	1.25	pCi/g		0.35	0.34	HASL300
RBA020408	LEAD-214	1.24	pCi/g		0.46	0.46	HASL300
RBB030508	LEAD-214	1.24	pCi/g		0.26	0.31	HASL300
RBB050508	LEAD-214	1.24	pCi/g		0.32	0.35	HASL300
RBB302428	LEAD-214	1.24	pCi/g		0.41	0.33	HASL300
RBC021314	LEAD-214	1.24	pCi/g		0.49	0.48	HASL300
RBC090005	LEAD-214	1.24	pCi/g		0.32	0.32	HASL300
RBC321620	LEAD-214	1.24	pCi/g		0.29	0.36	HASL300
RBA112630	LEAD-214	1.23	pCi/g		0.41	0.41	HASL300
RBB070005	LEAD-214	1.23	pCi/g		0.33	0.31	HASL300
RBB110508	LEAD-214	1.23	pCi/g		0.58	0.5	HASL300
RBB380005	LEAD-214	1.23	pCi/g		0.34	0.34	HASL300
RBB420005	LEAD-214	1.23	pCi/g		0.49	0.4	HASL300
RBC020005	LEAD-214	1.23	pCi/g		0.43	0.4	HASL300
RBA070005	LEAD-214	1.22	pCi/g		0.51	0.46	HASL300
RBA110812	LEAD-214	1.22	pCi/g		0.31	0.3	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB250005	LEAD-214	1.22	pCi/g		0.18	0.23	HASL300
RBB330508	LEAD-214	1.22	pCi/g		0.37	0.4	HASL300
RBB340005	LEAD-214	1.22	pCi/g		0.38	0.38	HASL300
RBB340508	LEAD-214	1.22	pCi/g		0.33	0.24	HASL300
RBB382024	LEAD-214	1.22	pCi/g		0.32	0.24	HASL300
RBC101620	LEAD-214	1.22	pCi/g		0.28	0.34	HASL300
RBC130005	LEAD-214	1.22	pCi/g		0.35	0.31	HASL300
RBC210005	LEAD-214	1.22	pCi/g		0.55	0.39	HASL300
RBC220005	LEAD-214	1.22	pCi/g		0.28	0.3	HASL300
RBB212428	LEAD-214	1.21	pCi/g		0.33	0.33	HASL300
RBC131620	LEAD-214	1.21	pCi/g		0.33	0.25	HASL300
RBM052428	LEAD-214	1.21	pCi/g		0.29	0.34	HASL300
RBA081216	LEAD-214	1.2	pCi/g		0.56	0.51	HASL300
RBB020005	LEAD-214	1.2	pCi/g		0.32	0.37	HASL300
RBB390508	LEAD-214	1.2	pCi/g		0.31	0.33	HASL300
RBC030005	LEAD-214	1.2	pCi/g		0.42	0.39	HASL300
RBC192024	LEAD-214	1.2	pCi/g		0.41	0.41	HASL300
RBC242428	LEAD-214	1.2	pCi/g		0.28	0.36	HASL300
RBZ012025	LEAD-214	1.2	pCi/g		0.45	0.36	HASL300
RBA061620	LEAD-214	1.19	pCi/g		0.46	0.46	HASL300
RBA072630	LEAD-214	1.19	pCi/g		0.62	0.49	HASL300
RBA110005	LEAD-214	1.19	pCi/g		0.26	0.31	HASL300
RBB440005	LEAD-214	1.19	pCi/g		0.39	0.36	HASL300
RBC100005	LEAD-214	1.19	pCi/g		0.32	0.36	HASL300
RBC330005	LEAD-214	1.19	pCi/g		0.55	0.39	HASL300
RBZ010005	LEAD-214	1.19	pCi/g		0.37	0.37	HASL300
RBB250508	LEAD-214	1.18	pCi/g		0.3	0.31	HASL300
RBB270508	LEAD-214	1.18	pCi/g		0.24	0.29	HASL300
RBC351620	LEAD-214	1.18	pCi/g		0.61	0.46	HASL300
RBA030508	LEAD-214	1.17	pCi/g		0.56	0.49	HASL300
RBB170005	LEAD-214	1.17	pCi/g		0.25	0.27	HASL300
RBB242428	LEAD-214	1.17	pCi/g		0.19	0.25	HASL300
RBB442530	LEAD-214	1.17	pCi/g		0.43	0.45	HASL300
RBC252024	LEAD-214	1.17	pCi/g		0.35	0.3	HASL300
RBA141216	LEAD-214	1.16	pCi/g		0.43	0.41	HASL300
RBB122024	LEAD-214	1.16	pCi/g		0.47	0.46	HASL300
RBB160005	LEAD-214	1.16	pCi/g		0.44	0.44	HASL300
RBC081216	LEAD-214	1.16	pCi/g		0.34	0.37	HASL300
RBC451216	LEAD-214	1.16	pCi/g		0.38	0.37	HASL300
RBA020004	LEAD-214	1.15	pCi/g		0.32	0.34	HASL300
RBB052630	LEAD-214	1.15	pCi/g		0.39	0.36	HASL300
RBB322428	LEAD-214	1.15	pCi/g		0.24	0.29	HASL300
RBB372428	LEAD-214	1.15	pCi/g		0.31	0.3	HASL300
RBC190913	LEAD-214	1.15	pCi/g		0.4	0.43	HASL300
RBC280005	LEAD-214	1.15	pCi/g		0.27	0.31	HASL300
RBC421216	LEAD-214	1.15	pCi/g		0.52	0.52	HASL300
RBB080005	LEAD-214	1.14	pCi/g		0.46	0.41	HASL300
RBB171216	LEAD-214	1.14	pCi/g		0.26	0.32	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC080005	LEAD-214	1.14	pCi/g		0.24	0.28	HASL300
RBB260812	LEAD-214	1.13	pCi/g		0.2	0.26	HASL300
RBB310812	LEAD-214	1.13	pCi/g		0.27	0.3	HASL300
RBC340509	LEAD-214	1.13	pCi/g		0.45	0.43	HASL300
RBC410005	LEAD-214	1.13	pCi/g		0.42	0.37	HASL300
RBD060001	LEAD-214	1.13	pCi/g		0.21	0.25	HASL300
RBA122630	LEAD-214	1.12	pCi/g		0.27	0.3	HASL300
RBA131216	LEAD-214	1.12	pCi/g		0.32	0.32	HASL300
RBA172025	LEAD-214	1.12	pCi/g		0.29	0.27	HASL300
RBB240508	LEAD-214	1.12	pCi/g		0.3	0.23	HASL300
RBB370508	LEAD-214	1.12	pCi/g		0.27	0.31	HASL300
RBC200005	LEAD-214	1.12	pCi/g		0.41	0.37	HASL300
RBC370005	LEAD-214	1.12	pCi/g		0.3	0.34	HASL300
RBC380509	LEAD-214	1.12	pCi/g		0.2	0.24	HASL300
RBB342428	LEAD-214	1.11	pCi/g		0.24	0.3	HASL300
RBB350005	LEAD-214	1.11	pCi/g		0.34	0.35	HASL300
RBC120005	LEAD-214	1.11	pCi/g		0.31	0.34	HASL300
RBC390005	LEAD-214	1.11	pCi/g		0.36	0.37	HASL300
RBM090001	LEAD-214	1.11	pCi/g		0.3	0.34	HASL300
RBA121620	LEAD-214	1.1	pCi/g		0.31	0.24	HASL300
RBB280508	LEAD-214	1.1	pCi/g		0.35	0.28	HASL300
RBB292428	LEAD-214	1.1	pCi/g		0.18	0.23	HASL300
RBC040005	LEAD-214	1.1	pCi/g		0.51	0.44	HASL300
RBC061216	LEAD-214	1.1	pCi/g		0.35	0.34	HASL300
RBC391216	LEAD-214	1.1	pCi/g		0.25	0.28	HASL300
RBC460005	LEAD-214	1.1	pCi/g		0.23	0.28	HASL300
RBZ025560	LEAD-214	1.1	pCi/g		0.29	0.22	HASL300
RBB390005	LEAD-214	1.09	pCi/g		0.28	0.31	HASL300
RBC100509	LEAD-214	1.09	pCi/g		0.27	0.21	HASL300
RBB170508	LEAD-214	1.08	pCi/g		0.29	0.33	HASL300
RBC021620	LEAD-214	1.08	pCi/g		0.32	0.3	HASL300
RBM012630	LEAD-214	1.08	pCi/g		0.47	0.4	HASL300
RBA040005	LEAD-214	1.07	pCi/g		0.58	0.48	HASL300
RBA090005	LEAD-214	1.07	pCi/g		0.45	0.44	HASL300
RBB410005	LEAD-214	1.07	pCi/g		0.32	0.26	HASL300
RBB442025	LEAD-214	1.07	pCi/g		0.39	0.35	HASL300
RBC400005	LEAD-214	1.07	pCi/g		0.25	0.21	HASL300
RBA130005	LEAD-214	1.06	pCi/g		0.27	0.25	HASL300
RBB152024	LEAD-214	1.06	pCi/g		0.45	0.47	HASL300
RBC011216	LEAD-214	1.06	pCi/g		0.41	0.39	HASL300
RBC140005	LEAD-214	1.06	pCi/g		0.28	0.29	HASL300
RBC240005	LEAD-214	1.06	pCi/g		0.29	0.24	HASL300
RBC261620	LEAD-214	1.06	pCi/g		0.34	0.3	HASL300
RBC440005	LEAD-214	1.06	pCi/g		0.4	0.34	HASL300
RBC010005	LEAD-214	1.05	pCi/g		0.37	0.36	HASL300
RBC230005	LEAD-214	1.05	pCi/g		0.3	0.23	HASL300
RBC290005	LEAD-214	1.05	pCi/g		0.34	0.32	HASL300
RBC311620	LEAD-214	1.05	pCi/g		0.48	0.37	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC371620	LEAD-214	1.05	pCi/g		0.26	0.21	HASL300
RBC380005	LEAD-214	1.05	pCi/g		0.29	0.26	HASL300
RBC461215	LEAD-214	1.05	pCi/g		0.34	0.28	HASL300
RBC450005	LEAD-214	1.04	pCi/g		0.5	0.34	HASL300
RBA050005	LEAD-214	1.03	pCi/g		0.36	0.36	HASL300
RBA140005	LEAD-214	1.03	pCi/g		0.28	0.22	HASL300
RBB210508	LEAD-214	1.03	pCi/g		0.38	0.26	HASL300
RBB332428	LEAD-214	1.03	pCi/g		0.31	0.23	HASL300
RBB382428	LEAD-214	1.03	pCi/g		0.26	0.27	HASL300
RBC150005	LEAD-214	1.03	pCi/g		0.41	0.35	HASL300
RBC202024	LEAD-214	1.03	pCi/g		0.31	0.32	HASL300
RBZ022025	LEAD-214	1.03	pCi/g		0.28	0.22	HASL300
RBB200005	LEAD-214	1.02	pCi/g		0.33	0.29	HASL300
RBB290812	LEAD-214	1.02	pCi/g		0.2	0.18	HASL300
RBB400005	LEAD-214	1.02	pCi/g		0.41	0.41	HASL300
RBC320005	LEAD-214	1.02	pCi/g		0.24	0.27	HASL300
RBA060005	LEAD-214	1.01	pCi/g		0.39	0.32	HASL300
RBB032428	LEAD-214	1.01	pCi/g		0.3	0.28	HASL300
RBB162428	LEAD-214	1.01	pCi/g		0.55	0.36	HASL300
RBB260005	LEAD-214	1.01	pCi/g		0.18	0.19	HASL300
RBC270005	LEAD-214	1.01	pCi/g		0.3	0.26	HASL300
RBB220508	LEAD-214	1	pCi/g		0.31	0.23	HASL300
RBB232428	LEAD-214	1	pCi/g		0.29	0.28	HASL300
RBB310005	LEAD-214	1	pCi/g		0.27	0.21	HASL300
RBB350508	LEAD-214	1	pCi/g		0.26	0.25	HASL300
RBC060005	LEAD-214	1	pCi/g		0.27	0.29	HASL300
RBC071216	LEAD-214	1	pCi/g		0.32	0.24	HASL300
RBB360005	LEAD-214	0.99	pCi/g		0.27	0.28	HASL300
RBC232024	LEAD-214	0.99	pCi/g		0.3	0.31	HASL300
RBA080005	LEAD-214	0.98	pCi/g		0.4	0.41	HASL300
RBB421620	LEAD-214	0.98	pCi/g		0.44	0.38	HASL300
RBA100005	LEAD-214	0.97	pCi/g		0.4	0.34	HASL300
RBB062630	LEAD-214	0.96	pCi/g		0.27	0.27	HASL300
RBB290005	LEAD-214	0.96	pCi/g		0.29	0.28	HASL300
RBZ023034	LEAD-214	0.96	pCi/g		0.26	0.19	HASL300
RBA120005	LEAD-214	0.95	pCi/g		0.24	0.25	HASL300
RBA170005	LEAD-214	0.95	pCi/g		0.23	0.25	HASL300
RBB220005	LEAD-214	0.95	pCi/g		0.35	0.25	HASL300
RBB272428	LEAD-214	0.95	pCi/g		0.16	0.19	HASL300
RBB161620	LEAD-214	0.94	pCi/g		0.5	0.41	HASL300
RBB202428	LEAD-214	0.93	pCi/g		0.28	0.29	HASL300
RBC222024	LEAD-214	0.93	pCi/g		0.34	0.26	HASL300
RBD020001	LEAD-214	0.93	pCi/g		0.27	0.32	HASL300
RBA100812	LEAD-214	0.92	pCi/g		0.45	0.45	HASL300
RBD100001	LEAD-214	0.92	pCi/g		0.21	0.25	HASL300
RBZ020005	LEAD-214	0.92	pCi/g		0.34	0.24	HASL300
RBB060005	LEAD-214	0.9	pCi/g		0.27	0.27	HASL300
RBM062428	LEAD-214	0.9	pCi/g		0.3	0.29	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB030005	LEAD-214	0.89	pCi/g		0.29	0.21	HASL300
RBB140005	LEAD-214	0.89	pCi/g		0.41	0.29	HASL300
RBC271620	LEAD-214	0.89	pCi/g		0.3	0.29	HASL300
RBD090001	LEAD-214	0.89	pCi/g		0.29	0.26	HASL300
RBC340005	LEAD-214	0.88	pCi/g		0.36	0.3	HASL300
RBD070001	LEAD-214	0.88	pCi/g		0.35	0.34	HASL300
RBB042630	LEAD-214	0.87	pCi/g		0.3	0.21	HASL300
RBC051216	LEAD-214	0.87	pCi/g		0.37	0.24	HASL300
RBB050005	LEAD-214	0.85	pCi/g		0.26	0.22	HASL300
RBD010001	LEAD-214	0.84	pCi/g		0.32	0.34	HASL300
RBC291620	LEAD-214	0.83	pCi/g		0.28	0.18	HASL300
RBD030001	LEAD-214	0.83	pCi/g		0.34	0.31	HASL300
RBC110005	LEAD-214	0.82	pCi/g		0.28	0.28	HASL300
RBC360005	LEAD-214	0.79	pCi/g		0.38	0.28	HASL300
RBC430005	LEAD-214	0.76	pCi/g		0.39	0.33	HASL300
RBD050001	LEAD-214	0.75	pCi/g		0.28	0.27	HASL300
RBC281620	LEAD-214	0.74	pCi/g		0.36	0.35	HASL300
RBD080001	LEAD-214	0.72	pCi/g		0.23	0.16	HASL300
RBD040001	LEAD-214	0.71	pCi/g		0.27	0.18	HASL300
RBC281620	THORIUM-234	15.6	pCi/g		3.5	4.5	HASL300
RBC420005	THORIUM-234	7.6	pCi/g	J	2.9	3.8	HASL300
RBA042630	THORIUM-234	7.4	pCi/g	J	2.8	3.2	HASL300
RBC192024	THORIUM-234	7.3	pCi/g	J	3	3.6	HASL300
RBM152024	THORIUM-234	6.4	pCi/g		2.5	2.3	HASL300
RBC070005	THORIUM-234	6	pCi/g	J	2.7	3.1	HASL300
RBC040005	THORIUM-234	4.9	pCi/g	J	2.6	2.2	HASL300
RBB220508	THORIUM-234	4.8	pCi/g	J	1.8	2.1	HASL300
RBZ022025	THORIUM-234	4.1	pCi/g	J	1.7	1.9	HASL300
RBC291620	THORIUM-234	3.9	pCi/g		1.6	1.1	HASL300
RBZ025560	THORIUM-234	3.5	pCi/g	J	1.4	1.7	HASL300
RBC071216	THORIUM-234	3.1	pCi/g	J	1.3	1.6	HASL300
RBB210005	THORIUM-234	2.8	pCi/g		1.4	1.3	HASL300
RBB120005	THALLIUM-208	1.05	pCi/g		0.23	0.29	HASL300
RBC030005	THALLIUM-208	1.04	pCi/g	J	0.059	0.23	HASL300
RBC330005	THALLIUM-208	1.04	pCi/g	J	0.23	0.3	HASL300
RBM141620	THALLIUM-208	1.01	pCi/g	J	0.097	0.29	HASL300
RBC441620	THALLIUM-208	0.97	pCi/g	J	0.25	0.29	HASL300
RBC411216	THALLIUM-208	0.91	pCi/g	J	0.34	0.34	HASL300
RBA040812	THALLIUM-208	0.9	pCi/g		0.032	0.23	HASL300
RBB012830	THALLIUM-208	0.9	pCi/g		0.24	0.35	HASL300
RBA090005	THALLIUM-208	0.89	pCi/g		0.027	0.24	HASL300
RBA150005	THALLIUM-208	0.89	pCi/g		0.2	0.25	HASL300
RBA102630	THALLIUM-208	0.83	pCi/g		0.28	0.28	HASL300
RBM101216	THALLIUM-208	0.8	pCi/g	J	0.22	0.26	HASL300
RBB102024	THALLIUM-208	0.78	pCi/g		0.22	0.21	HASL300
RBB210508	THALLIUM-208	0.77	pCi/g		0.12	0.2	HASL300
RBC461215	THALLIUM-208	0.76	pCi/g		0.23	0.23	HASL300
RBA042630	THALLIUM-208	0.75	pCi/g		0.24	0.3	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBA072630	THALLIUM-208	0.75	pCi/g		0.24	0.31	HASL300
RBA142630	THALLIUM-208	0.75	pCi/g		0.15	0.23	HASL300
RBB010005	THALLIUM-208	0.75	pCi/g		0.27	0.27	HASL300
RBB040005	THALLIUM-208	0.74	pCi/g		0.19	0.27	HASL300
RBB100005	THALLIUM-208	0.74	pCi/g		0.25	0.29	HASL300
RBC180005	THALLIUM-208	0.74	pCi/g	J	0.2	0.25	HASL300
RBB090508	THALLIUM-208	0.72	pCi/g		0.36	0.35	HASL300
RBC341620	THALLIUM-208	0.72	pCi/g	J	0.26	0.25	HASL300
RBB350508	THALLIUM-208	0.71	pCi/g		0.16	0.18	HASL300
RBM052428	THALLIUM-208	0.71	pCi/g		0.16	0.19	HASL300
RBA070005	THALLIUM-208	0.7	pCi/g		0.2	0.23	HASL300
RBC101620	THALLIUM-208	0.7	pCi/g		0.16	0.18	HASL300
RBB160005	THALLIUM-208	0.69	pCi/g		0.22	0.22	HASL300
RBB220005	THALLIUM-208	0.69	pCi/g		0.21	0.21	HASL300
RBC150005	THALLIUM-208	0.69	pCi/g	J	0.26	0.26	HASL300
RBB401216	THALLIUM-208	0.68	pCi/g		0.34	0.29	HASL300
RBC222024	THALLIUM-208	0.68	pCi/g		0.17	0.19	HASL300
RBM041620	THALLIUM-208	0.68	pCi/g		0.19	0.23	HASL300
RBZ025560	THALLIUM-208	0.68	pCi/g		0.1	0.14	HASL300
RBB030508	THALLIUM-208	0.67	pCi/g		0.14	0.23	HASL300
RBB350005	THALLIUM-208	0.67	pCi/g		0.11	0.15	HASL300
RBM132024	THALLIUM-208	0.67	pCi/g		0.037	0.15	HASL300
RBB022428	THALLIUM-208	0.66	pCi/g		0.16	0.17	HASL300
RBB210812	THALLIUM-208	0.66	pCi/g		0.14	0.2	HASL300
RBB280005	THALLIUM-208	0.66	pCi/g		0.23	0.26	HASL300
RBB310005	THALLIUM-208	0.66	pCi/g		0.12	0.18	HASL300
RBB320508	THALLIUM-208	0.66	pCi/g		0.14	0.19	HASL300
RBA040005	THALLIUM-208	0.65	pCi/g		0.26	0.25	HASL300
RBA141216	THALLIUM-208	0.65	pCi/g		0.15	0.19	HASL300
RBB132024	THALLIUM-208	0.65	pCi/g		0.23	0.23	HASL300
RBB252428	THALLIUM-208	0.65	pCi/g		0.17	0.23	HASL300
RBB443539	THALLIUM-208	0.65	pCi/g		0.32	0.29	HASL300
RBM162025	THALLIUM-208	0.65	pCi/g		0.28	0.3	HASL300
RBZ012025	THALLIUM-208	0.65	pCi/g		0.22	0.27	HASL300
RBB032428	THALLIUM-208	0.64	pCi/g		0.16	0.16	HASL300
RBB040508	THALLIUM-208	0.64	pCi/g		0.18	0.19	HASL300
RBB260508	THALLIUM-208	0.64	pCi/g		0.15	0.24	HASL300
RBB362428	THALLIUM-208	0.64	pCi/g		0.24	0.27	HASL300
RBB442025	THALLIUM-208	0.64	pCi/g		0.19	0.23	HASL300
RBC070005	THALLIUM-208	0.64	pCi/g		0.16	0.17	HASL300
RBC350005	THALLIUM-208	0.64	pCi/g	J	0.27	0.29	HASL300
RBZ022025	THALLIUM-208	0.64	pCi/g		0.098	0.15	HASL300
RBZ023034	THALLIUM-208	0.64	pCi/g		0.14	0.21	HASL300
RBA151620	THALLIUM-208	0.63	pCi/g		0.3	0.27	HASL300
RBB140005	THALLIUM-208	0.63	pCi/g		0.2	0.22	HASL300
RBB222428	THALLIUM-208	0.63	pCi/g		0.17	0.25	HASL300
RBC041216	THALLIUM-208	0.63	pCi/g	J	0.15	0.18	HASL300
RBC050005	THALLIUM-208	0.63	pCi/g		0.089	0.15	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC130005	THALLIUM-208	0.63	pCi/g		0.17	0.17	HASL300
RBC140005	THALLIUM-208	0.63	pCi/g		0.13	0.19	HASL300
RBB080812	THALLIUM-208	0.62	pCi/g		0.27	0.3	HASL300
RBB290812	THALLIUM-208	0.62	pCi/g		0.098	0.18	HASL300
RBB322428	THALLIUM-208	0.62	pCi/g		0.12	0.21	HASL300
RBC241620	THALLIUM-208	0.62	pCi/g		0.15	0.22	HASL300
RBD010001	THALLIUM-208	0.62	pCi/g		0.11	0.2	HASL300
RBA110812	THALLIUM-208	0.61	pCi/g		0.14	0.2	HASL300
RBB200812	THALLIUM-208	0.61	pCi/g		0.17	0.18	HASL300
RBB280508	THALLIUM-208	0.61	pCi/g		0.14	0.2	HASL300
RBA051620	THALLIUM-208	0.6	pCi/g		0.14	0.19	HASL300
RBA170005	THALLIUM-208	0.6	pCi/g		0.11	0.13	HASL300
RBB150508	THALLIUM-208	0.6	pCi/g		0.26	0.28	HASL300
RBB382024	THALLIUM-208	0.6	pCi/g		0.15	0.22	HASL300
RBC120005	THALLIUM-208	0.6	pCi/g		0.14	0.19	HASL300
RBB370005	THALLIUM-208	0.59	pCi/g		0.11	0.15	HASL300
RBC080005	THALLIUM-208	0.59	pCi/g		0.14	0.19	HASL300
RBC371620	THALLIUM-208	0.59	pCi/g		0.12	0.2	HASL300
RBB020005	THALLIUM-208	0.58	pCi/g		0.055	0.13	HASL300
RBB070508	THALLIUM-208	0.58	pCi/g		0.2	0.21	HASL300
RBC121620	THALLIUM-208	0.58	pCi/g		0.16	0.23	HASL300
RBA050005	THALLIUM-208	0.57	pCi/g		0.13	0.16	HASL300
RBB162428	THALLIUM-208	0.57	pCi/g		0.21	0.22	HASL300
RBB300005	THALLIUM-208	0.57	pCi/g		0.13	0.16	HASL300
RBB442530	THALLIUM-208	0.57	pCi/g		0.055	0.15	HASL300
RBM012630	THALLIUM-208	0.57	pCi/g		0.28	0.28	HASL300
RBA010005	THALLIUM-208	0.56	pCi/g		0.23	0.25	HASL300
RBA092630	THALLIUM-208	0.56	pCi/g		0.23	0.23	HASL300
RBB120812	THALLIUM-208	0.56	pCi/g		0.22	0.23	HASL300
RBB212428	THALLIUM-208	0.56	pCi/g		0.13	0.17	HASL300
RBB382428	THALLIUM-208	0.56	pCi/g		0.091	0.14	HASL300
RBC021314	THALLIUM-208	0.56	pCi/g	J	0.24	0.26	HASL300
RBC110005	THALLIUM-208	0.56	pCi/g		0.14	0.16	HASL300
RBC252024	THALLIUM-208	0.56	pCi/g		0.15	0.22	HASL300
RBC391216	THALLIUM-208	0.56	pCi/g		0.15	0.21	HASL300
RBD080001	THALLIUM-208	0.56	pCi/g		0.092	0.15	HASL300
RBM020005	THALLIUM-208	0.56	pCi/g		0.27	0.28	HASL300
RBM062428	THALLIUM-208	0.56	pCi/g		0.14	0.19	HASL300
RBA100005	THALLIUM-208	0.55	pCi/g		0.2	0.24	HASL300
RBB230508	THALLIUM-208	0.55	pCi/g		0.22	0.24	HASL300
RBB240005	THALLIUM-208	0.55	pCi/g		0.14	0.2	HASL300
RBB300508	THALLIUM-208	0.55	pCi/g		0.25	0.29	HASL300
RBC051216	THALLIUM-208	0.55	pCi/g		0.14	0.19	HASL300
RBC261620	THALLIUM-208	0.55	pCi/g		0.18	0.23	HASL300
RBC320005	THALLIUM-208	0.55	pCi/g		0.11	0.16	HASL300
RBC390005	THALLIUM-208	0.55	pCi/g		0.13	0.16	HASL300
RBA173035	THALLIUM-208	0.54	pCi/g		0.11	0.17	HASL300
RBB090005	THALLIUM-208	0.54	pCi/g		0.3	0.23	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB372428	THALLIUM-208	0.54	pCi/g		0.13	0.17	HASL300
RBD100001	THALLIUM-208	0.54	pCi/g		0.16	0.15	HASL300
RBA172025	THALLIUM-208	0.53	pCi/g		0.17	0.21	HASL300
RBB130005	THALLIUM-208	0.53	pCi/g		0.21	0.2	HASL300
RBB332428	THALLIUM-208	0.53	pCi/g		0.12	0.16	HASL300
RBB340508	THALLIUM-208	0.53	pCi/g		0.13	0.15	HASL300
RBB411216	THALLIUM-208	0.53	pCi/g		0.24	0.25	HASL300
RBC060005	THALLIUM-208	0.53	pCi/g		0.15	0.2	HASL300
RBC091620	THALLIUM-208	0.53	pCi/g		0.16	0.18	HASL300
RBD020001	THALLIUM-208	0.53	pCi/g		0.15	0.14	HASL300
RBA112630	THALLIUM-208	0.52	pCi/g		0.22	0.25	HASL300
RBB070005	THALLIUM-208	0.52	pCi/g		0.16	0.2	HASL300
RBB152024	THALLIUM-208	0.52	pCi/g		0.21	0.22	HASL300
RBB281216	THALLIUM-208	0.52	pCi/g		0.15	0.19	HASL300
RBB352428	THALLIUM-208	0.52	pCi/g		0.17	0.18	HASL300
RBC020509	THALLIUM-208	0.52	pCi/g	J	0.25	0.24	HASL300
RBC111620	THALLIUM-208	0.52	pCi/g		0.11	0.15	HASL300
RBC230005	THALLIUM-208	0.52	pCi/g		0.1	0.13	HASL300
RBA122630	THALLIUM-208	0.51	pCi/g		0.13	0.13	HASL300
RBB232428	THALLIUM-208	0.51	pCi/g		0.076	0.14	HASL300
RBC081216	THALLIUM-208	0.51	pCi/g		0.16	0.15	HASL300
RBC100509	THALLIUM-208	0.51	pCi/g		0.11	0.13	HASL300
RBC131620	THALLIUM-208	0.51	pCi/g		0.11	0.13	HASL300
RBC370005	THALLIUM-208	0.51	pCi/g		0.13	0.2	HASL300
RBC400812	THALLIUM-208	0.51	pCi/g		0.12	0.15	HASL300
RBD060001	THALLIUM-208	0.51	pCi/g		0.16	0.2	HASL300
RBA081216	THALLIUM-208	0.5	pCi/g		0.25	0.22	HASL300
RBA174549	THALLIUM-208	0.5	pCi/g		0.17	0.19	HASL300
RBB200005	THALLIUM-208	0.5	pCi/g		0.13	0.16	HASL300
RBB230005	THALLIUM-208	0.5	pCi/g		0.2	0.21	HASL300
RBB310812	THALLIUM-208	0.5	pCi/g		0.16	0.18	HASL300
RBB370508	THALLIUM-208	0.5	pCi/g		0.12	0.16	HASL300
RBC040005	THALLIUM-208	0.5	pCi/g	J	0.21	0.21	HASL300
RBC271620	THALLIUM-208	0.5	pCi/g		0.19	0.21	HASL300
RBC280005	THALLIUM-208	0.5	pCi/g		0.14	0.17	HASL300
RBZ020005	THALLIUM-208	0.5	pCi/g		0.083	0.11	HASL300
RBA030005	THALLIUM-208	0.49	pCi/g		0.17	0.17	HASL300
RBB250005	THALLIUM-208	0.49	pCi/g		0.11	0.15	HASL300
RBB292428	THALLIUM-208	0.49	pCi/g		0.098	0.14	HASL300
RBB340005	THALLIUM-208	0.49	pCi/g		0.21	0.2	HASL300
RBC460005	THALLIUM-208	0.49	pCi/g		0.13	0.16	HASL300
RBD090001	THALLIUM-208	0.49	pCi/g		0.13	0.19	HASL300
RBB360812	THALLIUM-208	0.48	pCi/g		0.18	0.19	HASL300
RBC011216	THALLIUM-208	0.48	pCi/g	J	0.23	0.23	HASL300
RBC071216	THALLIUM-208	0.48	pCi/g		0.13	0.2	HASL300
RBC190005	THALLIUM-208	0.48	pCi/g	J	0.2	0.18	HASL300
RBA120005	THALLIUM-208	0.47	pCi/g		0.14	0.13	HASL300
RBA121620	THALLIUM-208	0.47	pCi/g		0.12	0.16	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBB020508	THALLIUM-208	0.47	pCi/g		0.18	0.16	HASL300
RBB342428	THALLIUM-208	0.47	pCi/g		0.11	0.13	HASL300
RBC020005	THALLIUM-208	0.47	pCi/g	J	0.22	0.21	HASL300
RBD040001	THALLIUM-208	0.47	pCi/g		0.13	0.19	HASL300
RBM122024	THALLIUM-208	0.47	pCi/g		0.16	0.15	HASL300
RBA131216	THALLIUM-208	0.46	pCi/g		0.078	0.12	HASL300
RBB170005	THALLIUM-208	0.46	pCi/g		0.15	0.18	HASL300
RBB220508	THALLIUM-208	0.46	pCi/g		0.097	0.12	HASL300
RBB240508	THALLIUM-208	0.46	pCi/g		0.14	0.17	HASL300
RBB270005	THALLIUM-208	0.46	pCi/g		0.13	0.14	HASL300
RBC232024	THALLIUM-208	0.46	pCi/g		0.17	0.2	HASL300
RBC260005	THALLIUM-208	0.46	pCi/g	J	0.12	0.12	HASL300
RBA020408	THALLIUM-208	0.45	pCi/g		0.21	0.21	HASL300
RBA130005	THALLIUM-208	0.45	pCi/g		0.16	0.19	HASL300
RBA132630	THALLIUM-208	0.45	pCi/g		0.18	0.21	HASL300
RBB210005	THALLIUM-208	0.45	pCi/g		0.15	0.16	HASL300
RBB270508	THALLIUM-208	0.45	pCi/g		0.1	0.12	HASL300
RBB290005	THALLIUM-208	0.45	pCi/g		0.13	0.16	HASL300
RBB312428	THALLIUM-208	0.45	pCi/g		0.15	0.18	HASL300
RBC190913	THALLIUM-208	0.45	pCi/g	J	0.18	0.15	HASL300
RBC270005	THALLIUM-208	0.45	pCi/g		0.12	0.14	HASL300
RBC310005	THALLIUM-208	0.45	pCi/g	J	0.23	0.21	HASL300
RBC420005	THALLIUM-208	0.45	pCi/g	J	0.21	0.21	HASL300
RBM171215	THALLIUM-208	0.45	pCi/g		0.15	0.17	HASL300
RBA110005	THALLIUM-208	0.44	pCi/g		0.086	0.11	HASL300
RBB050005	THALLIUM-208	0.44	pCi/g		0.12	0.15	HASL300
RBB050508	THALLIUM-208	0.44	pCi/g		0.13	0.14	HASL300
RBB202428	THALLIUM-208	0.44	pCi/g		0.078	0.12	HASL300
RBB250508	THALLIUM-208	0.44	pCi/g		0.15	0.19	HASL300
RBC090005	THALLIUM-208	0.44	pCi/g		0.11	0.14	HASL300
RBC220005	THALLIUM-208	0.44	pCi/g		0.1	0.12	HASL300
RBC381216	THALLIUM-208	0.44	pCi/g		0.16	0.17	HASL300
RBZ010005	THALLIUM-208	0.44	pCi/g		0.046	0.11	HASL300
RBA020004	THALLIUM-208	0.43	pCi/g		0.18	0.16	HASL300
RBA060005	THALLIUM-208	0.43	pCi/g		0.19	0.18	HASL300
RBA140005	THALLIUM-208	0.43	pCi/g		0.11	0.14	HASL300
RBB142024	THALLIUM-208	0.43	pCi/g		0.22	0.19	HASL300
RBB242428	THALLIUM-208	0.43	pCi/g		0.097	0.12	HASL300
RBB440005	THALLIUM-208	0.43	pCi/g		0.15	0.16	HASL300
RBC462530	THALLIUM-208	0.43	pCi/g		0.19	0.21	HASL300
RBB072630	THALLIUM-208	0.42	pCi/g		0.16	0.18	HASL300
RBB272428	THALLIUM-208	0.42	pCi/g		0.086	0.11	HASL300
RBB390005	THALLIUM-208	0.42	pCi/g		0.12	0.15	HASL300
RBB390508	THALLIUM-208	0.42	pCi/g		0.053	0.1	HASL300
RBC061216	THALLIUM-208	0.42	pCi/g		0.14	0.15	HASL300
RBC240005	THALLIUM-208	0.42	pCi/g		0.13	0.15	HASL300
RBB360005	THALLIUM-208	0.41	pCi/g		0.16	0.17	HASL300
RBB410005	THALLIUM-208	0.41	pCi/g		0.19	0.18	HASL300

Table E.7-1
Investigative Soil Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Parameter	Result	Units	Qualifier [a]	Detection Limit	Error	Test Method
RBC242428	THALLIUM-208	0.41	pCi/g		0.13	0.15	HASL300
RBC290005	THALLIUM-208	0.41	pCi/g		0.17	0.18	HASL300
RBC410005	THALLIUM-208	0.41	pCi/g	J	0.084	0.12	HASL300
RBM110005	THALLIUM-208	0.41	pCi/g		0.11	0.12	HASL300
RBZ013539	THALLIUM-208	0.41	pCi/g		0.17	0.17	HASL300
RBB042630	THALLIUM-208	0.4	pCi/g		0.11	0.12	HASL300
RBB061620	THALLIUM-208	0.4	pCi/g		0.13	0.15	HASL300
RBB062630	THALLIUM-208	0.4	pCi/g		0.12	0.14	HASL300
RBB170508	THALLIUM-208	0.4	pCi/g		0.19	0.19	HASL300
RBB260812	THALLIUM-208	0.4	pCi/g		0.096	0.11	HASL300
RBB330005	THALLIUM-208	0.4	pCi/g		0.18	0.2	HASL300
RBB380005	THALLIUM-208	0.4	pCi/g		0.17	0.16	HASL300
RBC400005	THALLIUM-208	0.4	pCi/g		0.11	0.13	HASL300
RBD070001	THALLIUM-208	0.4	pCi/g		0.16	0.15	HASL300
RBM090001	THALLIUM-208	0.4	pCi/g		0.14	0.16	HASL300
RBB052630	THALLIUM-208	0.39	pCi/g		0.16	0.15	HASL300
RBC321620	THALLIUM-208	0.39	pCi/g		0.13	0.13	HASL300
RBC380005	THALLIUM-208	0.39	pCi/g		0.13	0.13	HASL300
RBC430005	THALLIUM-208	0.39	pCi/g	J	0.19	0.17	HASL300
RBA160508	THALLIUM-208	0.38	pCi/g		0.18	0.17	HASL300
RBB171216	THALLIUM-208	0.38	pCi/g		0.18	0.18	HASL300
RBB320005	THALLIUM-208	0.38	pCi/g		0.18	0.18	HASL300
RBB400005	THALLIUM-208	0.38	pCi/g		0.14	0.14	HASL300
RBB420005	THALLIUM-208	0.38	pCi/g		0.2	0.16	HASL300
RBC450005	THALLIUM-208	0.38	pCi/g	J	0.17	0.16	HASL300
RBB060005	THALLIUM-208	0.37	pCi/g		0.16	0.16	HASL300
RBC291620	THALLIUM-208	0.37	pCi/g		0.15	0.17	HASL300
RBB390812	THALLIUM-208	0.36	pCi/g		0.13	0.13	HASL300
RBC100005	THALLIUM-208	0.36	pCi/g		0.18	0.17	HASL300
RBC141620	THALLIUM-208	0.36	pCi/g		0.14	0.13	HASL300
RBD030001	THALLIUM-208	0.35	pCi/g		0.14	0.13	HASL300
RBB030005	THALLIUM-208	0.343	pCi/g		0.094	0.085	HASL300
RBB260005	THALLIUM-208	0.34	pCi/g		0.12	0.14	HASL300
RBB302428	THALLIUM-208	0.33	pCi/g		0.17	0.15	HASL300
RBB330508	THALLIUM-208	0.32	pCi/g		0.17	0.14	HASL300
RBD050001	THALLIUM-208	0.32	pCi/g		0.1	0.12	HASL300
RBC370812	THALLIUM-208	0.29	pCi/g		0.13	0.12	HASL300
RBC380509	THALLIUM-208	0.29	pCi/g		0.12	0.11	HASL300

pCi/g - picocuries per gram

[a] **"Qualifier"** Column:

This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:

LT - Result is less than requested minimum detectable concentration, greater than sample specific minimum detectable concentration

J - result is estimated, Analyte is present below nominal reporting limit, or the analyte is detected, but the quantitation is estimated because of associated QC data

Table is sorted alphabetically by the parameter column and then by the result column.

Table E.7-2
Water Sample Results
Summary of Positive Detects for Radiological COPCs

Sample Number	Sample Type	Parameter	Result	Units	Validation Qualifier[a]	Detection Limit	Error	User Test Panel
Water samples collected in 2000								
RBT044	RINSE BLANK	BISMUTH-214	58	pCi/L	J	26	29	HASL300
RBT085	FIELD BLANK	THORIUM-234	750	pCi/L	J	140	220	HASL300
RBT032	RINSE BLANK	THALLIUM-208	12.6	pCi/L		5.3	7.0	HASL300
Water samples collected in 2002								
RBWU01	GW SAMPLE	BISMUTH-214	47	pCi/L		22	16	HASL300
RBT002A	FIELD BLANK	POTASSIUM-40	169	pCi/L		76	62	HASL300
RBWB02	GW SAMPLE	LEAD-214	35	pCi/L		19	12	HASL300
RBWU01	GW SAMPLE	LEAD-214	42	pCi/L		18	13	HASL300

pCi/L - picocuries per liter
GW - groundwater
[a] **"Qualifier"** Column:
This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:
J - result is estimated, Analyte is present below nominal reporting limit, or the analyte is detected, but the quantitation is estimated because of associated QC data.
Table is sorted alphabetically by the parameter column and then by the result column.

Table E.7-3
Rejected Results for Radiological Analysis
of Soil and Water Samples

Sample Number	User Test Panel	Sample Matrix	Parameter	Result	Units	Validation Qualifier[a]	Detection Limit	Error
Radiological data collected in 2000 that was rejected								
RBA100005	HASL300	SOIL	AMERICIUM-241	0.8	pCi/g	R	0.28	0.26
RBA091216	HASL300	SOIL	ANTIMONY-124	0.29	pCi/g	R	0.14	0.12
RBB320508	HASL300	SOIL	STRONTIUM-85	0.5	pCi/g	R	0.14	0.21
RBB290812	HASL300	SOIL	STRONTIUM-85	0.56	pCi/g	R	0.11	0.21
RBC371620	HASL300	SOIL	STRONTIUM-85	0.61	pCi/g	R	0.13	0.22
RBA020004	HASL300	SOIL	STRONTIUM-85	0.66	pCi/g	R	0.16	0.21
RBB310005	HASL300	SOIL	STRONTIUM-85	0.7	pCi/g	R	0.16	0.29
RBM012630	HASL300	SOIL	STRONTIUM-85	0.91	pCi/g	R	0.23	0.31
RBB420005	HASL300	SOIL	STRONTIUM-85	1.05	pCi/g	R	0.21	0.34
RBC020509	HASL300	SOIL	STRONTIUM-85	1.22	pCi/g	R	0.3	0.48
RBT064	HASL300	WATER	STRONTIUM-85	5.7	pCi/L	R	5.5	3.8
RBT0004	HASL300	WATER	STRONTIUM-85	9.5	pCi/L	R	5.4	3.8
RBD040001	HASL300	SOIL	THORIUM-227	0.52	pCi/g	R	0.29	0.22
RBA121620	HASL300	SOIL	THORIUM-234	3.5	pCi/g	R	1.3	1.7
Radiological data collected in 2002 that was rejected								
RBT0004	HASL300	WATER	STRONTIUM-85	9.5	pCi/L	R	5.4	3.8
RBT064	HASL300	WATER	STRONTIUM-85	5.7	pCi/L	R	5.5	3.8

pCi/g - picocuries per gram
pC/L - picocuries per liter
[a] **"Qualifier"** Column:
This column lists the Paragon Analytics laboratory data qualifiers and internal validation qualifiers listed below:
R - The data are unusable. The analyte may or may not be present.

Plate

The plate is not available in electronic format.
Please email **lm.records@gjo.doe.gov** to request the plate.

Distribution

	Copies
Monica Sanchez Environmental Restoration Division U.S. Department of Energy National Nuclear Security Administration Nevada Operations Office P.O. Box 98518, M/S 505 Las Vegas, NV 89193-8518	1 (Controlled)
Bill Wilborn Environmental Restoration Division U.S. Department of Energy National Nuclear Security Administration Nevada Operations Office P.O. Box 98518, M/S 505 Las Vegas, NV 89193-8518	2 (Uncontrolled)
Jenny Chapman Desert Research Institute P.O. Box 19040, M/S 433 Las Vegas, NV 89132-0040	1 (Controlled) 2 (Uncontrolled)
Dave Stahl IT Corporation P.O. Box 93838, M/S 439 Las Vegas, NV 89193	1 (Controlled)
Rob Boehlecke IT Corporation P.O. Box 93838, M/S 439 Las Vegas, NV 89193	2 (Controlled) 3 (Uncontrolled)
Donna Stoner Colorado Department of Public Health and Environment Hazardous Materials and Waste Management Division 722 South 6th Street, Room 232 Grand Junction, CO 81501	1 (Controlled) 1 (Uncontrolled)

	Copies
Jake Jacobi Colorado Department of Public Health and Environment Laboratory and Radiation Services Division 8100 Lowry Blvd. Denver CO 80230-6928	1 (Controlled)
Randall Ferguson, C.P.G. Oil and Gas Conservation Commission 1120 Lincoln Street, Suite 801 Denver, CO 80203	1 (Controlled)
U.S. Department of Energy National Nuclear Security Administration Nevada Operations Office Technical Library P.O. Box 98518, M/S 505 Las Vegas, NV 89193-8518	1 (Uncontrolled)
U.S. Department of Energy Office of Scientific and Technical Information P.O. Box 62 Oak Ridge, TN 37831-0062	1 (Electronic Copy)
U.S. Department of Energy National Nuclear Security Administration Nevada Operations Office Public Reading Room P.O. Box 98521 Las Vegas, NV 89193-8521	1 (Uncontrolled) 1 (Controlled)