

SAMPLING AND ANALYSIS PLAN FOR THE WESTERN HOOK-OPEN SPACE SUB-AREA

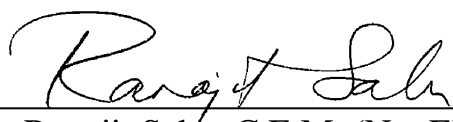
BMI COMMON AREAS (EASTSIDE) CLARK COUNTY, NEVADA

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I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.



July 7, 2009

Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2009)

Date

BRC Project Manager

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ACRONYMS AND ABBREVIATIONS

AOC3	Settlement Agreement and Administrative Order on Consent: BMI Common Areas, Phase 3
APA	Air pathway analysis
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BCL _w	Basic Comparison Level for residential tap water
BRC	Basic Remediation Company
CAMU	Corrective Action Management Unit
CAP	Corrective Action Plan
COPC	Chemical of potential concern
CSM	Conceptual site model
DAF	Dilution attenuation factor
DBCP	1,2-Dibromo-3-chloropropane
DCB	Dichlorobenzene
DQO	Data quality objective
DVSR	Data Validation Summary Report
ECI	Environmental Conditions Investigation
ERM	ERM-West, Inc.
FSSOP	Field Sampling and Standard Operating Procedures
ft/ft	foot per foot
IRM	Interim remedial measure
LBCL	Leaching-based Basic Comparison Level for protection of groundwater
MCL	Maximum contaminant level
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NDEP	Nevada Division of Environmental Protection
NFAD	No further action determination
OCP	Organochlorine pesticide
PAH	Polynuclear aromatic hydrocarbon
pCi/g	picoCuries per gram
PCB	Polychlorinated biphenyl
ppt	parts per trillion
PSQ	Principal Study Question

ACRONYMS AND ABBREVIATIONS

QA/QC	Quality Assurance/Quality Control
Qal	Quaternary alluvium
QAPP	Quality Assurance Project Plan
RBSL _{MW}	Risk-Based Screening Level for outdoor maintenance worker
RBSL _{REC}	Risk-Based Screening Level for recreational user
RIB	Rapid infiltration basin
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedure
SPLP	Synthetic precipitation leaching procedure
SRC	Site-related chemical
SVOC	Semi-volatile organic compound
TDS	Total dissolved solid
TEQ	Toxic equivalency
TPH	Total petroleum hydrocarbons
UCL	Upper confidence limit
UMCf	Upper Muddy Creek formation
USEPA	U.S. Environmental Protection Agency
VOC	Volatile organic compound
WRF	Wastewater Reclamation Facility

1.0 INTRODUCTION

Basic Remediation Company (BRC) has prepared this Sampling and Analysis Plan (SAP) for the Western Hook-Open Space sub-area.¹ The SAP describes tasks for performance of confirmation sampling of Site soils and soil vapor flux in order to obtain a no further action determination (NFAD) for this area. The term NFAD is defined in the *Settlement Agreement and Administrative Order on Consent: BMI Common Areas, Phase 3* (AOC3; Nevada Division of Environmental Protection [NDEP] 2006) in Section XVII. This revision of the SAP, Revision 3, incorporates comments received from the NDEP, dated June 2, 2009, on Revision 2 of the Western Hook-Open Space SAP, dated May 2009; comments received April 13, 2009, on Revision 1 of the Western Hook-Open Space SAP, dated March 2009; and comments received February 23, 2009, on Revision 0 of the Western Hook-Open Space SAP, dated January 2009. The NDEP comments and BRC's response to these comments are included in Appendix A. Also included in Appendix A is a redline/strikeout version of the text showing the revisions from the January 2009 version of the SAP. An electronic version of the entire report, as well as original format files (MS Word and MS Excel) of all text and tables are included in Appendix B.

The Western Hook-Open Space sub-area (hereinafter "the Site") is one of several sub-areas of the BMI Common Areas (Eastside) located in Clark County, Nevada (Figure 1). The Site encompasses an area of approximately 151 acres (Figure 2). The Site includes former ponds, ditches, and areas that were not used for any known waste disposal. This SAP relies upon information provided in the *BRC Closure Plan, BMI Common Areas, Clark County, Nevada* (BRC *et al.* 2007; hereinafter "Closure Plan"). The main text of the Closure Plan provides discussions of the following elements relative to the BMI Common Areas project as a whole:

- The project history, including cleanup goals and project objective (Closure Plan Sections 1 and 2);
- The list of site-related chemicals (Closure Plan Section 3);
- The conceptual site model (CSM) addressing potential contaminant sources, the nature and extent of chemical of potential concern (COPC) occurrence, and potential exposure pathways (Closure Plan Section 4; a CSM discussion specific to the Site is provided in Section 2 of this SAP);
- Data verification and validation procedures (Closure Plan Section 5);

¹ This sub-area is referred to as "Trails & Recreation" sub-area in the *BRC Closure Plan for the BMI Common Areas* (BRC *et al.* 2007).

- The procedures used to evaluate the usability and adequacy of data for use in the risk assessment (Closure Plan Sections 6 and 9);
- The data quality objectives (DQOs; Closure Plan Section 7; a DQO discussion specific to the Site is provided in Section 3 of this SAP);
- The remedial alternative study process for the Site (Closure Plan Section 8);
- Risk assessment procedures that will be used for Site closure (Closure Plan Section 9 for human health and Section 10 for ecological); and
- Data quality assessment (Closure Plan Section 5).

For certain areas within the BMI Common Areas, remediation is planned based on existing Site data, and will be performed prior to conducting the site characterization activities proposed under this SAP; however, none is planned for this Site other than clearing of obvious contamination (*e.g.*, burn pits, stained soil, abandoned vehicles, and other debris). These clearing activities will occur prior to implementing the procedures described in this SAP. The following data gaps associated with the existing Site characterization have been identified: several of the previous samples were composite samples; most of the previous soil samples were collected at least seven years ago; few of the previous samples have been analyzed for all of the major chemicals or chemical families and several analyses used different analytical methods than established in the current analytical program for the BMI Common Areas; no soil vapor flux samples have been collected; and spatial coverage of the Site is incomplete.

Therefore, because of these various factors, risk assessments for the Site will be conducted using the data collected as part of this SAP, which has been designed to produce data representative of the conditions to which current or future users would be exposed. The need for remediation will be primarily based on these data, which represent a more robust sampling coverage and additional media of concern beyond those assessed during the historical sampling events (*i.e.*, soil vapor flux) and can thus be more reliably used to delineate areas requiring remediation. Validated, reliable historical data will be used as appropriate to augment the dataset derived from the SAP activities.² However, because the historical data represent incomplete coverage for certain constituents and will be redundant for others after implementation of this SAP, BRC anticipates that the historical data will not generally be included in the risk assessment. However, a data usability evaluation will be conducted to determine whether any of the historical data can

² Only those historical data that are representative of the conditions to which current or future users would be exposed (*i.e.*, exclude data associated with soils subsequently removed from the Site) and pass a data usability evaluation will be included in the risk assessment for the Site.

or should be used in the risk assessment or it will be explained why the new data supplants the old data. These historical data are useful for CSM purposes and are discussed in Section 2.0.

Sampling performed as described in this SAP relies on the statistical methodologies presented in the *Statistical Methodology Report, BMI Common Areas (Eastside), Henderson, Nevada* (NewFields 2006; hereinafter “Statistical Methodology Report”). The Statistical Methodology Report describes the statistical methods that will be used to confirm the final soils closure at each of the Eastside sub-areas of the BMI Common Areas.

The SAP presents sampling procedures that will be performed to assess current conditions in soils and soil vapor flux at the Site. As described in the Closure Plan, this information will be used to determine potential impacts to future Site users from chemicals currently present in site soils. In this SAP, as recommended in the Statistical Methodology Report, soil samples will be collected throughout the Site on a systematic sampling basis, consisting of a regular 3-acre grid overlay across the property with a randomly placed sample within each grid cell to provide enough samples for completion of a statistically robust assessment of contaminant distribution, and subsequently, to provide a robust dataset upon which to perform a human health risk assessment. Additional biased sampling locations will be selected within or near small-scale contamination points of interests; including, but not limited to, previous debris locations, ponds, berm walls, and the conveyance ditches. Soil vapor flux samples will be collected from a subset of the soil sampling locations.³

1.1 PURPOSE OF THE SAP

The purpose of this SAP is to evaluate soil and soil vapor conditions (including any indirect impacts from underlying groundwater) that may have been impacted at the Site from former activities and adjoining lands. The scope of this investigation is limited to soil and soil vapor flux sampling in an effort to assess issues that might directly impact Site development potential consistent with the Closure Plan. However, the data will be used to determine any impacts to groundwater from future site uses. That is, data will be collected to evaluate the soil-to-groundwater leaching pathway. The objective of the field investigation is to identify and characterize the distribution of Site-related chemicals (SRC) such that the potential impacts from chemicals present in site soils to future Site users can be determined through risk assessment.

³ This SAP assumes that surface flux sampling will be conducted at the Site. BRC is currently undergoing a surface flux/soil gas comparison study for the project. Implementation of this SAP will utilize the recommended approach from this study. Sample locations and laboratory analyses in this SAP are not affected regardless of sampling method.

Surface and subsurface samples that will be collected are depth-discrete soil matrix samples and surface vapor flux samples. Although this SAP does include data collection for evaluating groundwater as a potential source to the vapor intrusion pathway,⁴ it does not address potential groundwater issues, which are being investigated separately by BRC pursuant to AOC3 (NDEP 2006) as part of an overall evaluation of the BMI Common Areas. The investigation is designed to provide sufficient data to support risk-based decisions (including decisions to seek an NFAD) for the Site. The NFAD for the Site will contain a deed restriction precluding potable use of groundwater beneath the Site.

⁴ The vapor intrusion pathway would only apply if structures designed for human occupancy were to be constructed on the Site; given the planned future use of the Site, this is not anticipated. However, this data can also be used to evaluate outdoor air exposures.

2.0 CONCEPTUAL SITE MODEL

The following sections provide information about the Site, previous investigations that have been conducted at the Site, interim remedial measures (IRMs) that have occurred, and the existing Site dataset. An overview of the CSM for the Site is provided in the Closure Plan. Consistent with the structure of prior SAPs, this section includes a summary of the investigations performed at the Site during the following primary project phases: prior to IRM performance (Section 2.4); during or immediately following any IRMs (Section 2.6); and subsequent to IRM performance (Section 2.7).

2.1 SITE DESCRIPTION

The Site (Figure 2) comprises approximately 151 acres that gently slope to the northeast. The western half of the Site contains a portion of the Lower Ponds (77 acres), which were once associated with historical conveyance and/or disposal of operations effluent and cooling water by companies operating at the BMI Complex. The individual ponds (typically approximately 2 to 12 acres in size) are distinct and defined by berms generally along the north, east, and west sides. In general, the berms are relatively uniformly-shaped, often with angular corners showing little evidence of erosion. The berms are typically 4 to 6 feet tall. The remaining approximately 74-acre portion of the site without ponds is vacant land, for which there are no known historical uses. As depicted on Figure 2, a portion of a former effluent conveyance ditch (the Beta Ditch) passes through the Site and a second effluent conveyance ditch (the Alpha Ditch) forms the Site's eastern boundary.

The Site was undeveloped desert land until the construction of the Lower Ponds and conveyance ditches, into which various plant wastewaters were discharged from 1942 through 1976. Since 1976, the Site has been vacant and unused.

The native soils are compacted, poorly sorted, non-plastic, light brown to red silty sand with varying amounts of gravel. Within individual Lower Ponds, surficial material consists of very fine material that grades in color from greenish-gray to light yellowish-brown; in places, the ground surface is white. This discolored material has been interpreted to be residual sediment associated with historic effluent disposal in the ponds. It may also be a result of potential evaporative deposits from the daylighting of groundwater (*i.e.*, in historical seep areas, see Section 2.3).

Exposures to current receptors (*i.e.*, trespassers/visitors, occasional on-site workers, and off-site residents) are being managed through Site access control. Under the prospective redevelopment plan, the Site will be used for public parks, with Site uses including trails, playfields, roads, and parking areas (Figure 3). The entire Site will be enhanced by restoration and redevelopment once remediation is complete. Future receptors identified as “on-site receptors” are defined as receptors located within the current Site boundaries (Figure 2), while future “off-site receptors” are those located outside the current Site boundaries. Many potential human receptors are possible at the Site in the period during and after redevelopment. The potentially exposed populations and their potential routes of exposure are discussed in Section 9 of the Closure Plan.

The current development plan for the Site is shown on Figure 3. To construct recreational facilities, the land will be cut and/or filled, paved with roads or parking areas, and nurtured with imported soils from other areas within the BMI Common Areas⁵ as needed. Figure 4 shows the current grading plan for the Site, indicating which areas will be filled and which areas will be cut.

As indicated above and shown on Figure 4, the current development plans indicate that the Site will receive a substantial amount of fill material and be developed for non-residential uses after remediation is complete. This area is not intended to and will not include habitat attractive to support native plant and wildlife populations. Based on discussions between BRC and NDEP during the Closure Plan process, it is currently the belief that these developments do not constitute suitable habitat in this sub-area or in any of the other sub-areas. Therefore, exposures to ecological receptors will be mitigated or removed (see Section 10 of the Closure Plan), and hence an ecological risk assessment will not be necessary.

Because the background general water quality (*i.e.*, high salt concentrations) of the groundwater beneath the Site and in the surrounding area is poor and because BRC will place institutional controls in the form of a deed restriction to prevent future users from utilizing groundwater beneath the Site, the use of private water wells by parks for drinking water, irrigation water, or other non-potable uses (*e.g.*, washing cars, filling swimming pools) will not occur in the post-redevelopment phase.

Although direct exposures to groundwater will not occur; indirect exposures are possible. The primary indirect exposure pathway from groundwater is the infiltration of volatile organic

⁵ Note: Imported soil data will not be included in risk assessment calculations. However, the chemical data for fill material from the Site may be useful for evaluating sub-areas to receive this fill (that is, imported fill that may be used at the Site will have been included in risk assessments for sub-areas where this fill was obtained.

compounds (VOCs) and radon from soil and groundwater to indoor and/or outdoor air. The indoor air exposure pathway is only a complete pathway if structures designed for human occupancy were to be constructed on the Site. Therefore, given the intended land use is for recreational purposes, the indoor air exposure pathway is not considered a complete pathway for this Site. In addition, residual levels of chemicals in soil may leach and impact groundwater quality beneath the Site. Collection of data to evaluate both of these migration pathways at the Site is presented in this SAP.

The Site is surrounded on most sides by lands outside the BMI Common Areas boundaries. Adjacent land uses are as follows:

- Open space (Wetlands Park) is located immediately adjacent to the north of the Site, followed by the Las Vegas Wash, which is within approximately 650 feet of the Site.
- The City of Henderson Bird Viewing Preserve, a wetlands area comprising 83 acres of individual ponds, is located immediately adjacent to the Site, to the southwest.
- The City of Henderson Wastewater Reclamation Facility (WRF), which is associated with City water treatment operations, is located immediately adjacent to the south and west of the Site. The Pittman Lateral pipeline, which forms the southern boundary of the WRF, is located approximately 900 feet south of the Site. This east-west trending subsurface feature is a major water supply conduit for the Las Vegas Valley.
- The City of Henderson northern rapid infiltration basins (RIBs), which are associated with City water treatment operations, are immediately east of the Site.

The Site is bordered to the west by the Western Hook–Development sub-area (227 acres) and to the south by the Galleria North sub-area (144 acres⁶). Chemicals detected in these sub-areas are similar to those found at the Site. The phased remediation schedule for the Eastside sub-areas calls for these sub-areas to be remediated prior to the Site. Other sub-areas to the south contain elevated chemicals in soil, and remediation of those sub-areas is scheduled to occur after remediation of the Site. However, impacts from these areas to the Site are considered negligible because dust suppression/mitigation measures and storm water pollution prevention controls will

⁶ These acreage estimates reflect a change from those presented in the Closure Plan that has resulted from the revision of site boundaries that occurred subsequent to Closure Plan finalization. The Galleria North acreage has increased from the 136 acres presented in the Closure Plan, due in large part to the incorporation of part of the Sunset North Commercial sub-area.

be implemented during remediation activities. Analytical results for the Western Hook-Development and Galleria North sub-areas are presented further in Section 2.8 below.

2.2 SURFACE WATER

Surface water flow occurs for brief periods of time during periodic precipitation events. The nature of the Lower Ponds and their construction currently serve to reduce overland transport of surface waters collected within the former Ponds area. However, the presence of the drainage ditches and the proximity of the Wash suggest the current potential for rainfall to be carried from other portions of the Site to the Wash.

After development, when the former wastewater conveyance features (*e.g.*, the Upper Pond berms and ditches) have presumably been removed, there will be a lower likelihood that surface waters generated within the Site will migrate via overland transport to the Las Vegas Wash from the Site. Storm water features as part of the future development of the Site will also reduce the potential for overland transport.

2.3 GEOLOGY/HYDROGEOLOGY

As is common throughout the Las Vegas Valley, Site soils are primarily sand and gravel, with occasional cobbles. This is consistent with the depositional environment of an alluvial fan. The Site is located on alluvial fan sediments, with a surface that slopes to the north-northeast at a gradient of approximately 0.02 foot per foot (ft/ft) towards the Las Vegas Wash. Regional drainage is generally to the east.

The uppermost strata beneath the Site consist primarily of alluvial sands and gravels derived primarily from the volcanic source rocks in the McCullough Range, as well as from the River Mountains, located to the southwest and southeast of the Site, respectively. These uppermost alluvial sediments were deposited within the last two million years and are of Quaternary age, and are thus mapped and referred to as the Quaternary alluvium (Qal; Carlsen *et al.* 1991). The Qal is typically on the order of 30 to 50 feet thick at the BMI Common Areas (Eastside) with variations due, in part, to the non-uniform contact between the Qal and the underlying Upper Muddy Creek Formation (UMCf). At the Site; however, the Qal thickness is less and the UMCf is near the surface, and may in fact be at the surface in some areas of the Site.

The UMCf underlies the Qal. The Muddy Creek formation, of which the UMCf is the uppermost part, is a lacustrine deposition from the Tertiary Age, and it underlies much of the Las Vegas

Valley. It is more than 2,000 feet thick in places. The lithology of the UMCf underlying the Site is typically fine-grained (sandy silt and clayey silt), although layers with increased sand content are sporadically encountered. As indicated above, the UMCf is near the surface, and may in fact be at the surface in some areas of the Site. Characterization of soil properties in both Western Hook (Open Space and Development) sub-areas is currently on-going and should provide data that will better determine naturally-occurring arsenic conditions in this portion of the project.

Because background concentrations of arsenic in the UMCf are higher than in the Qal (*e.g.*, the maximum arsenic concentration in the UMCf background dataset is 24.8 mg/kg versus a maximum arsenic concentration of 7.2 mg/kg in the shallow soil [Qal] background dataset), this likely explains the higher arsenic concentrations found across the Site discussed in Section 2.8. These UMCf materials have typically low permeability, with hydraulic conductivities on the order of 10^{-6} to 10^{-8} centimeters per second (Weston 1993). The UMCf in the vicinity of the Site was encountered to the maximum explored depth of 400 feet below ground surface (bgs). Lithologic cross-sections using Site-specific stratigraphic information are shown on Figures 5 and 6.

Two distinct, laterally continuous water-bearing zones are present within the upper 400 feet of the Site subsurface: (1) an upper, unconfined water-bearing zone primarily within the Qal (referred to as the Shallow Zone); and (2) a deep, confined water-bearing zone that occurs in a sandier depth interval within the silts of the deeper UMCf (referred to as the Deep Zone). Between these two distinct water-bearing zones, a series of saturated sand stringers were sporadically and unpredictably encountered during drilling (referred to as the Middle Zone).

The Shallow Zone is an unconfined, shallower, water-bearing zone that occurs across the BMI Common Areas. Within the Site boundaries, water in the Shallow Zone occurs in the Qal. The water surface in the Shallow Zone generally follows topography, with the water surface sloping towards the Las Vegas Wash. According to recent groundwater monitoring performed in April-May 2008 (BRC and MWH 2008), the depth from the surface to first groundwater at the Site ranges from approximately 25 feet bgs in the southern portion of the Site to approximately five feet bgs in the northern portion of the Site. Wells completed in the Shallow Zone are not highly productive, with sustainable flows typically less than five gallons per minute. Chemical

occurrence within this water-bearing zone, based on recent monitoring data associated with wells installed within and in the vicinity of the Site, is discussed in Section 2.9.⁷

Groundwater seeps currently exist at various locations within the BMI Common Areas near the Las Vegas Wash. No seeps currently exist within the Western Hook-Open Space sub-area; however, they may have occurred in the past. An evaluation of historical aerial photos taken between 1964 and 1970 indicates that seeps may have historically appeared in the northern non-pond portions of the Site, at the southernmost portion of the Site, and at nearby off-site locations (see Figure 7, an aerial photo from 1969 showing the seep areas within the Site) in association with past effluent infiltration at the Eastside ponds and with infiltration of municipal wastewater at the southern RIBs. Evidence of seeps was not observed in aerial photographs after 1972. The extent to which these former seeps historically affected contaminant transport (*e.g.*, by means of enhanced surface water transport to the Wash or upward migration into overlying soils) is unknown.

In addition, historical aerial photographs depict the presence of an east-west trending linear feature north of the ponds areas and roughly coincident with the northern Site boundary. This feature is shown on Figure 7. The purpose of and historical uses of this feature are unknown. Based on evidence from historical aerial photographs (*i.e.*, darkened coloration suggesting the presence of liquids), the period of use of the unknown linear feature north of the ponds appears to coincide with the time frame of historical uses of the Site.

2.4 INVESTIGATIONS PRIOR TO INTERIM REMEDIAL MEASURE PERFORMANCE

Shallow soil samples were collected within the Site prior to 2001 (*i.e.*, initiation of the IRM) during the following six separate events (see Figure 2 for sample locations; sample locations are differentiated between pre- and post-IRM; the results of these field sampling events are summarized in the database excerpt provided in Appendix B):

- The BMI Common Areas Environmental Conditions Investigation (ECI) conducted during March and April 1996 (dataset 1a). The soil investigation activities were performed in

⁷ Chemical occurrence in both the shallow and deep water-bearing zones beneath the Eastside and CAMU areas is currently being characterized under a process separate from the Closure Plan process under which this SAP has been prepared, which focuses on site soils. This SAP summarizes chemical occurrence trends in the shallow water-bearing zone, which is more likely to affect potential users under current and future land uses. A more detailed presentation of chemical occurrence patterns within both zones will be provided upon completion of the on-going groundwater investigation, and the CSM for the Eastside and CAMU areas will be updated accordingly.

accordance with a work plan approved by NDEP in February 1996 (ERM-West, Inc. [ERM] 1996a). The soil sampling results for the investigation activities were previously presented in the ECI report (ERM 1996b), which was approved by NDEP in March 1997. Data validation results are presented in the Data Validation Summary Report (DVSR) for dataset 1a (ERM 2006a), which was approved by NDEP on September 12, 2006.

- Additional soil sampling conducted in May 1999 to establish the extent of antimony, manganese, thallium, and perchlorate occurrence in Site soils (dataset 6c). These data were not collected under a formal NDEP-approved work plan. The results were previously summarized in the IRM Completion Report (ERM 2000), which has not been approved by NDEP. Data validation results are presented in the DVSR for dataset 6c (ERM 2006b), which was approved by NDEP on October 10, 2006.
- Additional soil sampling conducted in February 2000 to assess the extent of various compound classes in soils in the Lower Ponds (dataset 7b). These data were not collected under a formal NDEP-approved work plan. The results were previously summarized in the IRM Completion Report (ERM 2000), which has not been approved by NDEP. Data validation results are presented in the DVSR for dataset 7b (ERM 2006c), which was approved by NDEP on September 13, 2006.
- Discrete/composite soil investigation conducted in July 2000 (dataset 8a). The soil investigation activities were performed in accordance with ERM's work plan submitted in July 2000 and approved by NDEP on July 18, 2000. The soil sampling results for the investigation activities were previously presented in letters to NDEP dated August 11, 2000 (soil sampling results) and August 28, 2000 (statistical analysis of results); these letters have not been approved by NDEP. Data validation results are presented in the DVSR for dataset 8a (ERM 2006d), which was approved by NDEP on October 10, 2006.
- Additional soil sampling conducted in February and March 2000 within the northernmost Upper and Lower ponds (dataset 8b). These data were not collected under a formal NDEP-approved work plan. The results were previously summarized in the IRM Completion Report (ERM 2000), which has not been approved by NDEP. Data validation results are presented in the DVSR for dataset 8b (ERM 2006e), which was approved by NDEP on September 14, 2006.
- Supplemental soil investigation conducted in October 2000 (dataset 8c) in the Northwestern Ditch, Western Ditch, and Pond PLE-09. These data were not collected under a formal

NDEP-approved work plan. Data validation results are presented in the DVSR for dataset 8c (ERM 2006f), which was approved by NDEP on October 26, 2006.

During these investigations, soil samples at various depths were collected and analyzed for VOCs, semi-volatile organic compounds (SVOCs), polynuclear aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs), dioxins/furans, metals, perchlorate, radionuclides, and/or asbestos.

The following compounds were detected in soils collected during the sampling events listed above at concentrations greater than the following comparison levels:

- Risk-based screening levels, (RBSLs) for a recreational user under an Open Space land use scenario (RBSL_{REC}) as presented in the *Technical Memorandum – Development of Recreational Risk-Based Screening Levels (RBSLs), BMI Common Areas (Eastside) Site, Clark County, Nevada* (BRC 2009 [In Review]), and in the *BRC Quality Assurance Project Plan* (QAPP; BRC and ERM 2009);
- RBSLs for an outdoor maintenance worker under an Open Space land use scenario (RBSL_{MW}) as presented in the project QAPP (BRC and ERM 2009); or
- NDEP Leaching-based Basic Comparison Levels for the protection of groundwater (LBCL; dilution attenuation factor [DAF] = 1) (NDEP 2009a):

Location	Site-Related Chemical	RBSL _{REC} (mg/kg)	RBSL _{MW} (mg/kg)	LBCL (mg/kg)	Maximum Background Detection ⁸ (mg/kg)	Maximum Detection (mg/kg)
PLG-01	Arsenic	36	4.2	1	7.2	12
	Barium	100,000	100,000	82	836	180*
	Chromium	100,000	450	2	16.7	20
	Manganese	93,000	34,000	3.26	1,090	620*
	Nickel	45,000	23,000	7	30	13*
	alpha-BHC	3.3	0.4	0.00003	--	0.0024
	beta-BHC	12	1.4	0.0001	--	0.023
PLG-02	Arsenic	36	4.2	1	7.2	13
	Barium	100,000	100,000	82	836	150*
	Chromium	100,000	450	2	16.7	15*
	Manganese	93,000	34,000	3.26	1,090	570*
	Nickel	45,000	23,000	7	30	16*

⁸ Note that the maximum background concentration is from the 2005 shallow soil background dataset. As indicated in Section 2.3, the UMCf background dataset may also be applicable for the Site but this is not yet conclusive and is therefore not included as a comparison level in this report.

Location	Site-Related Chemical	RBSL _{REC} (mg/kg)	RBSL _{MW} (mg/kg)	LBCL (mg/kg)	Maximum Background Detection ⁸ (mg/kg)	Maximum Detection (mg/kg)
PLG-04	Aluminum	100,000	100,000	75	15,300	12,000*
	Arsenic	36	4.2	1	7.2	72
	Iron	100,000	100,000	7.56	19,700	15,000*
	Magnesium	--	--	649	17,500	17,000*
	Manganese	93,000	34,000	3.26	1,090	1,300
	beta-BHC	12	1.4	0.0001	--	0.018
PLG-05	Aluminum	100,000	100,000	75	15,300	9,400*
	Antimony	910	450	0.3	0.5	0.55
	Arsenic	36	4.2	1	7.2	39
	Barium	100,000	100,000	82	836	130*
	Chromium	100,000	450	2	16.7	13*
	Iron	100,000	100,000	7.56	19,700	16,000*
	Magnesium	--	--	649	17,500	23,000
	Manganese	93,000	34,000	3.26	1,090	1,300
	Molybdenum	11,000	5,700	3.64	2	5
	Nickel	45,000	23,000	7	30	9.4*
	Selenium	11,000	5,700	0.3	0.6	0.65
	alpha-BHC	3.3	0.4	0.00003	--	0.011
	beta-BHC	12	1.4	0.0001	--	0.016
	Radium-226	0.77	0.025	0.0161	2.36	0.92*
	Radium-228	1.3	0.045	0.0595	2.94	0.91*
	Thorium-228	0.84	0.028	3.3	2.28	1.94*
	Thorium-230	160	8.5	0.303	3.01	2.07*
	Thorium-232	140	7.6	0.303	2.23	1.5*
	Uranium-233/234	12	0.39	--	2.84	2.19*
	Uranium-235/236	200	11	--	0.21	0.058*
	Uranium-238	43	1.6	--	2.37	1.72*
PLH-01	Arsenic	36	4.2	1	7.2	11
	Barium	100,000	100,000	82	836	180*
	Chromium	100,000	450	2	16.7	12*
	alpha-BHC	3.3	0.4	0.00003	--	0.0045
	beta-BHC	12	1.4	0.0001	--	0.035
PLH-02	Arsenic	36	4.2	1	7.2	14
	Barium	100,000	100,000	82	836	110*
	Chromium	100,000	450	2	16.7	14*
	Manganese	93,000	34,000	3.26	1,090	410*
	Nickel	45,000	23,000	7	30	12*
	beta-BHC	12	1.4	0.0001	--	0.014
PLH-03	Aluminum	100,000	100,000	75	15,300	14,000*
	Arsenic	36	4.2	1	7.2	41
	Barium	100,000	100,000	82	836	170*
	Chromium	100,000	450	2	16.7	18
	Iron	100,000	100,000	7.56	19,700	116,000
	Magnesium	--	--	649	17,500	23,000
	Manganese	93,000	34,000	3.26	1,090	910*
	Nickel	45,000	23,000	7	30	13*
	beta-BHC	12	1.4	0.0001	--	0.014

Location	Site-Related Chemical	RBSL _{REC} (mg/kg)	RBSL _{MW} (mg/kg)	LBCL (mg/kg)	Maximum Background Detection ⁸ (mg/kg)	Maximum Detection (mg/kg)
PLH-04	Arsenic	36	4.2	1	7.2	5.2*
	Chromium	100,000	450	2	16.7	2.9*
	Selenium	11,000	5,700	0.3	0.6	0.76
	alpha-BHC	3.3	0.4	0.00003	--	0.0096
	beta-BHC	12	1.4	0.0001	--	0.0049
PLI-01	Arsenic	36	4.2	1	7.2	4.5*
	Barium	100,000	100,000	82	836	240*
	Chromium	100,000	450	2	16.7	12*
	Manganese	93,000	34,000	3.26	1,090	300*
	Nickel	45,000	23,000	7	30	12*
PLI-02	Aluminum	100,000	100,000	75	15,300	8,700*
	Arsenic	36	4.2	1	7.2	17
	Chromium	100,000	450	2	16.7	16*
	Iron	100,000	100,000	7.56	19,700	14,000*
	Magnesium	--	--	649	17,500	11,000*
	Manganese	93,000	34,000	3.26	1,090	1,100
	Mercury	680	340	0.1	0.11	0.15
	Nickel	45,000	23,000	7	30	9.4*
	beta-BHC	12	1.4	0.0001	--	0.0061
PLI-03	Arsenic	36	4.2	1	7.2	19
	Barium	100,000	100,000	82	836	260*
	Chromium	100,000	450	2	16.7	18
	Manganese	93,000	34,000	3.26	1,090	290*
	Nickel	45,000	23,000	7	30	14*
	alpha-BHC	3.3	0.4	0.00003	--	0.01
PLJ-01	Arsenic	36	4.2	1	7.2	28
	Barium	100,000	100,000	82	836	170*
	Chromium	100,000	450	2	16.7	13*
	alpha-BHC	3.3	0.4	0.00003	--	0.011
	beta-BHC	12	1.4	0.0001	--	0.027
PLJ-02	Antimony	910	450	0.3	0.5	0.65
	Arsenic	36	4.2	1	7.2	37
	Chromium	100,000	450	2	16.7	19
	Manganese	93,000	34,000	3.26	1,090	7,200
	Nickel	45,000	23,000	7	30	9.5*
	Perchlorate	1,600	790	--	--	830
	alpha-BHC	3.3	0.4	0.00003	--	0.058
	beta-BHC	12	1.4	0.0001	--	0.07
	Radium-226	0.77	0.025	0.0161	2.36	0.69*
	Radium-228	1.3	0.045	0.0595	2.94	0.55*
	Thorium-228	0.84	0.028	3.3	2.28	1.16*
	Thorium-230	160	8.5	0.303	3.01	0.69*
	Thorium-232	140	7.6	0.303	2.23	0.87*
	Uranium-233/234	12	0.39	--	2.84	3.39
	Uranium-235/236	200	11	--	0.21	0.05*
	Uranium-238	43	1.6	--	2.37	2.5

Location	Site-Related Chemical	RBSL _{REC} (mg/kg)	RBSL _{MW} (mg/kg)	LBCL (mg/kg)	Maximum Background Detection ⁸ (mg/kg)	Maximum Detection (mg/kg)
Alpha Ditch	Arsenic	36	4.2	1	7.2	13
	Barium	100,000	100,000	82	836	300*
	Cadmium	1,100	560	0.4	0.16	0.57
	Chromium	100,000	450	2	16.7	16*
	Selenium	11,000	5,700	0.3	0.6	1
Beta Ditch	Arsenic	36	4.2	1	7.2	16
	Barium	100,000	100,000	82	836	390*
	Cadmium	1,100	560	0.4	0.16	0.54
	Chromium	100,000	450	2	16.7	14.1*
	alpha-BHC	3.3	0.4	0.00003	--	0.00069
	beta-BHC	12	1.4	0.0001	--	0.0074

mg/kg = Milligrams per kilogram

Note: Only those compounds with comparison level exceedances are included in the table above.

* Within range of background concentrations.

As indicated above, all of the barium, nickel, and radionuclide exceedances and most of the chromium exceedances were within the range of background concentrations. Ultimately, it was concluded that remediation was warranted for Site pond PLG-05 and the western portion of PLG-04 to address the presence of arsenic, as well as asbestos, which was observed in surface soils in these two ponds.⁹

2.5 INTERIM REMEDIAL MEASURES

To expedite restoration of the BMI Common Areas, BRC elected to perform an IRM for certain Lower Ponds. This IRM was performed following the procedures specified in the NDEP-approved *Sunset North Area IRM Workplan* (ERM 1999). The IRM work plan was approved by NDEP on August 27, 1999. IRM activities consisted of excavation of the impacted shallow soils, transportation to a secured location within the Upper Ponds, and treatment to prevent generation of wind-blown dusts and runoff.

The primary phase of soil excavation was performed between October 1999 and May 2000, and addressed ponds in the Western Hook-Development, Sunset North Commercial and Upper Ponds sub-areas. Results of the IRM were presented in the IRM completion report (ERM 2000); this report has not been approved by NDEP. Subsequently, after completion of this initial IRM phase,

⁹ The results of asbestos analyses conducted on samples collected from the Site prior to this SAP are not suitable for risk assessment nor site characterization purposes, and are not included in this report. Excavation of asbestos-containing soils was based on the visual observation of clumps of suspect asbestos containing materials (origin unknown) in the soils.

based on sampling results that indicated the presence of elevated concentrations of arsenic and visual evidence of asbestos in the soils, additional surface soil excavation was performed in additional Lower Ponds, specifically, PLG-04, PLG-05 within the Site and PLG-06 within the Western Hook-Development sub-area. This excavation work followed the procedures specified in the IRM work plan, but was not performed in accordance with an NDEP-approved work plan specific to those three ponds. The areas of soil removal within the Site are shown on Figure 2.

In addition, in 2007 BRC conducted a broad-scale removal of tamarisk plants in the Site; evidence of the ground surface disturbance from those plant removal activities can be seen on Figure 2. These tamarisk removal efforts covered an area of approximately 98 acres and involved the removal of minimal amounts of site soil incorporated in the plant roots.

2.6 INTERIM REMEDIAL MEASURE-RELATED CONFIRMATION SAMPLING

Recognizing that a significant area-wide soil sampling event was to be performed shortly after the soil removal efforts in ponds PLG-04 and PLG-05 were completed (see following section), no confirmation samples were collected in these areas. Based on those area-wide sampling data, SRC concentrations in Site soils were reduced as follows:

Pond ID	Site-Related Chemical	Pre-IRM Maximum Detection (mg/kg)	Post-IRM Maximum Detection (mg/kg)
PLG-04 (post-IRM samples PRNSNP-17 and -30C)	Arsenic	72	20.4
	Manganese	1,300	554
	beta-BHC	0.018	0.012
PLG-05 (post-IRM sample PRNSNP-29C)	Antimony	0.55	--
	Arsenic	39	19.1
	Magnesium	23,000	16,800
	Manganese	1,300	181
	Molybdenum	5	0.3
	Selenium	0.65	0.12
	alpha-BHC	0.011	ND
	beta-BHC	0.016	ND

Note: Results summarized only for those compounds noted in the prior section as exceeding comparison levels and outside the range of background concentrations.

2.7 INVESTIGATIONS SUBSEQUENT TO INTERIM REMEDIAL MEASURE

Shallow soil samples were collected within the Site after conducting the soil removal activities in PLG-04 and PLG-05 (*i.e.*, 2001 and later) during the following three separate events (see Figure 2 for sample locations; sample locations are differentiated between pre- and post-IRM;

the results of these field sampling events are summarized in the database excerpt provided in Appendix B):

- Supplemental soil investigation conducted in May/June 2001 (dataset 20c). These data were not collected under a formal NDEP-approved work plan. Data validation results are presented in the DVSR for dataset 20c (ERM 2007), which was approved by NDEP on February 5, 2007.
- Discussions between BRC and NDEP after the unusually heavy rainstorms of 2004 resulted in the decision to collect surface soil samples at three locations where the Alpha Ditch joins the City of Henderson. Mr. Todd Croft of NDEP visited the Site with a representative of BRC in order to determine the specific locations where the three surface soil samples should be collected. BRC conducted surface soil sampling at each of the locations on March 29, 2005. Data validation results are presented in the DVSR for dataset 32 (MWH 2006a), which was approved by NDEP on September 26, 2006.
- Waste characterization conducted in July and August 2006 (dataset 39). The soil investigation activities were performed in accordance with BRC's SAP submitted on June 29, 2006, and approved by NDEP in July 2006. The soil sampling results for the investigation activities were previously presented in the *Remedial Action Plan* (RAP; BRC 2007), which was approved by NDEP on September 24, 2007. Data validation results are presented in the DVSR for dataset 39 (MWH 2006b), which was approved by NDEP on November 3, 2006.

During these investigations, soil samples at various depths were collected and analyzed for alcohols, aldehydes, organic acids, dioxins/furans, VOCs, SVOCs, PAHs, OCPs, organophosphorus pesticides, herbicides, PCBs, metals, perchlorate, radionuclides, and/or asbestos.

2.8 CURRENT CHEMICAL DISTRIBUTION WITHIN SOILS

A summary of historic soil chemical data from surface to 10 feet bgs is presented in Table 1. Compound-specific historical sampling results collected from the Site are presented in

Appendix B, Tables B-1 through B-11, and included electronically in Appendix B.¹⁰ Sample locations are shown on Figure 2.

Figures showing the assumed current distribution of various representative chemicals at the Site are presented in Appendix C. SRCs were generally selected for graphical depictions if (1) a sufficient number of analyses for that constituent were performed; (2) multiple RBSL exceedances were observed for that constituent at concentrations in excess of background concentrations; and/or (3) an appreciable number of LBCL exceedances were observed for that constituent at concentrations in excess of background concentrations. For OCPs and radionuclides, a single representative constituent was selected for graphical displays. Using these criteria, chemical occurrence figures were prepared for the following constituents, which are discussed in greater detail below along with all constituents reported at concentrations in excess of their RBSL or LBCL:

- Arsenic (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-1 and C-2, respectively);
- Cadmium (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-3 and C-4, respectively);
- Chromium (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-5 and C-6, respectively);
- Perchlorate (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-7 and C-8, respectively);
- beta-BHC (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-9 and C-10, respectively);
- TCDD TEQ (0 to 2 feet bgs - on Figure C-11); and
- Radium-226 (0 to 2 feet bgs - on Figure C-12).

These figures also include samples within 1,000 feet of the Site from the adjacent Galleria North and Western Hook-Development sub-areas, as well as the City of Henderson WRF, to provide information on the current upgradient, downgradient, and cross-gradient conditions.

Unless otherwise noted, to assess the potential threat to human health, chemical detections were compared to the Open Space land use scenario RBSLs (both the RBSL_{REC} and the RBSL_{MW}).¹¹ In

¹⁰ In most cases, the sample nomenclature for samples collected within the Lower Ponds is consistent with the pond IDs – for example, a sample collected from Lower Pond row J, the first pond to the west, at 1 foot bgs was historically assigned a sample ID of “PLJ-01-1”. The pond rows and individual ponds within them are labeled on Figure 2. In cases where a location was outside the former Ponds or where this nomenclature convention was not followed (*i.e.*, PRNSNP-17); when such borings are noted in the text, the Pond locations or general location areas are provided for ease of reference. All boring locations are shown on Figure 2.

addition, to assess the potential for impacts to groundwater quality, chemical detections at the Site were also compared to the LBCL established for each chemical. However, it should be noted that the range of background concentrations for certain constituents are appreciably higher than their RBSLs and/or LBCL; therefore, comparison to background concentrations is more appropriate for these constituents than using the RBSLs or LBCL as a point of comparison. Chemical occurrence patterns for the chemicals detected at concentrations in excess of comparison levels, in samples collected from surface to 10 feet bgs, are provided below.¹²

Aluminum. Aluminum was detected in all 61 samples (47 surface and 14 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. These detections were all lower than the 100,000 mg/kg RBSL_{REC} and RBSL_{MW}, but exceeded the 75 mg/kg LBCL. All of the detections were lower than the maximum background concentration of 15,300 mg/kg.

Antimony. Of the 55 samples (37 surface and 18 subsurface samples, Table B-1) reflecting current conditions in which antimony was analyzed, it was detected in only one sample (0.65 mg/kg in a surface soil sample from PLJ-02). This detection was lower than the 910 mg/kg RBSL_{REC} and 450 mg/kg RBSL_{MW}, but exceeded the 0.3 mg/kg LBCL. In addition, this detection was higher than the range of background concentrations (maximum background concentration of 0.5 mg/kg). It should be noted that the standard reporting limits employed during the historical sampling events are higher than the LBCL, and it is unknown whether antimony is also present in those samples at concentrations in excess of the LBCL. The reporting limits were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported.

Arsenic. Of the 100 samples reflecting current conditions in which arsenic was analyzed (70 surface and 30 subsurface samples, Table B-1); arsenic was detected in approximately 94 percent. All but two of the detections were lower than the 36 mg/kg RBSL_{REC}; these two exceedances were associated with surface soils samples collected from former ponds PLH-03 (41 mg/kg) and PLJ-02 (37 mg/kg). The majority of the detections were higher than the 4.2 mg/kg RBSL_{MW} (76 detections) and the 1 mg/kg LBCL (92 detections).

¹¹ Here and afterwards in this SAP, when the term “Open Space land use scenario RBSL” is used, it refers to both the RBSL_{REC} and the RBSL_{MW} comparison levels in general. If the subject text refers specifically to the RBSL determined for either the park user or maintenance worker receptor under the recreational land use scenario, the applicable RBSL is identified.

¹² For all inorganic constituents in this section, unless the number of comparison level exceedances was too large (i.e., more than 20, such as arsenic), samples locations associated with these exceedances are listed in the text. For metals other than arsenic with many comparison level exceedances, the lists within the body of this section focus on those exceedances that are higher than the range of background concentrations.

Sixty-four samples had reported arsenic concentrations in excess of the maximum shallow soil background level¹³ (7.2 mg/kg; from BRC/TIMET 2007). These samples were associated with the former ponds and ditches, and with the non-pond areas in the northern portion of the Site (maximum detection 41 mg/kg, in pond PLH-03), and with surface and subsurface samples. Also, as noted in Section 2.3, the UMCf may be near or at the surface in some areas of the Site. Because background concentrations of arsenic in the UMCf are higher than in the Qal (*e.g.*, the maximum arsenic concentration in the UMCf background dataset is 24.8 mg/kg versus a maximum arsenic concentration of 7.2 mg/kg in the shallow soil [Qal] background dataset), this may explain the higher arsenic concentrations found across the Site. Seven results were higher than the maximum arsenic concentration in the UMCf background dataset. These seven exceedances are associated with the following locations:

- Pond PLJ-01 at 1 feet bgs (28 mg/kg);
- Pond PLJ-02 at 1 feet bgs (37 mg/kg);
- Pond PLH-04 (sample ID PRNSNP-21) at 0 feet bgs (33.7 mg/kg); and
- Pond PLH-03 (sample IDs PLH-03SCD, PLH-03SCOM, PLH--03PA-1, and PLH-03SED) at 1 feet bgs (41, 35, 28, and 27 mg/kg, respectively).

The distribution of arsenic for soil samples collected in the surface soils and the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-1 and C-2, respectively.

Barium. Barium was detected in all of the 80 samples reflecting current conditions in which barium was analyzed (50 surface and 30 subsurface samples, Table B-1). None of the detections were higher than the 100,000 mg/kg RBSL_{REC} and RBSL_{MW}, but 64 exceeded the 82 mg/kg LBCL. However, all of the detections were within the range of background concentrations (maximum background concentration of 836 mg/kg).

Cadmium. Of the 96 samples reflecting current conditions in which cadmium was analyzed (67 surface and 29 subsurface samples, Table B-1); it was detected in approximately 45 percent. None of the detections were higher than the 1,100 mg/kg RBSL_{REC} or the 560 mg/kg RBSL_{MW}, but the following five results slightly exceeded the 0.4 mg/kg LBCL:

¹³ These exceedances are too numerous to list; the reader is referred to Table B-1.

- Alpha Ditch location ADB-11 at 1 and 5 feet bgs (0.41 mg/kg and 0.46 mg/kg, respectively);
- Alpha Ditch location ADB-12 at 1 and 5 feet bgs (0.57 mg/kg and 0.54 mg/kg, respectively); and
- Beta Ditch location BDB-21 at 5 feet bgs (0.54 mg/kg).

These five samples were also higher than the range of background concentrations (maximum background concentration of 0.16 mg/kg). It should be noted that the standard reporting limits employed during the historical sampling events are slightly higher than the LBCL, and it is unknown whether cadmium is also present in those samples at concentrations in excess of the LBCL. The reporting limits were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. The distribution of cadmium for soil samples collected in the surface soils and the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-3 and C-4, respectively.

Chromium. Chromium was detected in all of the 82 samples reflecting current conditions in which it was analyzed (52 surface and 30 subsurface samples, Table B-1). None of the detections were higher than the 100,000 mg/kg RBSL_{REC} and 450 mg/kg RBSL_{MW}; however, all but three of the detections were higher than the 2 mg/kg LBCL. The majority of these detections were within the range of background concentrations (16.7 mg/kg maximum background detection); however, 14 results were higher than background. These 14 exceedances are associated with the following locations:

- Pond PLG-01 at 5 feet bgs (20 mg/kg);
- Pond PLH-03 at 5 feet bgs (18 mg/kg);
- Pond PLH-04 (sample ID PRNSNP-21) at 0 feet bgs (17.4 mg/kg);
- Pond PLI-03, four samples at 0-1 foot bgs (17, 18, 23, and 20.1 mg/kg [sample ID PRNSNP-25]) and one sample at 4 feet bgs (sample ID PRNSNP-25; 17.5 mg/kg);
- Pond PLJ-02 at 1 foot bgs (19 mg/kg);
- The non-pond area in the northernmost portion of the Site – locations PRNBA-01 (0 feet bgs), PRNBA-03 (4 feet bgs), PRNBA-07 (4 feet bgs), and PRNU-02 (9 feet bgs) (detections of 18.2, 31.1, 17.9, and 19.6 mg/kg, respectively); and

- The non-pond area in the eastern half of the Site – location PREU-01 at 1 foot bgs (25 mg/kg).

As seen from the above bullets, these concentrations are relatively close to background concentrations (maximum reported detection of 31.1 mg/kg at PRNBA-03, and all but two detections less than 25 mg/kg). The distribution of chromium for soil samples collected in the surface soils and the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-5 and C-6, respectively.

Iron. Iron was detected in all of the 61 samples reflecting current conditions in which it was analyzed (47 surface and 14 subsurface samples, Table B-1). Of these detections, one (116,000 mg/kg from PLH-03 at 1 foot bgs) was higher than the 100,000 mg/kg RBSL_{REC} and RBSL_{MW}. All of the detections were higher than the 7.6 mg/kg LBCL. However, only four detections were higher than the maximum background concentration of 19,700 mg/kg. These exceedances were associated with the following locations:

- A surface sample in PLH-01 (sample ID PRNBA-07; 20,900 mg/kg);
- PLH-03 at 1 foot bgs (116,000 mg/kg); and
- Surface soil samples collected from non-pond areas to the north and east of the former ponds (PRNBA-04 at 21,400 mg/kg and PREU-04 at 21,600 mg/kg).

Magnesium. Magnesium was detected in all 61 samples (47 surface and 14 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. Open Space land use scenario RBSLs have not been established for this constituent; all of the detections exceeded the 649 mg/kg LBCL. However, all but four of these detections were lower than the maximum background concentration of 17,500 mg/kg. The four background exceedances were associated with samples collected from the following locations:

- PLG-03 in surface soil (sample ID PRNBA-09) (18,500 mg/kg); and
- PLH-03 in surface soil (sample ID PRNBA-06; 19,000 mg/kg) and at 1 foot bgs (19,000 mg/kg and 23,000 mg/kg)

Manganese. Manganese was detected in all 77 samples (59 surface and 18 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. These detections were all lower than the 93,000 mg/kg RBSL_{REC} and the 34,000 mg/kg RBSL_{MW}. All but one detection exceeded the 3.3 mg/kg LBCL. However, the majority of these detections were lower than the

maximum background concentration of 1,090 mg/kg. The six background exceedances were associated with samples collected from the following locations:

- PLG-04 in surface soil (PRNSNP-19) and at 1 foot bgs (5,320 mg/kg and 1,100 mg/kg, respectively);
- PLI-02 at 1 foot bgs (1,100 mg/kg);
- PLI-03 (sample ID PRNBA-05) (surface soil sample, 1,380 mg/kg);
- PLJ-02 at 1 foot bgs (7,200 mg/kg);
- The non-pond area immediately north of the former ponds (surface soil sample at location PRNBA-02 – 1,180 mg/kg)

Mercury. Of the 80 samples reflecting current conditions in which mercury was analyzed (50 surface and 30 subsurface samples, Table B-1); it was detected in approximately 23 percent. None of these detections exceeded the 680 mg/kg RBSL_{REC} or the 340 mg/kg RBSL_{MW}; however, one detection (0.15 mg/kg in surface soil sample PLI-02PA-1) was slightly higher than the 0.1 mg/kg LBCL. This detection was also higher than the range of background concentrations (maximum background concentration of 0.11 mg/kg). The reporting limits were generally sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs or LBCL, if present, would have been reported.

Molybdenum. Molybdenum was detected in 67 percent of the 61 samples (47 surface and 14 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. These detections were all lower than the 11,000 mg/kg RBSL_{REC} and the 5,700 mg/kg RBSL_{MW}, and all but one of the detections were lower than the 3.6 mg/kg LBCL. That exceedance (5.1 mg/kg) was associated with a sample collected from immediately north of the former ponds (sample ID PRNBA-02). This detection was also higher than the maximum background concentration of 2 mg/kg. It should be noted that the standard reporting limits employed during the historical sampling events are slightly higher than the LBCL, and it is unknown whether molybdenum is also present in those samples at concentrations in excess of the LBCL. The reporting limits were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported.

Nickel. Nickel was detected in all 55 of the samples reflecting current conditions in which it was analyzed (37 surface and 18 subsurface samples, Table B-1). None of these detections exceeded

the 45,000 mg/kg RBSL_{REC} or the 23,000 mg/kg RBSL_{MW}; however, the majority were higher than the 7 mg/kg LBCL (maximum detection 23.1 mg/kg in sample PRMBA-03 [4 feet bgs]). All of these detections were lower than the maximum background concentration of 30 mg/kg.

Selenium. Of the 100 samples reflecting current conditions in which it was analyzed (70 surface and 30 subsurface samples, Table B-1); selenium was reported in approximately 35 percent. None of the detections were higher than the 11,000 mg/kg RBSL_{REC} or the 5,700 mg/kg RBSL_{REC}; however, 23 of the detections were higher than the 0.3 mg/kg LBCL. The majority of the detections were within the range of background concentrations; however, seven results were higher than the 0.6 mg/kg maximum background concentration. These seven exceedances are associated with the following locations:

- Pond PLH-04 at 1 foot bgs (0.76 mg/kg);
- Pond PLG-04 at 0 feet bgs (sample PRNSNP-19; 0.64 mg/kg);
- The non-pond area in the northernmost portion of the Site – locations PRNBA-08 at 0 feet bgs (0.63 mg/kg) and PREU-05 at depths of 0 feet bgs, 4 feet bgs, and 9 feet bgs (0.78, 0.77, and 0.61 mg/kg, respectively); and
- The Alpha Ditch – location ADB-11 at 5 feet bgs (1 mg/kg).

As seen from the above bullets, these concentrations are close to the range of background concentrations (maximum reported detection of 1 mg/kg at ADB-11 as compared to the 0.6 mg/kg maximum background concentration). It should be noted that the standard reporting limits employed during the historical sampling events are higher than the LBCL (and the background range in some cases), and it is unknown whether selenium is also present in those samples at concentrations in excess of the LBCL (or background, in some cases). The reporting limits were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported.

Perchlorate. Of the 76 samples reflecting current conditions in which it was analyzed (57 surface and 19 subsurface samples, Table B-1); perchlorate was reported in approximately 93 percent. None of the detections were higher than the 1,600 mg/kg RBSL_{REC}; however, one detection was higher than the 790 mg/kg RBSL_{MW}. An LBCL has not been established for perchlorate. The RBSL_{MW} exceedance was associated with a surface soil sample collected from pond PLJ-02 (830 mg/kg). The distribution of perchlorate for soil samples collected in the surface soils and

the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-7 and C-8, respectively.

Other Inorganics. As seen in Table 1 and Tables B-1 and B-6 in Appendix B, several inorganic constituents, in addition to those listed above, were routinely detected in soil samples reflecting current conditions. None of these additional inorganic constituents were detected at concentrations in excess of the Open Space land use scenario RBSLs, (*i.e.*, either the RBSL_{REC} or the RBSL_{MW}) or the LBCL. With few exceptions, the standard reporting limits for these additional inorganic constituents were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs or LBCL, if present, would have been reported; such exceptions included:

- Antimony – in many cases, the standard reporting limits were higher than the LBCL (also higher than background);
- Silver – in some cases, the standard reporting limits were higher than the LBCL (also higher than background); and
- Thallium - the standard reporting limits were higher than the LBCL, but were within the range of background.

Organochlorine Pesticides. One hundred and four soil samples reflecting current conditions were analyzed for OCPs (73 surface and 31 subsurface samples, Table B-2). Most of these analytes were detected in at least one sample; 2,4-DDD, 2,4-DDE, and beta-BHC were the most commonly detected. These three constituents were detected in at least 50 percent of the samples in which they were analyzed. None of the detections exceeded the Open Space land use scenario RBSLs (*i.e.*, either the RBSL_{REC} or the RBSL_{MW}); the standard reporting limits were lower than the Open Space land use scenario RBSLs, and concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. However, the following OCP detections were higher than the LBCL (DAF 1):

- alpha-BHC (12 exceedances of the 0.00003 mg/kg LBCL in soil samples collected from across the site, maximum detection 0.058 mg/kg in a 1 foot bgs sample from PLJ-02);
- beta-BHC (51 exceedances of the 0.0001 mg/kg LBCL in soil samples collected from across the site, maximum detection 0.081 mg/kg in a 1 foot bgs sample from PLH-04); and

- Dieldrin (2 exceedances of the 0.0002 mg/kg LBCL in surface soil samples collected from the northern non-pond areas at the site [PRNBA-05 and PRNU-02; 0.002 and 0.0068 mg/kg, respectively]).

It should be noted that the standard reporting limits employed during the historical sampling events for these three OCPs and Lindane are higher than the LBCL; therefore, it is unknown whether these constituents are also present in those samples at concentrations in excess of the LBCL. Otherwise, the reporting limits for OCPs were sufficiently low such that concentrations in excess of the LBCL, if present, would be reported. The distribution of beta-BHC for soil samples collected in the surface soils and the interval from 5 to 10 feet bgs at the Site are shown on Figures C-9 and C-10, respectively. This OCP was selected for graphical displays because it was the most frequently detected of the OCPs in Site samples, has a relatively low human health risk threshold compared to the other OCPs (Note: there are no Open Space land use scenario RBSL exceedances of any OCPs), and the highest number of LBCL exceedances.)

Volatile Organic Compounds. Sixty-nine samples reflecting current conditions were analyzed for VOCs (43 surface and 26 subsurface samples, Table B-3). Sporadic low detections of VOCs were reported in the analyses performed on soils; all but the maximum detection [0.061 mg/kg of acetone] were less than 0.004 mg/kg. Acetone, a common laboratory contaminant that was reported as being present in eight (27 percent) of the samples in which it was analyzed, was the most commonly detected VOC. None of the detections were above the Open Space land use scenario RBSLs (*i.e.*, either the RBSL_{REC} or the RBSL_{MW}); the standard reporting limits were lower than the Open Space land use scenario RBSLs, and concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. However, in some cases the reporting limits employed during the historical sampling events are higher than the LBCL, and it is unknown whether these constituents are present in those samples at concentrations in excess of the LBCL. These analytes with reporting limits higher than the LBCL are as follows:

- | | |
|--|------------------------|
| • 1,1,2,2-Tetrachloroethane | • Benzene |
| • 1,1,2-Trichloroethane | • Carbon tetrachloride |
| • 1,2,4-Trichlorobenzene | • Dichloromethane |
| • 1,2-Dichloroethane | • Tetrachloroethylene |
| • 1,2-Dichloropropane | • Trichloroethylene |
| • Cis- and trans-1,3-dichloropropylene | • Vinyl chloride |

Otherwise, the reporting limits for VOCs were sufficiently low such that concentrations in excess of the LBCL, if present, would be reported.

Semi-Volatile Organic Compounds. Sixty-two samples reflecting current conditions were analyzed for SVOCs (43 surface and 19 subsurface samples, Table B-4). Only two SVOCs (bis(2-ethylhexyl)phthalate, a common laboratory contaminant, and dibutyl phthalate), were reported in the analyses performed on soils. Detections of these two constituents were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} or the RBSL_{MW}) and the LBCL. For non-detects, the standard reporting limits were lower than the Open Space land use scenario RBSLs in all cases except for n-nitrosodi-n-propylamine, which had reporting limits slightly higher than the RBSL_{MW}. With the exception of this compound, concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported for SVOCs. For several SVOCs the reporting limits employed during the historical sampling events are higher than the LBCL, and it is unknown whether these constituents are present in those samples at concentrations in excess of the LBCL. These analytes with reporting limits higher than the LBCL are as follows:

- | | |
|-----------------------------|-----------------------------|
| • 2,2’-/4,4’-Dichlorobenzil | • Carbazole |
| • 2,4,6-Trichlorophenol | • Hexachloro-1,3-butadiene |
| • 2,4-Dichlorophenol | • Hexachlorobenzene |
| • 2,4-Dimethylphenol | • Hexachloroethane |
| • 2,4-Dinitrophenol | • Isophorone |
| • 2,4-Dinitrotoluene | • Nitrobenzene |
| • 2,6-Dinitrotoluene | • N-nitrosodi-n-propylamine |
| • 2-Chlorophenol | • n-Nitrosodiphenylamine |
| • 3,3-Dichlorobenzidine | • p-Chloroaniline |
| • bis(2-Chloroethyl)ether | • Pentachlorophenol |

Dioxins and Furans. Eleven surface soil samples (Table B-5) reflecting current conditions were analyzed for dioxins and furans. All of the individual dioxins and furans congeners analyzed were reported as detections in each sample; comparison levels have not been established for individual congeners. To assess the potential threat to human health, dioxins/furans toxic equivalency (TEQ) concentrations for each sample were compared to the Agency for Toxic Substances and Disease Registry (ATSDR) screening value of 50 parts per trillion (ppt) for the

recreational user and 1,000 ppt for the outdoor maintenance worker under the Open Space land use scenario. One of the samples analyzed had a calculated TEQ value in excess of the recreational user comparison level (66.8 ppt, for a sample collected from the northern portion of PLG-04 [sample PRNSNP-19] from an area in which soil removal activities were not performed). LBCL values have not been established for dioxin/furans; thus the potential for impacts to groundwater quality due to their presence could not be assessed by comparisons to these comparison levels. The distribution of TCDD TEQ for samples collected in the surface soils at the Site is shown on Figure C-11.

Polychlorinated Biphenyls. Sixty-six samples reflecting current conditions were analyzed for PCBs (Aroclors only) (40 surface, 26 subsurface, Table B-8); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} and the RBSL_{MW}); thus concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. LBCL values have not been established for these compounds.

Organophosphorus Pesticides. Forty-four samples reflecting current conditions were analyzed for organophosphorus pesticides (30 surface, 14 subsurface, Table B-7); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} and the RBSL_{MW}); thus concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. LBCL values have not been established for these compounds.

Chlorinated Herbicides. Four surface soil samples reflecting current conditions were analyzed for chlorinated herbicides (Table B-10); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} and the RBSL_{MW}); thus concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. LBCL values have not been established for these compounds.

Polychlorinated Aromatic Hydrocarbons. Sixty-two samples reflecting current conditions were analyzed for PAHs (43 surface, 19 subsurface, Table B-11); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} and the RBSL_{MW}) and the LBCL in all cases except for benzo(a)pyrene and dibenzo(a,h)anthracene, which had reporting limits higher than the RBSL_{MW} and the LBCL, and benzo(a)anthracene, which had reporting limits higher than the LBCL. Thus

concentrations in excess of the Open Space land use scenario RBSLs and LBCLs, if present, would have been reported for all of the PAHs except these compounds.

Aldehydes/Organic Acids/Glycol/Alcohols. The waste characterization sample was analyzed for aldehydes, organic acids, glycols, and alcohols (Table B-10); there were no detections reported in that sample. The standard reporting limits were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} and the RBSL_{MW}); thus concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. The reporting limit for 4-chlorobenzene sulfonic acid (the only analyte in these analyses with an established LBCL) was higher than the LBCL, and it is unknown whether this constituent is present at a concentration in excess of the LBCL.

Radionuclides. Radionuclides were detected in all seven of the soil samples analyzed (surface soil samples, Table B-9). The following radionuclides were detected at concentrations in excess of the Open Space land use scenario RBSLs (*i.e.*, the RBSL_{REC} and/or the RBSL_{MW}) and/or LBCL:

- radium-226 (RBSL_{REC}, RBSL_{MW} and LBCL)
- radium-228 (RBSL_{REC}, RBSL_{MW} and LBCL)
- thorium-228 (RBSL_{REC}, RBSL_{MW} and LBCL)
- thorium-230 (LBCL)
- thorium-232 (LBCL)
- uranium-233/234 (RBSL_{MW})
- uranium-238 (RBSL_{MW})

It should be noted, however, that with limited exceptions, the reported activities in excess of the Open Space land use scenario RBSLs/LBCL were within the range of background levels. The three exceptions were:

- A detection of radium-226 of 2.51 picoCuries per gram (pCi/g; PRNU-02, in the northern non-pond portion of the Site),
- A detection of uranium-233/234 of 3.39 pCi/g (PLJ-02); and
- A detection of uranium-238 of 2.5 pCi/g (from pond PLJ-02).

As presented in NDEP guidance (NDEP 2009b), as part of the process used to evaluate radionuclide data for the Common Areas, BRC will assess whether secular equilibrium has been attained (as an indication that steady-state conditions have been reached). Given the limited

amount of radionuclide data for this Site and the differences in sample collection procedures (*i.e.*, a mix of composite and discrete) and historical analytical methods, and without conducting statistical equivalence testing, the data indicate that secular equilibrium has been broadly attained at the Site for the uranium-238 and thorium-232 decay chains. Specifically, the mean radioactivities range between 1.1 pCi/g and 1.7 pCi/g for the parents and key progeny of both decay chains included in the analytical program, as summarized below:

Uranium-238 Decay Chain		Thorium-232 Decay Chain	
<u>Isotope</u>	<u>Mean Activity</u>	<u>Isotope</u>	<u>Mean Activity</u>
Uranium-238	1.5 pCi/g	Thorium-232	1.4 pCi/g
Uranium-234	1.7 pCi/g	Radium-228	1.1 pCi/g
Thorium-230	1.3 pCi/g	Thorium-228	1.4 pCi/g
Radium-226	1.4 pCi/g		

Furthermore, these mean values are lower than the maximum background activities. A more thorough evaluation of secular equilibrium status will be performed after collecting radionuclide data in accordance with this SAP.

The distribution of radium-226, representative of radionuclides, for samples collected in the surface soils at the Site is shown on Figure C-12. This radionuclide was selected for graphical displays because it has low human Open Space land use scenario RBSLs compared to the other radionuclides, and, unlike many of the radionuclides, has a reported detection higher than the background range.

Summary of Soil Exceedances. As summarized above and in the associated data tables, sampling of Site soils has been limited, and the analyte list is incomplete. Based on the limited historical data, the following comparison level exceedances were observed:

- The few Open Space land use scenario RBSL exceedances were associated with TCDD TEQ (RBSL_{REC} only), arsenic (RBSL_{REC} and RBSL_{MW}), iron (RBSL_{REC} and RBSL_{MW}), and perchlorate (RBSL_{MW} only). In addition, radionuclides were also routinely reported as detections greater than one or both of the Open Space land use scenario RBSLs; however, all but three of the radionuclide results in excess of Open Space land use scenario RBSL values are considered representative of background conditions.

- LBCL exceedances were also limited to selected metals, alpha- and beta-BHC, dieldrin, and radionuclides. Many of the LBCL exceedances for metals and radionuclides were within the range of background.

2.9 CHEMICAL DISTRIBUTION WITHIN GROUNDWATER

For evaluating Shallow Zone groundwater quality at the Site, the following wells in the immediate Site vicinity were used: PC-79, PC-80, PC-81, PC-88, PC-90, and PC-94 (Figure 2). These are the only Shallow Zone wells within the Site with recent groundwater results. The data associated with these wells from the most recent groundwater monitoring event (May through June 2008) are presented in Table 2. Data validation results are presented in the DVSR for dataset 51 (ERM 2008), which was approved by NDEP on November 1, 2008. Chemical occurrence patterns for the chemicals detected in groundwater from these wells are provided below. For data evaluation purposes, the detections were compared to the following where established:

- U.S. Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs); and
- The NDEP BCL for residential tap water (BCL_W).¹⁴

Organic Compounds. The few organic compounds detected during the fifth groundwater monitoring event are as follows:

- alpha-BHC, beta-BHC, and delta-BHC were detected in samples collected from all of the wells in which they were analyzed at relatively low concentrations. The maximum detection was 0.86 micrograms per liter ($\mu\text{g/L}$) of delta-BHC (PC-88). MCLs have not been established for these constituents. A BCL_W has been established for alpha-BHC (0.011 $\mu\text{g/L}$) and beta-BHC (0.037 $\mu\text{g/L}$); all detections of these two chemicals were higher than their respective BCL_W levels.
- 1,1-Dichloroethane was detected in the samples from PC-80, PC-81, PC-88, and PC-90 at reported concentrations ranging from 0.41 to 2.1 $\mu\text{g/L}$ (maximum detection associated with PC-88). An MCL has not been established for this compound. The detections were all well below the BCL_W (11.8 $\mu\text{g/L}$).

¹⁴ These comparison levels were developed assuming use of groundwater as a potable water source. As noted in Section 1.1, the NFAD for the Site will contain a deed restriction to prevent future users from utilizing groundwater beneath the Site.

- 1,2,4-Trichlorobenzene was detected in the samples from PC-79, PC-81, and PC-88 at reported concentrations ranging from 1.2 to 1.4 µg/L (maximum detection associated with PC-79). The detections were all below the MCL and BCL_W (both 70 µg/L).
- 1,3,5-Trichlorobenzene was detected in the samples from PC-79, PC-80, and PC-81 at reported concentrations ranging from 1.2 to 1.9 µg/L (maximum detection associated with PC-79). None of the comparison levels listed above have been established for this compound.
- 1,2-Dichlorobenzene (DCB), 1,3-DCB, and 1,4-DCB were detected in samples collected from wells PC-79 and PC-88) at relatively low concentrations. The maximum detection was 4.6 µg/L of 1,3-DCB (PC-79). MCLs have been established for 1,2-DCB and 1,4-DCB (600 µg/L and 75 µg/L, respectively), but not for 1,3-DCB. BCL_W values have been established for all three compounds (600 µg/L, 110 µg/L, and 75 µg/L for 1,2-DCB, 1,3-DCB, and 1,4-DCB, respectively). All of the detections were well below these comparison levels.
- Chloroform was detected in samples from PC-88, PC-90, and PC-94 at concentrations ranging from 0.26 µg/L to 5.2 µg/L (maximum detection associated with PC-94). The detections were all well below the MCL (80 µg/L); however, the chloroform detections in the samples collected from PC-94 (4.7 µg/L and 5.2 µg/L) were higher than the 1.6 µg/L BCL_W.
- Trichloroethene (TCE) was detected in samples from PC-79, PC-88, and PC-90 at reported concentrations ranging from 0.19 to 0.57 µg/L (maximum detection associated with PC-88). The detections were all well below the MCL and BCL_W (5 µg/L).

No other organic chemicals were detected in these monitoring wells. The reporting limits for most of the analytes in these samples were sufficiently low such that concentrations in excess of the comparison levels, if present, would be detected. The exceptions are as follows:

Constituent	Reporting Limit	Comparison Level of Concern ¹⁵
Formaldehyde	60 µg/L	1.5 µg/L BCL _W ; no MCL
Dieldrin	0.0057 µg/L	0.0042 µg/L BCL _W ; no MCL
1,2,3-Trichloropropane	0.22 µg/L	0.034 µg/L BCL _W ; no MCL
1,2-Dibromo-3-chloropropane	0.48 µg/L	0.2 µg/L MCL and BCL _W
2-Nitropropane	0.034 µg/L	0.0012 µg/L BCL _W ; no MCL

¹⁵ This table lists only those comparison levels that are lower than the standard reporting limit.

For these constituents it cannot be determined whether they are present in Site groundwater at concentrations greater than the comparison levels noted above.

Inorganic Compounds. Inorganic compounds were routinely detected in the groundwater samples. It should be noted that many of these constituents are naturally occurring in groundwater, and the extent to which the detections represent background conditions was not evaluated for this SAP. The following constituents were detected at concentrations above their respective MCLs or BCL_W, as summarized below:

- Ammonia was higher than the 730 µg/L BCL_W in the sample collected from PC-80 (786 µg/L). An MCL has not been established for this constituent.
- Chloride, sulfate, and total dissolved solids (TDS) were substantially higher than the MCLs in all samples analyzed (250 milligrams per liter [mg/L] for chloride and sulfate, and 500 mg/L for TDS); maximum detections were 1,550 mg/L (PC-88), 2,130 mg/L (PC-94), and 4,810 mg/L (PC-90), respectively. BCL_W levels have not been established for these constituents.
- Chlorine was higher than the 3.7 mg/L BCL_W in all samples analyzed; the maximum reported concentration was 3,090 mg/L (PC-88). An MCL has not been established for this constituent.
- Nitrate was higher than the MCL and BCL_W (both 10 mg/L) in samples collected from PC-94; the maximum reported concentration was 15.3 mg/L.
- Perchlorate was higher than the USEPA Drinking Water Equivalent Level (24.5 µg/L) and the 18 µg/L BCL_W in samples collected from PC-88, PC-90, and PC-94; the maximum detection was 11,800 µg/L (PC-88).
- Aluminum was higher than the 50 µg/L MCL in samples collected from all of the wells except PC-90 (maximum detection 3,550 µg/L at PC-80). The 495.5 µg/L reporting limit for PC-90 was elevated above the MCL, and it is unknown whether aluminum is also present at this location at elevated concentrations. All of the aluminum detections were lower than the 36,500 µg/L BCL_W.
- Arsenic was higher than the MCL and BCL_W (both 10 µg/L) in samples collected from wells PC-79, PC-80 and PC-90; the highest concentration is associated with PC-90 (102 µg/L). The 96.5 µg/L reporting limit for the remaining samples was elevated above the comparison

levels, and it is unknown whether arsenic is also present at those locations at elevated concentrations.

- Cobalt was higher than the 11 µg/L BCL_w in samples collected from wells PC-79 and PC-80; the highest concentration is associated with PC-79 (14.3 µg/L). The 12.2 µg/L reporting limit for the remaining samples was elevated above the BCL_w, and it is unknown whether cobalt is also present at those locations at elevated concentrations. An MCL has not been established for this constituent.
- Iron was higher than the 300 µg/L MCL in samples collected from wells PC-79, PC-80 and PC-88; the highest concentration is associated with PC-80 (2,700 µg/L). The 800 µg/L reporting limit for the remaining samples was elevated above the MCL, and it is unknown whether iron is also present at those locations at elevated concentrations. All of the iron detections were lower than the 25,600 µg/L BCL_w.
- Lithium was higher than the 73 µg/L BCL_w in samples collected from wells PC-80, PC-81 and PC-88; the highest concentration is associated with PC-81 (177 µg/L). The reporting limits for the remaining samples were elevated above the BCL_w, and it is unknown whether lithium is also present at those locations at elevated concentrations. An MCL has not been established for this constituent.
- Manganese was higher than the 50 µg/L MCL in samples collected from all of the wells except PC-94; the highest concentration is associated with PC-79 (1,460 µg/L). With the exception of PC-90, these manganese detections were also higher than the 511 µg/L BCL_w.
- Uranium was higher than the MCL and BCL_w (both 30 µg/L) in samples collected from wells PC-81 and PC-90; the highest concentration is associated with PC-90 (36.7 µg/L).
- Zinc was higher than the 500 µg/L MCL in the sample collected from well PC-88 (595 µg/L). All of the zinc detections were lower than the 10,950 µg/L BCL_w.

It should be noted that reporting limits for several analytes, in addition to those noted above, were routinely higher than the MCLs and/or BCL_w (*i.e.*, antimony, beryllium, chromium, lead, phosphorus, and thallium), and it cannot be ascertained if these constituents are present in Site groundwater at concentrations greater than these comparison levels.

Chemical occurrence in both the shallow and deep water-bearing zones beneath the Eastside area is currently being characterized under a process separate from the Closure Plan process under which this SAP has been prepared, which focuses on site soils. A more detailed presentation of chemical occurrence patterns within these water-bearing zones (including comparisons to background conditions) and an assessment of the potential health risks will be provided upon completion of the on-going groundwater investigation, and the CSM for the Eastside area will be updated accordingly.

3.0 DATA QUALITY OBJECTIVES

The DQO process is a seven-step iterative planning approach used to prepare plans for environmental data collection activities. It provides a systematic approach for defining the criteria that a data collection design should satisfy, and covers: problem definition; when, where, and how to collect samples or measurements; determination of tolerable decision error rates; and the number of samples or measurements that should be collected. DQOs define the purpose of the data collection effort, clarify what the data should represent to satisfy this purpose, and specify the performance requirements for the quality of the data to be obtained. The DQO process, as defined by USEPA's *Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4* (USEPA 2006), consists of seven steps:

Step 1 - State the Problem;

Step 2 - Identify the Goal of the Study;

Step 3 - Identify Information Inputs;

Step 4 - Define the Boundaries of the Study;

Step 5 - Develop the Analytical Approach;

Step 6 - Specify Performance or Acceptance Criteria; and

Step 7 - Develop the Plan for Obtaining Data.

A general overview of USEPA and NDEP's seven-step DQO process is provided in the Closure Plan. The key decision inputs to the DQO process, namely the Step 2 Principal Study Questions (PSQs), are also provided in the Closure Plan. The PSQs are the central Eastside Area-wide questions that provide a basis for the overall closure effort. Per discussions with the NDEP, the other steps of the DQO process are to be addressed, on an Eastside Area sub-area basis (for soils), in the respective sub-area SAPs. Steps 1 through 5 of the DQO process are described below for this Site. Implementation of DQO Steps 6 and 7 is described in the Statistical Methodology Report, which presents the statistical approach to sample design for the Eastside Area sub-areas soils investigations.

3.1 STATE THE PROBLEM (STEP 1)

The first step in the DQO process is to define the problem that initiated the study in such a way that the focus of the study is unambiguous. This section provides the following information: a summarization of the problem being addressed; identification of the assessment team; identification of the key decision-makers and stakeholders; and a presentation of the schedule.

3.1.1 Problem Statement

As presented in the Closure Plan, the Site includes open land that has been modified to accept wastewater discharges from the BMI Complex through various trenches and evaporation ponds from 1942 through 1976. Currently, the approximately 151-acre Site includes former unlined disposal ponds (approximately 77 acres) and effluent conveyance ditches associated with historical BMI Complex operations, and unused vacant land (approximately 74 acres). The industrial activity on this Site may have resulted in concentrations of chemicals that drive unacceptable human health risk. Residual contamination remains at the Site as a consequence of these discharges. The goal of this work is to remediate the Site such that chemical concentrations in all relevant media do not pose an unacceptable risk to human health and the environment under current and future land use scenarios. The problem that needs to be addressed is one of returning at least the upper 10 feet of soils at the Site to conditions that pass a human health risk assessment, with restrictions on access to deeper soils and on the use of groundwater. Risk assessment at the Site includes exposure to soils, but also exposure to VOCs and radon, which might emanate from the vadose zone or from groundwater. A further consideration is the potential for leaching contaminants into groundwater.

The Site is currently vacant. The potential on-site and off-site receptors are currently trespassers/visitors, occasional on-site workers, and off-site residents. Risks to current receptors are being managed through Site access control. Under the current, prospective redevelopment plan, the Site will be used for public parks, with Site uses including trails, playfields, roads and parking areas. Consequently, receptors that are considered for this problem include construction workers, park users (adult and child), outdoor maintenance workers, and trespassers. The potentially exposed populations for the Site and their potential routes of exposure are presented on Figure 8 and are summarized in Section 9 of the Closure Plan.

As described in the Closure Plan and in the Statistical Methodology Report, remediation for all media will be to risk-based levels protective of human health and the environment under current and future land use scenarios. The problem will be addressed through iterative remediation until

sufficient remediation (removal of soil) has been performed such that acceptable human health risks have been attained. The final site conditions will include re-grading of on-site soils, so that the future surface will not consist of the same soil as the current surface. Imported fill material may or may not be needed, including fill from other sites. The grading plan for this Site is presented on Figure 4.

Although the primary focus is human health risk assessment for an Open Space land use scenario, secondary issues that will be addressed include contamination of deeper soils and groundwater beneath the Site. BRC will also discuss the issue of off-Site transport of contaminants with the NDEP should the NDEP determine that this is necessary, maintaining consistency with the AOC3. However, because remediation of the Site will be to on-site Open Space land use standards, risks to off-site receptors are expected to be minimal. However, potential risks to off-site receptors will be considered in the risk assessment for the Site.

3.1.2 Proposed Assessment Team

A multi-disciplinary approach is being and will be followed with participation by qualified geologists, chemists, radiochemists, hydrogeologists, biologists, ecologists, engineers, remediation specialists, toxicologists, risk assessors (human health and ecological), statisticians, field sampling personnel, community relations personnel, risk communications specialists, project developers, and project managers. BRC maintains an active roster of key team members, which will be periodically updated as appropriate throughout the project term. Key team members are identified in Section 1.4 of the Closure Plan.

3.1.3 Key Decision Makers and Stakeholders

The NDEP is the primary and the ultimate decision-maker for the project. Stakeholders include BRC, the City of Henderson, Clark County, the State of Nevada, the United States Government, the local public, site developers, and other interested persons.

3.1.4 Schedule

BRC has established a phased schedule for the Eastside Area such that the various sub-areas are addressed sequentially. The timing of the phased closures is closely spaced to avoid potential complications associated with the presence of contaminated soils near areas that have been successfully remediated and closed and to mitigate potential impacts on adjacent future

residential housing developments (that is, the Western Hook Development and Galleria North sub-areas).

Surface and shallow soil data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) exposures and risks. Once these data have been collected and preliminary risk calculations have been completed, BRC will determine whether the acceptable chemical concentrations and/or risk levels defined for the Site have been attained and will discuss this determination with the NDEP. If it is determined that acceptable risk levels have not been attained, BRC will perform additional remediation activities consistent with the *Corrective Action Plan* (CAP; BRC 2006), and will repeat the assessment process until risk-based goals are achieved. Each iterative remediation and data collection process is expected to take place over a one to two month period, but may extend into a slightly longer period.

3.2 IDENTIFY THE GOAL OF THE STUDY (STEP 2)

The purpose of this step is to define the Site-specific PSQs that need to be resolved in order to address the problem identified in Step 1, and to identify alternative actions that may be taken, depending on the answers to the PSQs. As noted above, the project PSQs are presented in the Closure Plan. The primary PSQ associated with this SAP is: Are the current (post-remediation, pre-development) and future (post-development) incremental risks to human health or the environment from exposure to Site soil and soil vapor flux sufficiently low that they are acceptable? If the incremental risks are not sufficiently low, then reasonable further action will be taken; otherwise, no further action will be taken and a risk assessment report will be prepared. Secondary PSQs deal with groundwater quality in the context of the overall site, and on the impact of site contamination on off-site human receptors. Ecological risk assessment issues will be discussed with the NDEP should NDEP determine that an ecological risk assessment is warranted.

The following fundamental assumptions apply:

1. The PSQs will be assessed only after BRC has determined that achievement of Site cleanup goals is expected for Site soils.¹⁶ Cleanup goals for the project are defined in Sections 1.1 and 9.1.1 of the Closure Plan and in the Statistical Methodology Report. The data pool employed

¹⁶ The existing historical data suggest that some remediation may be needed to attain cleanup goals; however, the need for remediation will be properly evaluated on the basis of data collected under this SAP, in accordance with the approved risk assessment methodology in the *Closure Plan*.

in the risk assessment will comprise only those data collected in accordance with this SAP,¹⁷ after remediation activities have been performed during the closure process, if such remediation occurs.

2. The data used in PSQ assessment will undergo a rigorous Quality Assurance/Quality Control (QA/QC) review prior to that assessment, in accordance with the procedures described in the project QAPP (BRC and ERM 2009). Only those data determined as a result to be suitable for use will be included in the closure data pool. Furthermore, the adequacy of the data pool will be evaluated following the procedures provided in Section 9.3 of the Closure Plan. If found to be inadequate, additional sampling and analysis may be performed.

Stated another way, the decision is to determine whether or not Site conditions¹⁸ result in acceptable human health risks and environmental risks for future land uses. This will be determined through human health risk assessment for potential future on-site receptors. Potential alternative actions (from the Closure Plan) that may be taken include: (1) No Action (in this context No Action means no additional action beyond removal of contaminated soils presently located on Site); (2) institutional controls/limited action; (3) importation and use of clean fill (on-site capping of soils); and (4) excavation of soils and on-site landfill disposal at the project CAMU.

How the study decisions will be determined for the Site, including how the risk assessment will be performed, is presented in the Closure Plan.

3.3 IDENTIFY INFORMATION INPUTS (STEP 3)

The purpose of this step is to identify the information needed to resolve the PSQs identified in Step 2. The data inputs for the primary PSQ are listed below. Risk assessment will be the primary means of answering the PSQs, and will incorporate the various data inputs listed below. These data inputs either 1) are already established, as presented in this SAP or the Closure Plan; 2) will be obtained during the soil and soil vapor flux sampling programs specified in this SAP; or 3) currently exist as data gaps that will be resolved prior to performing risk assessment. A

¹⁷ Data collected prior to SAP approval that might also be representative of Site conditions will not be included in the risk assessment; however, a data usability evaluation will be conducted to determine whether any of the historical data can be used in Site risk assessment, or it will be explained why the new data supplants the old data. However, the historical data may be used to help develop the CSM for both this Site and the overall Eastside.

¹⁸ "Site conditions" in the context of this sentence refers to those conditions assessed after performing any excavation of impacted soils and disposing of them outside the Site, if such actions are determined necessary during the Site characterization activities planned under this SAP.

comprehensive list of the necessary data inputs for addressing the primary PSQ is provided below:

- Input parameters for human health risk assessment and assessment of impacts to groundwater, considering relevant exposure pathways associated with potential future land uses.
- Toxicity input parameters consistent with current NDEP guidance (BCLs; NDEP 2009a).
- Input parameters for all fate and transport models (see Closure Plan and data to be collected as determined by this SAP).
- Site soil and soil vapor flux characterization data¹⁹ collected according to this SAP.
- Identified locations/depth intervals, including elevations to adjust for use of fill material and re-grading.
- Characterization data for imported fill if such fill is considered for use at the Site. At this point, it is not definitively known whether imported fill materials will be used on Site.
- To address the secondary PSQs, soil data from depths greater than 10 feet bgs and groundwater data will be used to address issues related to further understanding of vadose zone and groundwater contamination beneath the Site.

3.4 DEFINE THE BOUNDARIES OF THE STUDY (STEP 4)

The purpose of this step is to define the aspects of the project that affect the decision-making process, including:

- The populations to be sampled;
- The geographical area applicable for decision making;
- Temporal boundaries for decision making;
- Any practical constraints that may interfere with data collection; and

¹⁹ To be collected as determined by this SAP in accordance with the most recent NDEP-approved version of Standard Operating Procedure 16 (BRC, ERM and MWH 2008)

- The scale for decision-making purposes.

Each of these portions of this step is presented below.

3.4.1 Sample Populations

Several target populations will be sampled for this project, including surface and near-surface soils (*i.e.*, less than 10 feet bgs); subsurface soils (*i.e.*, greater than 10 feet bgs); groundwater; and soil vapor flux. These populations were segregated based on their differences in media type and pathways for potential human exposure following redevelopment. For this project, samples will be collected for surface and near-surface soils and soil vapor flux to address the primary PSQ via human health assessment, and for cumulative risk across these media types and associated pathways. Samples will be collected for subsurface soils and groundwater to address the secondary PSQs.

3.4.2 Spatial Boundaries

The spatial boundaries of interest for the risk assessment are the spatial extent of the Site boundary to a depth of 10 feet bgs or deeper if construction activities are below this level. However, impacts to receptors exposed to these soils can also occur from vapor intrusion from the deeper vadose zone and groundwater. Consequently, the vertical extent of the Site that encompasses vadose zone and groundwater is of interest. Based on expected land use, construction activities are not expected to occur at depths greater than 10 feet bgs.

Note that more than one set of surface spatial boundaries could ultimately be identified. For example, data may need to be grouped for sub-areas within the Site in order to appropriately address the decision units (*e.g.*, exposure areas). These spatial boundaries might be important if residual contamination varies across the Site either in the surface soils or by depth.

Because sub-areas within the Eastside are adjacent to each other, to assess or avoid potential impacts from other Site sources, risk assessment could be performed across Site boundaries, and/or adjacent Sites will be remediated in the same general time frame. To some extent, this will depend on the spatial homogeneity of concentrations once remediation has been performed. Future remediation at adjacent Sites will involve dust suppression and storm water pollution prevention activities, mitigating potential impacts from cross-contamination.

3.4.3 Temporal Boundaries

The temporal boundaries of interest for this project are defined by the time frame associated with decision making for each spatially distinct region of interest. Specifically, for each different land-use scenario, within each decision or exposure unit, both current and potential future risk needs to be considered and quantified. The time frame over which future risks will be evaluated can be regarded as indefinite, implying that future land uses must satisfy institutional constraints placed on the site now, or a new risk assessment will need to be performed. Specific issues for each medium are described below.

Surface Soil

The surface soil concentrations used in the risk assessment will be derived from existing soil conditions (that is, established during the characterization activities performed in accordance with this SAP). BRC assumes that these will reflect the concentration distribution for the project lifetime, and those data will be relied upon throughout the redevelopment process and for assessing risks under current and future land use scenarios. The timeframe for data collection, assessment, and decision-making will be from one to three months for surface soils. These soil data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) exposures and risks.

Subsurface Soil and Groundwater

As noted, BRC does not expect that subsurface soils (generally greater than 10 feet bgs) will be an issue from a human exposure standpoint. However, subsurface soils will be sampled in order to determine potential impacts to groundwater in accordance with the secondary PSQ relating to the deeper vadose zone and groundwater in the context of the entire Site. These subsurface soil data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) impacts to groundwater. Data to support the evaluation of potential impacts to groundwater will be collected. These data will be collected to support the migration to groundwater calculations included in the Closure Plan, as well as more refined modeling tools (such as, VLEACH, SESOIL, and PESTAN). Any indirect impacts from underlying groundwater will be addressed via the proposed surface flux measurements.

Soil Vapor Flux

The soil vapor fluxes used in the risk assessment will be derived from soil vapor flux data associated with existing soil and groundwater conditions (that is, data established during the

characterization activities performed in accordance with this SAP). BRC assumes that these will reflect the soil vapor flux distribution for the project lifetime, and those data will be relied upon throughout the redevelopment process and for assessing risks under current and future land-use scenarios. The timeframe for data collection, assessment, and decision-making will be from one to three months for soil vapor flux. These soil vapor flux data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) exposures and risks.

3.4.4 Practical Constraints for Data Collection

Since the Site is currently unoccupied, there are no access constraints for collecting soil or soil vapor flux samples from BRC's property, as specified in this SAP. For groundwater (which is not part of this SAP), additional and/or routine sampling activities (such as groundwater sampling from monitoring wells) may be required following redevelopment. However, these constraints do not apply to the situation associated with this SAP and will be dealt with at a later time.

3.4.5 Scale of Decision Making

The scale for decision making regarding the primary PSQ varies based on the target sample population of interest. Redevelopment of the Site following remediation includes significant changes in land uses, including recreational uses, but not residential housing. However, the final redevelopment plans for the Site have not been completed and may change depending upon the results of post-remediation sampling. To facilitate the redevelopment of the Site with the fewest practical constraints due to residual contamination, the nominal scale for decision making for the proposed recreational exposure scenario will be equal to one-half acre, consistent with the Statistical Methodology Report. However, if, as expected, the concentration distribution across the Site is statistically homogeneous representing a single population of concentrations for each chemical, then the decision unit will be the entire Site. Smaller decision units will only be defined if the spatial distribution of concentrations suggests the need to break the Site into smaller areas for risk-based decision making. The same approach will be used for soil vapor flux, subsurface soils, and groundwater as they feed into the human health risk assessment.

3.5 DEVELOP THE ANALYTICAL APPROACH (STEP 5)

The purpose of this DQO step, as described in USEPA guidance, is to define the population parameter (*e.g.*, mean risk) of interest for each population (surface soil, etc.); identify the appropriate action level (target risk level) for each population; and select measurement and

analysis methods that can be used to properly evaluate the parameters against the action levels (*i.e.*, ensure detection limits do not exceed action levels, etc.). Once these actions are completed, decision rules (if-then statements) are developed for each population that state the alternative actions that would be taken depending upon the true value of the parameter relative to the specified action levels.

The PSQ-specific decision rules for the Site are presented below:

- If, after confirmation sampling conducted per the Closure Plan and this SAP, and subsequent risk assessment following procedures per the Closure Plan, it is deemed that the risk goals for the project (as discussed in Section 1 of the Closure Plan) are not met, then remediation per Alternative (4) (excavation of soils and on-site landfill disposal at the project CAMU) listed in Section 3.2 will be conducted to satisfy the risk goals. The risk assessment methodology for the project is presented in Section 9 of the Closure Plan.
- If, after implementation of the Decision Rule above it is determined that there are specific locations at the Site for which additional and continued remediation will not be practical or effective, then other alternatives such as Alternative (2) and Alternative (3) (institutional controls/limited action, and importation and use of clean fill) identified in Section 3.2 will be evaluated considering overall protection, effectiveness, permanence, implementability, cost, regulatory acceptance, and community acceptance.
- If, after implementation of the Decision rule above it is determined that no further action needs to be taken in the top 10 feet of soils, a proposal for NFAD will be made. This proposal will be made only after consultation with NDEP.

Data for the secondary PSQs (deeper soils and groundwater) will be evaluated for obvious issues that might require immediate action, and will be included in analysis of objectives related to the groundwater program for the entire Site.

4.0 SCOPE OF WORK

Other than the removal of debris found on the Site, no remediation is proposed prior to the sampling activities specified in this SAP. Decisions regarding the need for remediation will be based on the initial data to be collected in accordance with this SAP as discussed in this section.

The risks posed to human health and the environment by chemicals remaining in Site soils will be assessed in accordance with the Risk Assessment Methodology provided in the Closure Plan. If this assessment indicates that risk-based cleanup goals established for the Site have not been met, additional phases of remediation, sampling/analysis, and assessment will be performed as discussed in the CAP and the Closure Plan. Development may only proceed after attainment of acceptable risk levels under the future planned land uses – *i.e.*, after obtaining the NFAD from the NDEP.

The following is the proposed scope of work for investigating the Site and meeting the SAP objectives. This scope includes soil sampling, soil vapor flux sampling, and laboratory analyses of those samples. Much of the discussion below regarding confirmation soil sampling is taken from the Statistical Methodology Report.

4.1 INITIAL CONFIRMATION SOIL SAMPLING

As per the Statistical Methodology Report, the initial confirmation sampling within the Site will be conducted on the basis of combined random and biased (judgmental) sampling, as follows:

- **Stratified Random Locations:** For this purpose, the Site is covered by a 3-acre cell grid network.²⁰ Within each 3-acre cell, a sampling location is randomly selected. Sampling locations are randomly selected within both full and partial grid cells if they are greater than 50 percent of the total grid cell area (based on the project-wide grid cell network and the Site boundaries; those partial grid cells that contain less than 50 percent of their area within the Site will be included in the adjacent sub-area SAPs). The main objective of this stratified random sampling is to provide uniform coverage of the Site.
- **Biased Locations:** Additional sampling locations are selected within or near small-scale contamination points of interests, including, but not limited to, previous debris locations,

²⁰ Although the 3-acre grid network was originally intended for a residential land use scenario, it is also the preferred default for a recreational land use scenario to match the concepts behind the statistical methodology report.

ponds, and ditches. For this purpose, the randomly selected location within a corresponding 3-acre cell may also be adjusted in order to cover a nearby point of interest.

A reconnaissance of the Site was performed in December 2008 to check the Site for environmentally significant features such as debris piles or stained soil. Results of this Site reconnaissance are shown in Table 3. Certain biased sampling locations for the Site were based on the outcome of this reconnaissance. Five debris piles were observed during the Site reconnaissance. Biased sampling locations were located at three of the five observed debris piles/soil staining. The other two debris piles contained materials that did not warrant the collection of samples from these locations. A final reconnaissance will be performed prior to sampling to check for any additional environmentally significant features since the initial reconnaissance. If found, these additional features will also be sampled. Biased sampling will also be conducted along the lengths of the former conveyance ditches on the Site, at an approximate 200-foot linear spacing. Additional biased sampling locations were placed so that each pond had at least one sample located within it, and that the pond berms also had an adequate number of samples. In all, the proposed sampling locations address each of the current land uses as follows:

<u>Land Use</u>	<u>Number of Sample Locations</u>
Former Pond	30
Pond Berm	9
Conveyance Ditch	36
Debris/Other/Unused Land	37

Forty-two of these sample locations are within the historical groundwater seep areas. Five sample locations (OSC1-JS01 through OSC1-JS05) are within the unknown linear feature north of the ponds. Figure 9 and accompanying Table 4 show the random and biased discrete sampling locations from which samples will be collected within the Site.

At each selected location, multi-depth soil samples will be collected and analyzed for the SRC list as follows. Proposed sample depths are 0 (surface) and 10 ft bgs at each sampling location. However, because groundwater at the northern portion of this Site is less than 10 ft bgs, samples for locations within the three northernmost grid cell rows will be collected at 0 (surface) and 5 feet bgs.

Sample locations with grading greater than 2 feet bgs will also be sampled at the anticipated post-grading soil surface. Additionally, at two sample locations, one within a remediated pond and one within an unremediated pond, soil physical parameter data will be collected at 20 feet and every subsequent 10 feet within unsaturated soils above the capillary fringe until groundwater is reached or 50 feet deep, whichever is shallower.

Samples will be collected at:

1. Existing surface (0 feet bgs) and 10 feet bgs (or 5 feet bgs) for sample locations in relatively flat (ungraded) locations;
2. Existing surface (0 feet bgs), post-grading surface, and post-grade 10 feet bgs (or 5 feet bgs) for sample locations with substantial grading (that is, cut depths greater than 2 feet²¹) and the uppermost sampled soil is expected to be used as surface fill;
3. Existing surface (0 feet bgs) and 10 feet bgs (or 5 feet bgs) for sample locations with minimal grading (that is, cut depths less than 2 feet) and the uppermost sampled soil is expected to be used as surface fill; and
4. Existing surface (0 feet bgs) and 10 feet bgs (or 5 feet bgs) for sample locations in an area expected to be covered by fill material.

The analytical sample results will then be divided into surface (0 to 2 feet depth), subsurface (2 to 10 feet depth), and deep (>10 feet depth) layers, according to the following rules:

- **Rule 1:** IF the sample is collected in a relatively flat (ungraded) part of the Site (*i.e.*, an area not targeted for substantial grading), **THEN** the depth of the collected soil sample will be used to designate its soil layer grouping.
- **Rule 2:** IF the sample is collected in a part of the Site targeted for substantial grading, **AND** the sampled soil is located in an area expected to be covered by fill material (*e.g.*, exposed excavated surfaces of ponds), **THEN** the current surface soil sample will be classified as a surface (0 to 2 feet depth) sample, and the soil layer grouping of the remaining deeper sampled soil will be determined based on the difference between its elevation and the final (post-graded) surface elevation in that part of the Site.

²¹ Because sample collection will be over a 2- to 3-feet depth interval, sample locations with an anticipated cut depth less than 3 feet will only be sampled at the surface and one post-grade subsurface depth.

- **Rule 3: IF** the sample is collected in a part of the Site targeted for substantial grading, **AND** the sampled soil is expected to be used as surface fill (*e.g.*, soil within a berm) **AND** the cut depth is expected to be greater than 2 feet, **THEN** the current surface soil sample will be classified as a fill material sample, a final (post-graded) surface sample will be classified as a surface (0 to 2 feet depth) sample, and the soil layer grouping of the remaining deeper sampled soil will be determined based on the difference between its elevation and the final (post-graded) surface elevation in that part of the Site.
- **Rule 4: IF** the sample is collected in a part of the Site targeted for substantial grading, **AND** the sampled soil is expected to be used as surface fill (*e.g.*, soil within a berm) **AND** the cut depth is expected to be less than 2 feet, **THEN** the current surface soil sample will be classified as both a fill material sample and as a surface (0 to 2 feet depth) sample, and the soil layer grouping of the remaining deeper sampled soil will be determined based on the difference between its elevation and the final (post-graded) surface elevation in that part of the Site.

A schematic example of these rules is shown on Figure 10. The current site grading plan is shown on Figure 4. It should be noted that this is the most current plan available, but not necessarily the final grading plan. The sample-specific collection depths are presented in Table 4.

All soil samples will be tagged in the database with numeric designations of their corresponding assigned soil layer grouping based on these rules. Initially, 233 soil samples will be collected from 112 soil boring locations (not including deep samples to be collected for soil physical parameter data). This includes 56 random and 56 biased sample locations; with the following number of samples representing each post-grade type of soil:

<u>Post-Grade Sample Type</u>	<u>Number of Samples</u> ²²
Fill material	31
Surface soil	121
Subsurface soil	112

²² Note that in some cases, a soil sample may be considered both a fill sample and a surface sample (as indicated in Table 4). Therefore, the sum of the number of samples indicated for each post-grade sample type does not necessarily equal the total number of samples collected.

It should be noted that, as discussed with NDEP, once a particular sub-area receives an NFAD from the NDEP, the cut material that is slated to be used as fill material elsewhere would not require additional testing. However, the chemical data for this fill material may be useful for evaluating sub-areas to receive fill (for example, if there is deeper contamination).

4.2 INTERMEDIATE SAMPLING AND CLEANUP

Upon layer-designation of confirmation soil samples, a series of tests will be conducted to determine whether sampled locations within a given layer include “exceeding” samples. An exceeding sample is one that warrants further investigation, which may include localized soil removal. Exceeding samples will be defined consistent with the following rules:

- **Chemicals without background concentrations:** For chemicals without corresponding background distributions, the distribution of its reported concentrations in each layer will be constructed. The 95 percent upper confidence limit (UCL) of these distributions will also be computed. **IF** the constructed distribution indicates the presence of anomalous concentrations (*e.g.*, high values at the end of an elongated tail of a uni-modal distribution, or values forming an elevated sub-population of a multi-modal distribution), **AND** the inclusion of these anomalous values causes the computed UCL to exceed one-tenth of the risk-based screening level of the chemical, **THEN** samples associated with anomalous values will be considered as potential exceeding samples. **IF** the constructed distribution indicates no presence of anomalous concentrations and the computed UCL exceeds one-tenth of the risk-based screening level of the chemical, **THEN** all samples associated with the layer will be considered as potential exceeding samples.
- **Chemicals with background concentrations:** For chemicals with corresponding background distributions, the distribution of its reported concentrations in each layer will be constructed. These concentration distributions will then be statistically compared to the appropriate background concentration distributions.²³ Appropriate two-sample tests, including Quantile test, Slippage test, *t*-Test, and the Wilcoxon rank sum test with Gehan modification, will be used to identify exceeding samples through comparison of Site and background distributions. **IF** inclusion of elevated measured values in a given layer causes the rejection of the appropriate two-sample test, **THEN** samples associated with such elevated values will be considered as potential exceeding samples.

²³ The specific background dataset that will be used for this purpose will be determined upon consultation with NDEP prior to the data evaluation procedures noted in this section.

Areas with potential exceeding samples may be subjected to re-sampling prior to the confirmation of the location as an exceeding sample. After any such re-sampling, the above process will be repeated to confirm the exceeding status of the targeted sample location. It should be noted that if the data indicate a more widespread or Site-wide contamination, then it might be important to look at the effect on a sub-area basis rather than a sample basis. That is, additional alternatives, such as changing the future land use, further division into smaller sub-areas, or more extensive remediation, would need to be considered and evaluated.

Upon confirmation of an exceeding sample, additional neighboring delineation sampling will be conducted based on a “step-out” approach. Step sizes and directions will be dependent on the location of the exceeding sample and perhaps the magnitude of the exceedance. Additional biased step-out or step-in sampling may be conducted to further refine the extent of the required removal. Each removal will be followed by confirmatory sampling. More detail on this approach is provided in the Statistical Methodology Report.

After the above intermediate removals, results associated with removed exceeding samples will be marked as excluded from the dataset, while non-exceeding delineation and confirmation data will be included in the dataset. The revised dataset will then be subjected to the above exceeding sample determination process, which will be repeated until all exceeding samples are adequately addressed.

4.3 FINAL CONFIRMATION DATASET

At this stage, the final confirmation soil dataset for the Site, consisting of: 1) the original non-exceeding confirmation data collected in accordance with this SAP²⁴ for the Site, 2) the non-exceeding data generated after intermediate sampling and cleanup, and 3) additional biased and random samples collected for confirmation; will be subjected to a series of statistical analyses in order to determine representative exposure concentrations for that sub-area, as described in the Statistical Methodology Report.

4.4 SOIL VAPOR FLUX SAMPLING

Concurrent with the confirmation soil sampling, BRC will implement soil vapor flux sampling across the Site. This SAP refers to and relies on the most recent NDEP-approved version of

²⁴ As distinguished from the historical “confirmation” sampling data collected as part of or immediately after the IRM, which will not be included in the risk assessment dataset.

Standard Operating Procedure (SOP) 16 for technical description of sampling and analytical methodology, QA/QC protocols, and project procedural description. The sampling procedure for the effort includes the USEPA surface emission isolation flux chamber (flux chamber) and static chamber sampling to perform an air pathway analysis (APA) for the Site. A description of the history, background, and operation of the USEPA-recommended flux chamber and radon flux approach is provided in SOP-16.

The flux chamber sample collection rationale is based on the project goal of obtaining a representative dataset of air emissions per sub-area. Flux chamber samples will be collected from each of the 3-acre grid cells. Soil vapor flux sampling locations will coincide with a biased sampling location, if any, in a given cell; if none are present, the soil vapor flux sampling will be performed at the grid-specific random sampling location. This approach results in 56 soil vapor flux sampling locations, indicated on Figure 9, providing full spatial coverage of the Site. All of the flux chamber samples will be tested for both VOC flux and radon flux, and this density of sample collection should be adequate for sub-area characterization given: the random nature of the sample locations, the size of the sub-area, and the number of sample locations suggested by the USEPA (1986) in the flux chamber User's Guide for assessing zones of homogeneous site properties. A higher density of sample collection for VOCs is not warranted given the general lack of VOC detections in soils and groundwater.

4.5 CHEMICALS SELECTED FOR ANALYSIS

The proposed analyte list for soil samples is comprised of the BRC project SRC list, as presented in the Closure Plan²⁵ and Table 5, with the following exceptions for this Site:

- Asbestos, dioxins/furans, and PCBs will only be analyzed for in surface soil samples.
- Only acetaldehyde and formaldehyde will be analyzed for by USEPA Method 8315A (chloroacetaldehyde, dichloroacetaldehyde, and trichloroacetaldehyde removed based on the *Revisions to the Analyte List Technical Memorandum* approved by NDEP on October 16, 2008).
- The following metals will not be analyzed for: niobium, palladium, platinum, silicon, sulfur, and zirconium (removed based on the *Revisions to the Analyte List Technical Memorandum* approved by NDEP on October 16, 2008).

²⁵ Specific analytes and analyte-specific reporting limits for each analysis are listed in Table 4 of the QAPP.

- Aroclors will be analyzed by USEPA Method 8082 only if the results of the analysis of total PCB congeners are greater than 33 parts per billion, which coincides with the standard reporting limit for this analysis.
- USEPA Method 8141A for organophosphorous pesticides will not be conducted. There have been only 47 detections of these compounds in over 10,000 soil sample records (<0.5 percent) from throughout the Eastside, and no detections in any of the soil samples collected within the Site.
- USEPA Method 8151A for chlorinated herbicides will not be conducted. There have been no detections of these compounds in over 1,400 soil sample records from throughout the Eastside, including those associated with one soil sample collected within the Site. Detection limits are below comparison levels.
- HPLC Method for organic acids will not be conducted. There have been only three detections of these compounds in 567 soil sample records (<0.5 percent) from throughout the Eastside, including those associated with one soil sample collected within the Site (all non-detects). Detection limits are below comparison levels.
- USEPA Method 8015B for nonhalogenated organics will not be conducted. There have been only five detections of these compounds in 420 soil sample records (1 percent) from throughout the Eastside, including those associated with one soil sample collected within the Site (all non-detects). Detection limits and the few detections have been well below comparison levels.
- USEPA Method 8015 for total petroleum hydrocarbons (TPH) will not be conducted. There have been only three detections of these compounds in over 299 soil sample records (1 percent) from throughout the Eastside. The few detections have been below 100 mg/kg, which is the typical low-end aesthetic threshold used for these compounds. While TPH is not proposed for analysis, its components are via other methods. In addition, TPH cannot be included in a risk assessment while its components can.
- Consistent with the current project analyte list, the following radionuclides will be analyzed for: radium-226, radium-228, thorium-228, thorium-230, thorium-232, uranium-233/234, uranium-235/236, and uranium-238. Activities for other radionuclides on the SRC list may be back-quantitated; however, the main radionuclides will likely carry sufficient information to perform a risk assessment. In addition, if the radionuclides are similar to background, then back-quantitation will be unnecessary and will not be performed.

The analyte list, as proposed in this SAP for the Site, consists of 307 of the 418 compounds (including water only parameters) on the project SRC list, as well as physical parameters (Section 5.2.3) to support the evaluation of potential impacts to groundwater from migration of chemicals from soil. The analytical and preparatory methods used in accordance with this SAP adhere to the most recent version of the project QAPP (BRC and ERM 2009), which has been revised to ensure appropriate comparisons to the background dataset. The proposed analyte list for soil vapor flux samples is comprised of the list provided in the most recent NDEP-approved version of SOP-16 (see the *BRC Field Sampling and Standard Operating Procedures* [FSSOP]; BRC, ERM, and MWH 2008), including radon. This analyte list is provided in Table 6.

5.0 FIELD AND LABORATORY METHODS

5.1 FIELD METHODS

All Site work will be performed under the responsible control and direction of a Nevada State Certified Environmental Manager. All sampling and sample handling procedures will be consistent with the NDEP-approved BRC FSSOP (BRC, ERM, and MWH 2008). In accordance with applicable federal regulation (Title 29, Code of Federal Regulations, Section 1910.120) all field activities will be performed in compliance with the *BRC Health and Safety Plan* (BRC and MWH 2005).

Pre-field and field activities will be conducted in accordance with the most recent NDEP-approved versions of applicable SOPs (BRC, ERM, and MWH 2008). These SOPs include SOP-1 (Drilling Methods), SOP-6 (Sample Management and Shipping), SOP-7 (Soil Sampling), SOP-10 (Surveying), SOP-12 (Asbestos Soil Sampling), SOP-13 (Field Equipment Calibration Procedures), SOP-14 (Field Documentation), SOP-15 (Field Logbook), SOP-16 (Flux Chamber Source Testing), SOP-17, (Soil Logging), SOP-23 (Split Spoon Sampling), SOP-26 (Soil Grab Sampling), and SOP-39 (Photoionization Detector Screening).

The BRC QAPP (BRC and ERM 2009) and Health and Safety Plan (BRC and MWH 2005) prepared for the BMI Common Areas will be used for this proposed scope of work. The selected driller will notify the Underground Services Alert one-call notification system at least 48 hours before implementing any subsurface activities. BRC will also notify the NDEP at least one week prior to commencing field activities. Once the data are collected, BRC will subject the data to validation per procedures agreed to previously with the NDEP and consistent with the project QAPP (BRC and ERM 2009) and SOP-40.

Soil cuttings generated during soil sampling and Hollow Stem Auger drilling activities will be collected and stored with the other remediation waste and sent to the CAMU.

5.2 LABORATORY METHODS

Samples submitted for laboratory analysis will be analyzed in accordance with approved methodologies by a State of Nevada-certified analytical laboratory. Samples not specified for analysis will be placed on hold pending the results of the initial analysis.

5.2.1 Soil Chemical Analyses

BRC's complete SRC list as approved by the NDEP is presented in Table 4 of the QAPP. Table 5 of this SAP identifies the complete list of analytes proposed for analysis of soil samples, along with the appropriate analytical methods. An explanation for the exclusion of a chemical for analysis is provided in Table 5 of this SAP.

5.2.2 Soil Vapor Flux Analyses

As indicated in Table 6, all flux chamber samples will be analyzed by USEPA Method TO-15 full scan, and selective ion mode analyses on a sub-set of VOCs to achieve the lowest attainable method detection limits for the target list of study compounds (see most recent version of SOP-16). All samples will be analyzed for the target list with optimum method detection limits so that these data can be used to satisfy the sensitivity requirements of the human health risk assessment.

5.2.3 Soil Physical Parameters

In addition to chemical data, to support the evaluation of the potential impacts to groundwater, soil physical properties will also be measured. These parameters will be collected to support the migration to groundwater calculations included in the Closure Plan, consistent with the USEPA Soil Screening Guidance (1996; 2000; 2002), as well as more refined modeling tools (such as, VLEACH, SESOIL, and PESTAN). Site-specific soil physical parameters to be measured include pH (USEPA Method 9045C), cation exchange capacity, dry bulk density, soil permeability/saturated hydraulic conductivity, specific gravity, total porosity, volumetric water content, grain-size analysis by sieve and hydrometer, and fractional organic carbon content (Table 5). These soil physical parameters will be measured from each of the subsurface samples collected from the two deep sample locations at the Site (Figure 9). This will ensure that soil physical parameters will be measured at various depths from across the Site so that all sample depths are represented. One of the deep sample locations will be within the historical groundwater seep area in the southern portion of the Site and one will be within one of the remediated ponds. In addition, samples will be collected from two subsurface sample locations (Figure 9 and Table 4) for conducting the synthetic precipitation leaching procedure (SPLP; USEPA Method 1312) with the extract analyzed for metals, OCPs, SVOCs, radium-226, radium-228, and perchlorate. These analytes are considered those of greatest concern for potential migration and impacts to groundwater. Both SPLP sample locations will be within the historical groundwater seep area and within the ponds.

6.0 REPORTING AND SCHEDULING

After approval of the SAP by NDEP, BRC is prepared to promptly initiate field activities. BRC will be directly in charge of sampling with oversight conducted by NDEP. As discussed in Section 3.4.3, sampling activities are anticipated to be completed over a one to three month period, and laboratory analyses to be completed within a five to six-week period following field work completion. Once the data are collected, BRC will subject the data to validation per procedures agreed to previously with the NDEP and consistent with the project QAPP (BRC and ERM 2009) and SOP-40 (BRC, ERM, and MWH 2008). Only those data determined by the QA/QC review to be suitable for use will be considered for the site dataset. A separate DVSR will be prepared and submitted to NDEP.

Upon receipt of laboratory analytical results and following data validation, a risk assessment will be conducted by BRC (in consultation with NDEP) to evaluate the risks posed to human health and the environment by chemicals remaining in Site soils. The risk assessment will be conducted in accordance with the Risk Assessment Methodology provided in the Closure Plan. As stated in the Closure Plan:

...risk assessment will not be initiated unless proper data sufficiency, representativeness, and adequacy analysis is first achieved. If necessary, additional data will be gathered or analyzed to meet the goals of data quality required for risk assessment. The risk assessment will, in turn, help to assure that these data characteristics are properly evaluated. Once risk assessment is completed, the assessment will be made as to whether the remediation conducted meets cleanup goals. If cleanup goals are not achieved, additional remediation, associated confirmation sampling, and assessment cycles will be conducted until a decision end point is reached – namely that the cleanup goals are either met (and the NFAD is issued or Site Closure is achieved, as the case may be) or proven infeasible because it is technically impractical or too costly, in which case changes in land use or institutional controls may be considered.

BRC will perform risk assessment calculations to justify additional remediation or sampling; however, these interim risk assessments will not be submitted to the NDEP. It is expected that the interim decisions (to support additional sampling or remediation) will be discussed with the NDEP on an informal, but regular basis. Any additional sampling and remediation will be addressed as an addendum to this SAP.

The risk assessment report will be an inclusive report that will also contain the following items:

- A summary of the sampling procedures conducted;
- Sampling location map;
- Soil boring logs;
- An evaluation and summary of the collected data;
- Tables(s) summarizing soil results; and
- If appropriate, plan view maps indicating the locations of detected constituents in soil.

As noted above, completion of the risk assessment will be an iterative process. Once the risk assessment passes internal BRC review, with NDEP consultation, and meets the risk goals stated in the Closure Plan, the risk assessment report will be submitted to the NDEP, along with an NFAD request for the Site, in accordance with AOC3. That is, the risk assessment report will be prepared and submitted to the NDEP only when BRC is comfortable that acceptable human health risks have been attained.

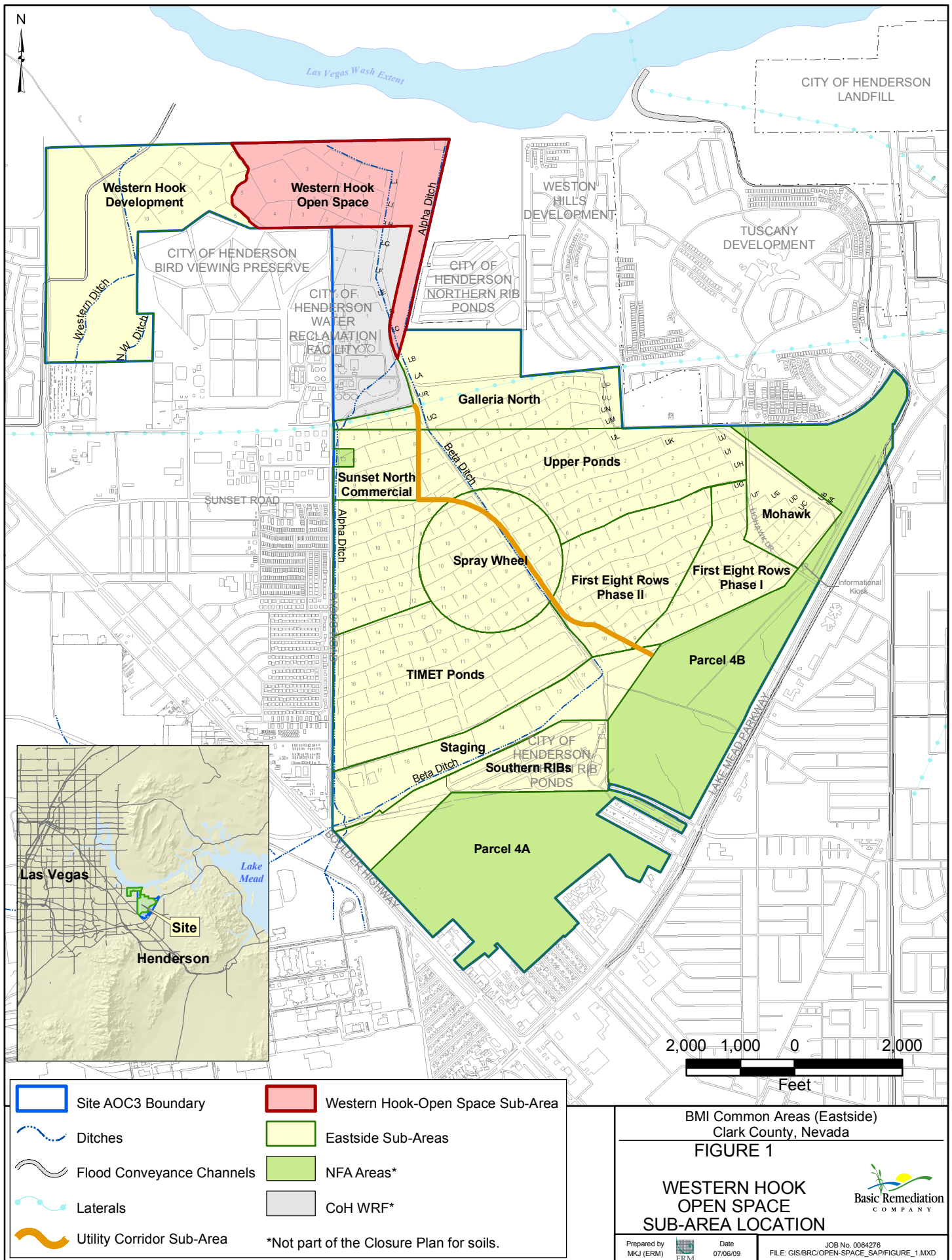
7.0 REFERENCES

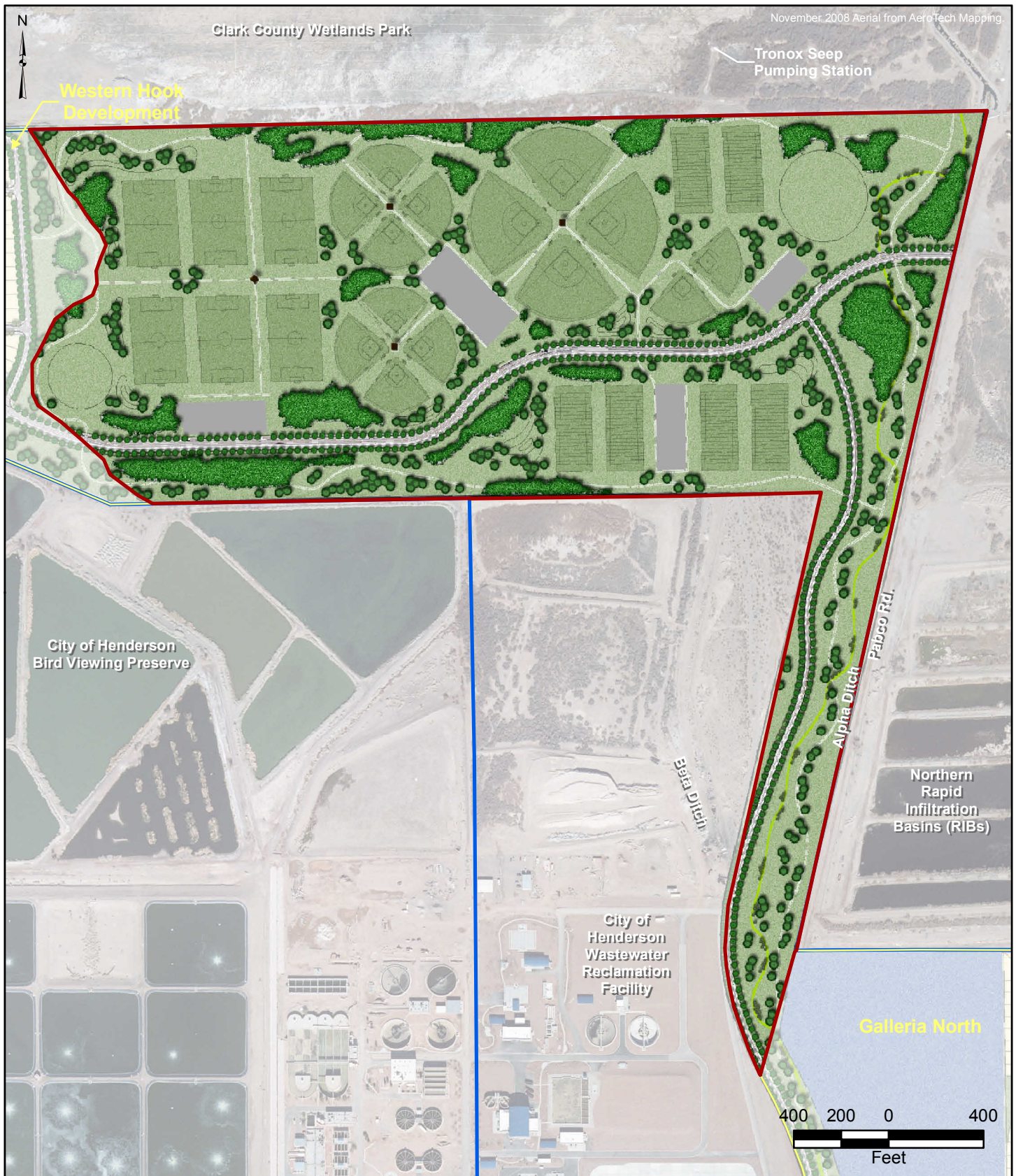
- Basic Remediation Company (BRC). 2006. Corrective Action Plan for the Basic Remediation Company (BRC) Common Areas Remediation Project.
- Basic Remediation Company (BRC). 2007. Remedial Action Plan, BMI Common Areas, Clark County, Nevada. March.
- Basic Remediation Company (BRC) and Environmental Resources Management (ERM). 2009. BRC Quality Assurance Project Plan. BMI Common Areas, Clark County, Nevada. April.
- Basic Remediation Company (BRC), Environmental Resources Management (ERM), and Daniel B. Stephens & Associates, Inc. 2007. BRC Closure Plan, BMI Common Areas, Clark County, Nevada. May.
- Basic Remediation Company (BRC), Environmental Resources Management (ERM) and MWH. 2008. BRC Field Sampling and Standard Operating Procedures, BMI Common Areas, Clark County, Nevada. December.
- Basic Remediation Company (BRC) and MWH. 2008. Fifth Round Groundwater Monitoring Report (April - July 2008). BMI Common Areas (Eastside), Clark County, Nevada. December.
- Basic Remediation Company (BRC) and MWH. 2005. BRC Health and Safety Plan. BMI Common Areas, Clark County, Nevada. October.
- Basic Remediation Company (BRC) and Titanium Metals Corporation (TIMET). 2007. Background Shallow Soil Summary Report, BMI Complex and Common Areas Vicinity. March.
- Carlsen, C.L., R.C. Lunnis, and D.E. Prudie. 1991. Changes in water levels and water quality in shallow groundwater, Pittman-Henderson Area, Clark County, Nevada, Resulting from diversion of industrial cooling water from ditch to pipeline in 1985. U.S. Geological Survey Water-Resources Investigation Report 89-4093. Carson City, Nevada.
- Environmental Resources Management (ERM). 1996a. Environmental Conditions Investigation Workplan, BMI Common Areas, Henderson, Nevada. February.
- Environmental Resources Management (ERM). 1996b. Draft Environmental Conditions Investigation Report, BMI Common Areas, Henderson, Nevada. August.

- Environmental Resources Management (ERM). 1999. Sunset North Area Interim Remedial Measures Workplan. August.
- Environmental Resources Management (ERM). 2000. Sunset North Area Interim Remedial Measure Completion Report, BMI Common Areas, Henderson, Nevada. August.
- Environmental Resources Management (ERM). 2006a. Data Validation Summary Report Common Areas Sampling Event #1a - 1996 Environmental Conditions Investigation. August.
- Environmental Resources Management (ERM). 2006b. Data Validation Summary Report Common Areas Sampling Event #6c - May/July 1999 Soil Sampling. July.
- Environmental Resources Management (ERM). 2006c. Data Validation Summary Report Common Areas Sampling Event #7b – Upper and Lower Ponds IRM Sampling, Sunset North. September.
- Environmental Resources Management (ERM). 2006d. Data Validation Summary Report Common Areas Sampling Event #8a – July 2000 Discrete/Composite Sampling Event. October.
- Environmental Resources Management (ERM). 2006e. Data Validation Summary Report Common Areas Sampling Event #8b – February/March 2000 Sunset North Area, Former Pond Sampling. September.
- Environmental Resources Management (ERM). 2006f. Data Validation Summary Report Common Areas Sampling Event #8c – October 2000 Sunset North Area, Former Pond Sampling. October.
- Environmental Resources Management (ERM). 2007. Data Validation Summary Report Common Areas Sampling Event #20c – May/June 2001 Sunset North Supplemental Investigation. February.
- Environmental Resources Management (ERM). 2008. Data Validation Summary Report – Fifth Groundwater Monitoring Event, April-July 2008 (Dataset 51), BMI Common Areas (Eastside), Clark County, Nevada. October.
- MWH. 2006a. Data Validation Summary Report, 2005 Alpha Ditch Investigation (Dataset 32), BMI Common Areas (Eastside), Clark County, Nevada. September.
- MWH. 2006b. Data Validation Summary Report – 2006 Waste Characterization Investigation (Dataset 39), BMI Common Areas (Eastside), Clark County, Nevada. October.

- NewFields Companies, LLC (NewFields). 2006. Statistical Methodology Report, BMI Common Areas (Eastside), Henderson, Nevada. August.
- Nevada Division of Environmental Protection (NDEP). 2009a. BMI Plant Sites and Common Areas Projects, Henderson, Nevada; Basic Comparison Levels Updated User's Guide and Tables. June.
- Nevada Division of Environmental Protection (NDEP). 2009b. Guidance for Evaluating Secular Equilibrium at the BMI Complex and Common Areas. February.
- Nevada Division of Environmental Protection (NDEP). 2006. Settlement Agreement and Administrative Order on Consent: BMI Common Areas, Phase 3 (AOC3).
- U.S. Environmental Protection Agency (USEPA). 1986. Measurement of Gaseous Emission Rates From Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide. EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Radian Corporation, February.
- U.S. Environmental Protection Agency (USEPA). 1996. Soil Screening Guidance: Technical Background Document. Office of Emergency and Remedial Response, Washington, DC. USEPA/540/R-96/018. May.
- U.S. Environmental Protection Agency (USEPA). 2000. Soil Screening Guidance for Radionuclides. Office of Radiation and Indoor Air, Washington, DC. USEPA/540-R-00-007 and USEPA/540-R-00-006.
- U.S. Environmental Protection Agency (USEPA). 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response, Washington, DC. OSWER 9355.4-24. December.
- U.S. Environmental Protection Agency (USEPA). 2006. Guidance on Systematic Planning Using the Data Quality Objectives Process. EPA QA/G-4. Office of Environmental Information Washington, DC. EPA/240/B-06/001. February.
- Weston. 1993. Site Conceptual Model, Stauffer/Pioneer/Montrose Site, Henderson, Nevada, September.

FIGURES





- Western Hook-Open Space Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas

Current Development Plan

- Parks & Trails
- Playfields
- Roads/Parking
- Schools

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 3

CURRENT DEVELOPMENT PLAN

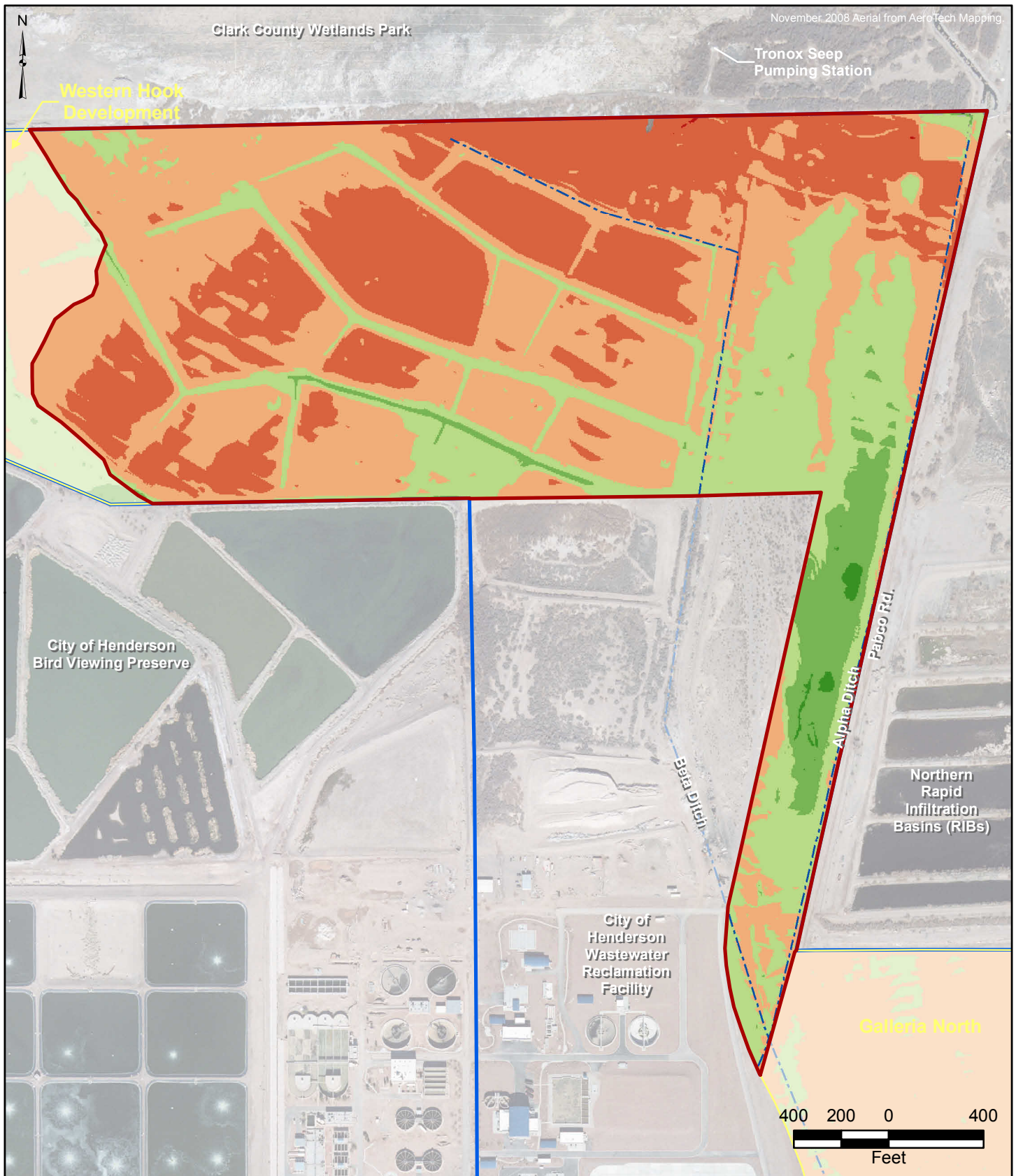


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07/06/09

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- Western Hook-Open Space Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas

Development Cut/Fill Areas

- | | |
|--|--|
| > 10 Ft Fill | 0 to 5 Ft Cut |
| 5 to 10 Ft Fill | 5 to 10 Ft Cut |
| 0 to 5 Ft Fill | > 10 Ft Cut |
| No Change | |

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 4

CURRENT
GRADING
PLAN



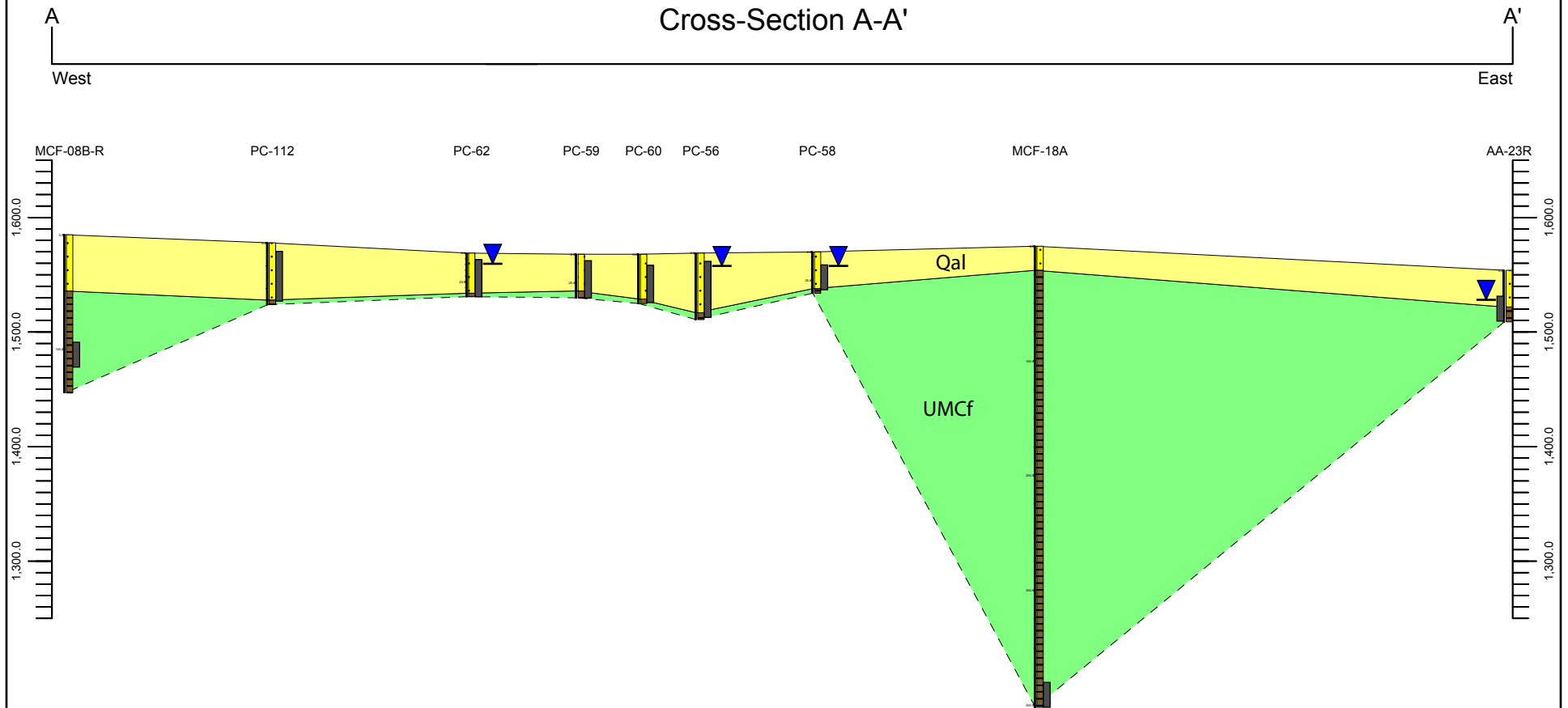
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Cross-Section A-A'



■ = Screen Interval

▼ = Shallow Zone Water Level (Apr-May 2008)

■ = Qal = Quaternary alluvium

■ = UMCf = Upper Muddy Creek formation

Vertical Scale = 5x Horizontal Scale

For soil lithology details, please see the individual boring logs.

See Figure 2 for cross-section location.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 5

WESTERN HOOK
OPEN SPACE SUB-AREA
CROSS-SECTION A-A'

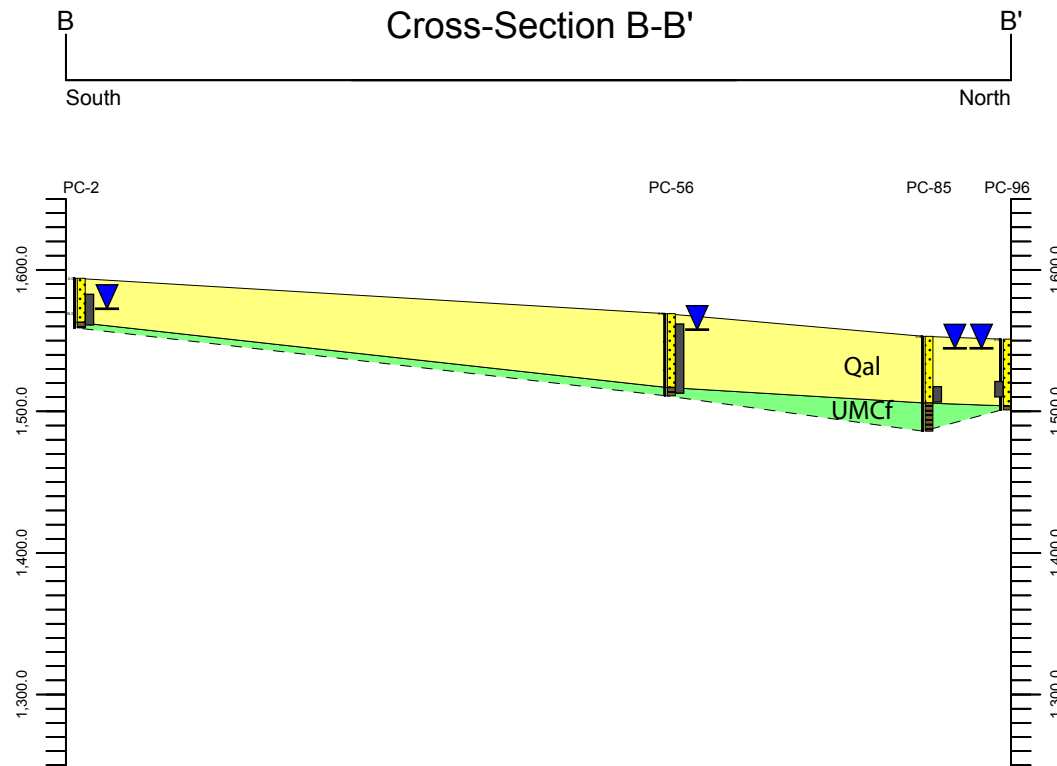


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▬ = Screen Interval

▼ = Shallow Zone Water Level (Apr-May 2008)

■ = Qal = Quaternary alluvium

■ = UMCf = Upper Muddy Creek formation

Vertical Scale = 5x Horizontal Scale

For soil lithology details, please see the individual boring logs.

See Figure 2 for cross-section location.

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 6

**WESTERN HOOK
OPEN SPACE SUB-AREA
CROSS-SECTION B-B'**

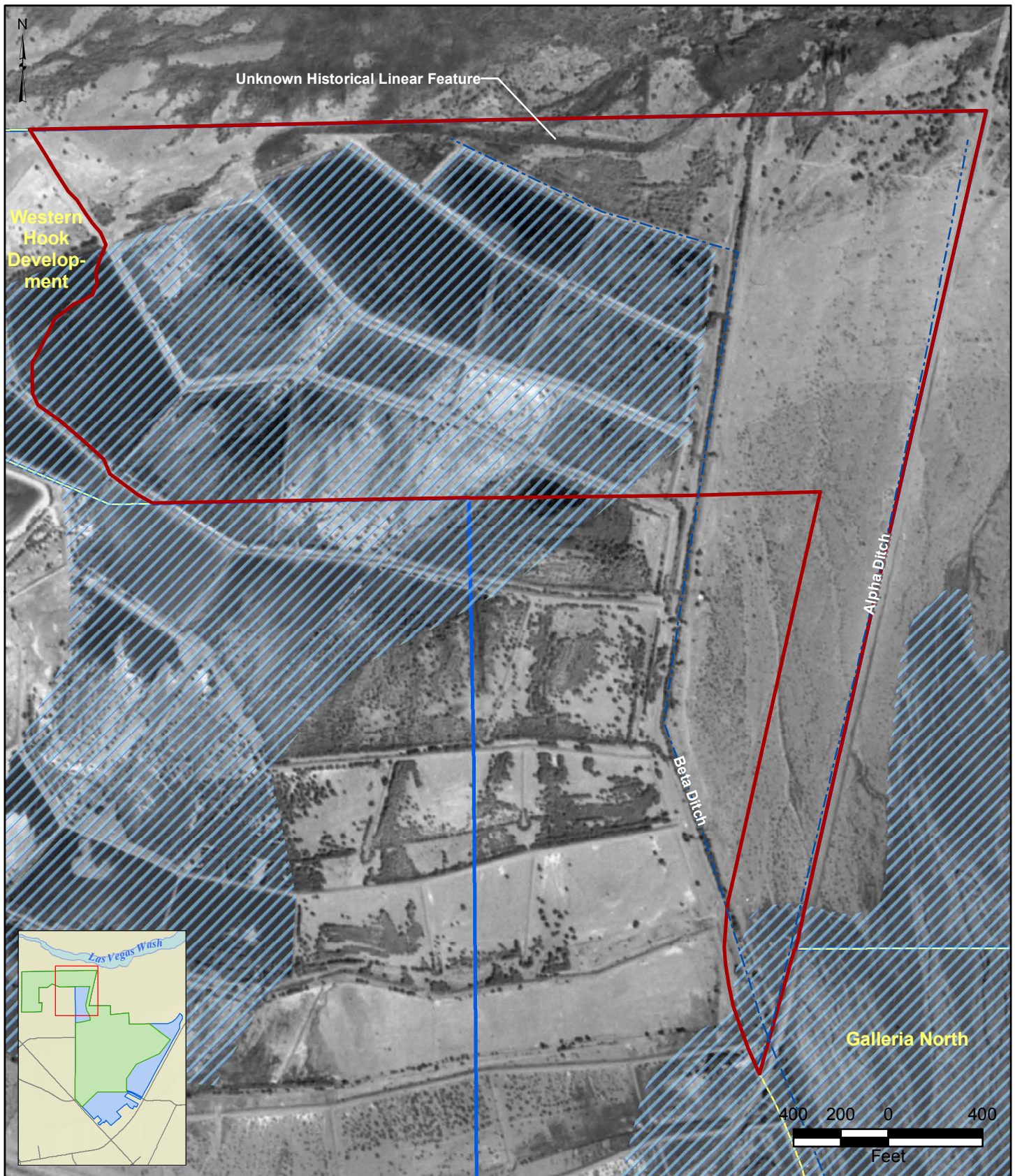


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- Western Hook-Open Space Sub-Area
- Site AOC3 Boundary
- Eastside Soil Sub-Areas
- Approximate Historical Seep Areas

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 7

1969 HISTORICAL
AERIAL PHOTO

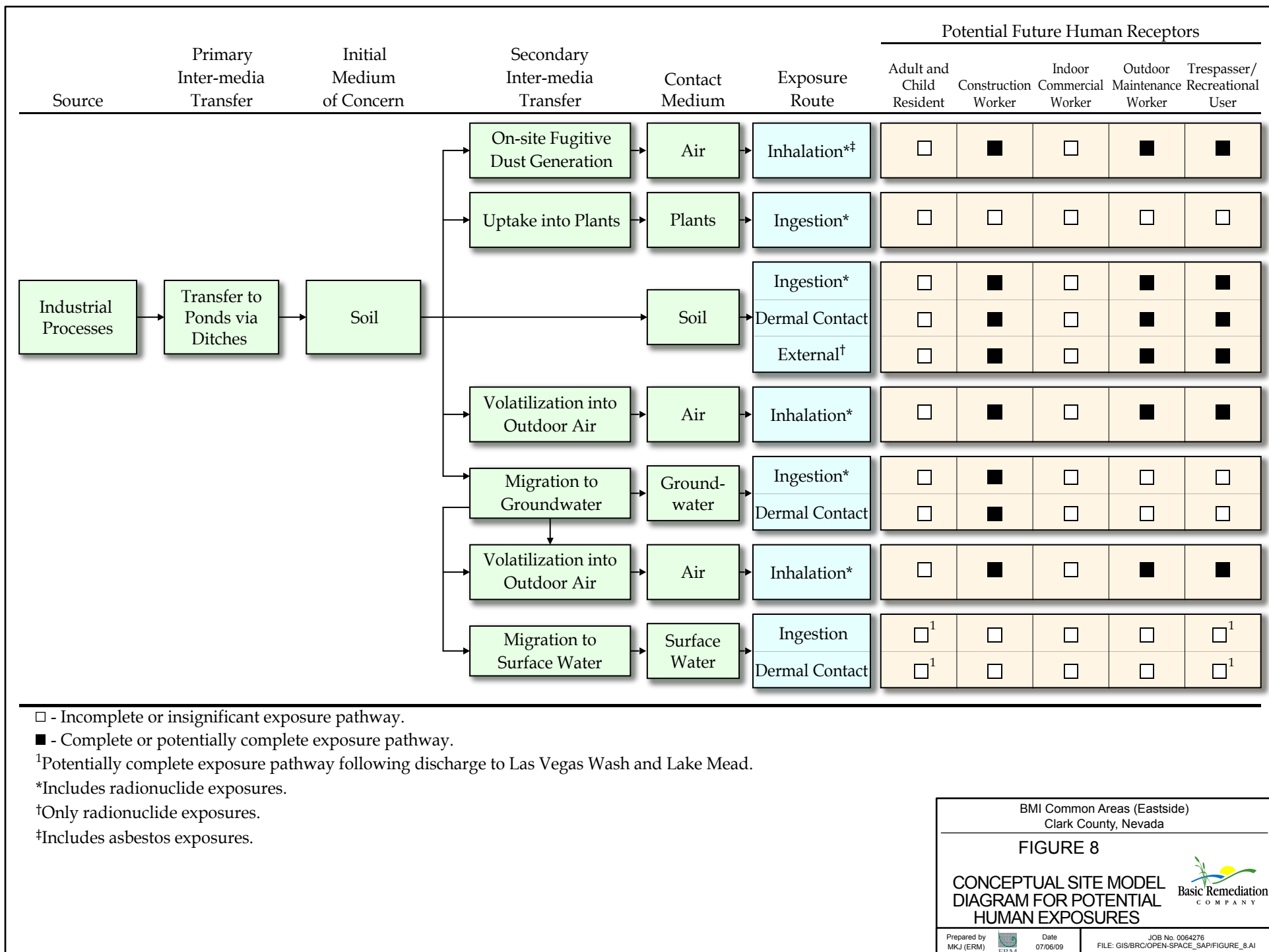


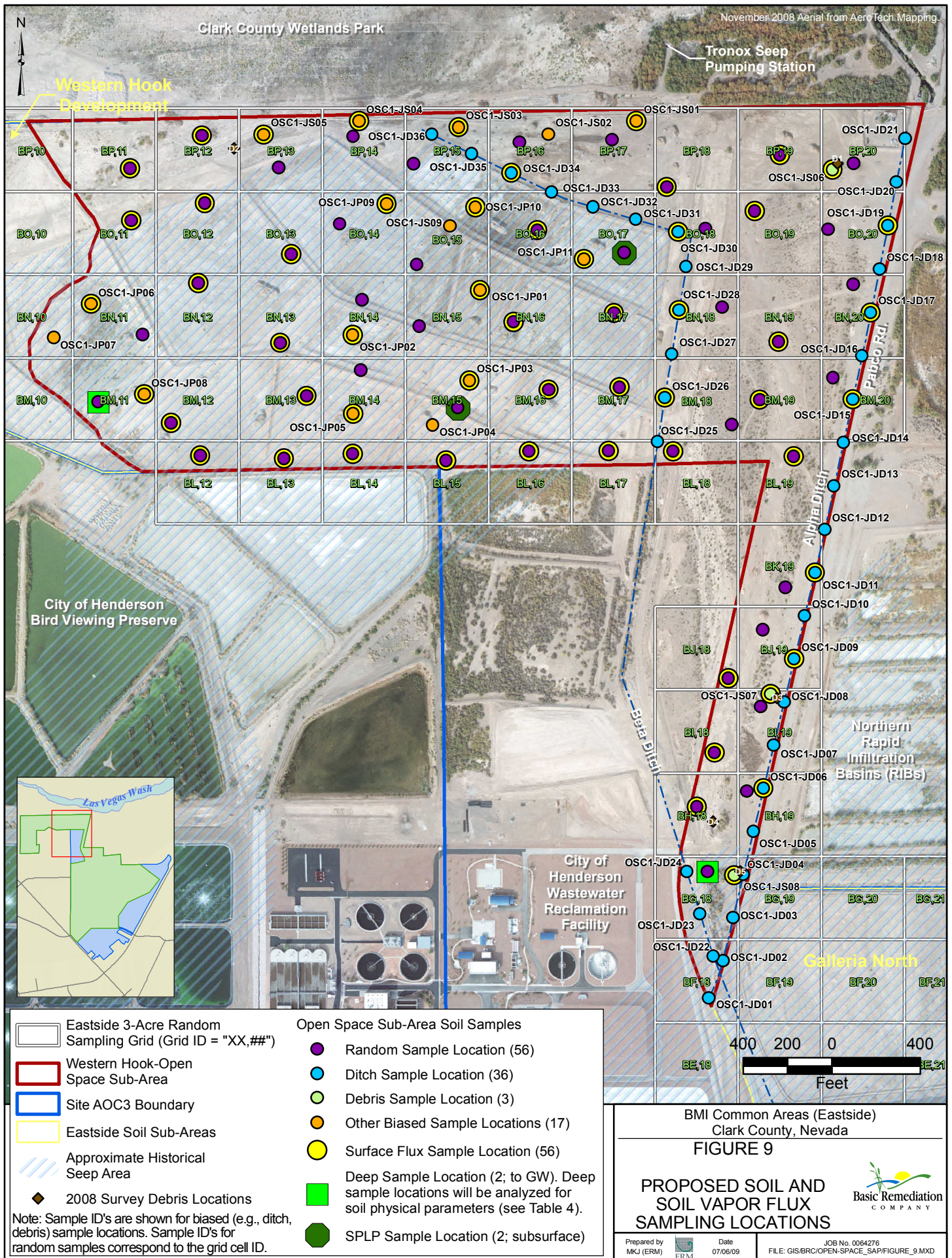
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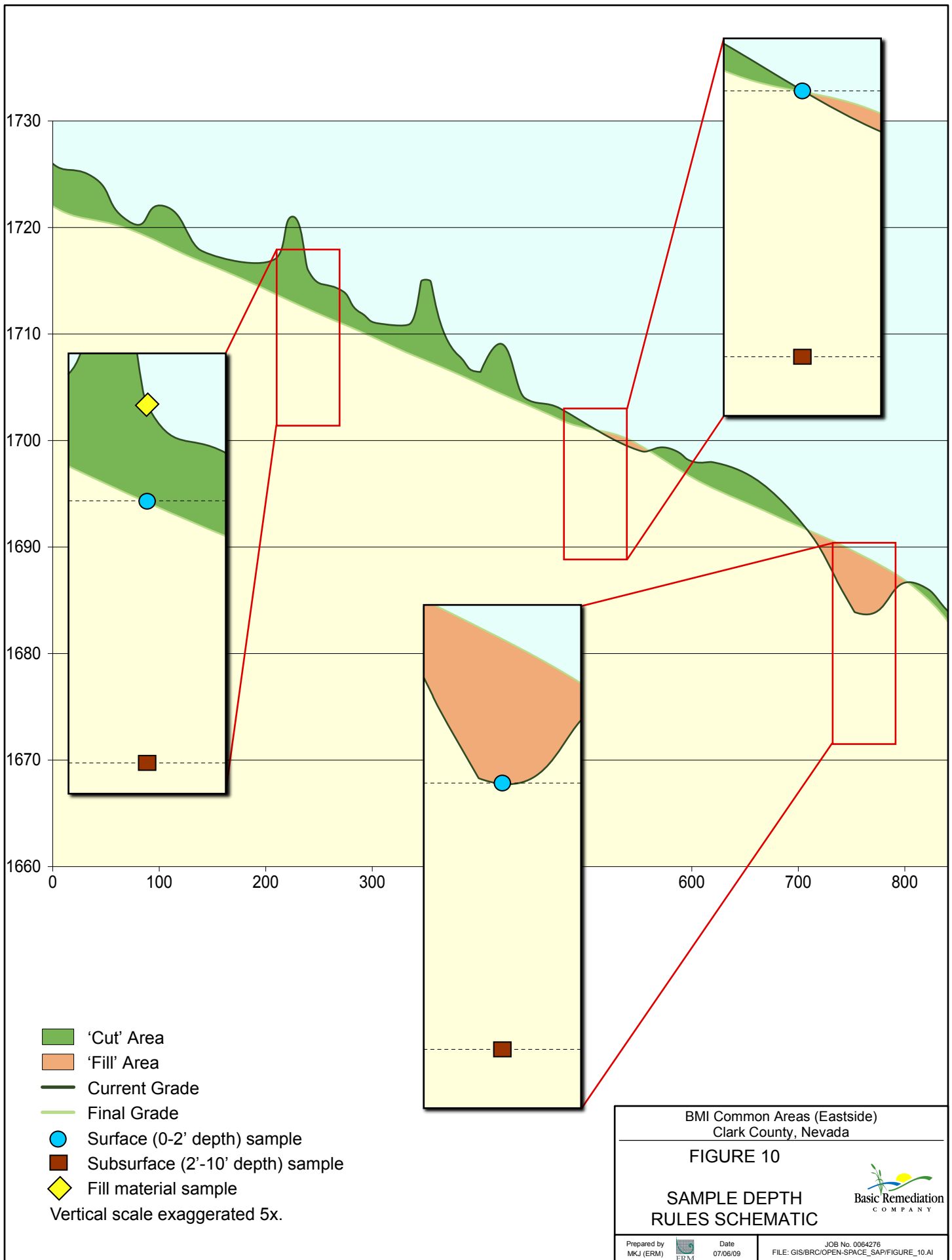


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TABLES

TABLE 1
SUMMARY OF POST-IRM SOIL CHEMICAL DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 6)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data ^a							Recreate RBSL	Count of Detects > Recreate	Maint. Worker RBSL	Count of Detects > Worker	NDEP LBCL (DAF 1)	Count of Detects > DAF 1	NDEP LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd ^b	Count of Detects > Bkgrnd
Alcohols	Ethanol	mg/kg	1	0%	1	6.3	--	6.3	6.3	--	6.3	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Ethylene glycol	mg/kg	1	0%	1	2.2	--	2.2	2.2	--	2.2	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--	
	Methanol	mg/kg	1	0%	1	13	--	13	13	--	13	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--	
	Propylene glycol	mg/kg	1	0%	1	0.81	--	0.81	0.81	--	0.81	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--	
Aldehydes	Acetaldehyde	mg/kg	1	0%	1	0.5	--	0.5	0.5	--	0.5	0	--	--	--	--	--	--	930	--	27	--	--	--	--	--	--	
	Chloral	mg/kg	1	0%	1	0.07	--	0.07	0.07	--	0.07	0	--	--	--	--	--	--	100000	--	68000	--	--	--	--	--	--	
	Chloroacetaldehyde	mg/kg	1	0%	1	1	--	1	1	--	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	Dichloroacetaldehyde	mg/kg	1	0%	1	0.07	--	0.07	0.07	--	0.07	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Dioxins/Furans	Formaldehyde	mg/kg	1	0%	1	1	--	1	1	--	1	0	--	--	--	--	--	--	260	--	17	--	--	--	--	--	--	
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	11	100%	0	--	--	--	--	--	--	11	4.5	7.1	92	110	190	430	--	--	--	--	--	--	--	--	--	
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	11	91%	1	2.2	--	2.2	2.2	--	2.2	10	1	4.4	14	15	24	38	--	--	--	--	--	--	--	--	--	
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	11	91%	1	2	--	2	2	--	2	10	2	7.1	41	50	89	140	--	--	--	--	--	--	--	--	--	
	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	8	88%	1	1.9	--	1.9	1.9	--	1.9	7	2.6	4	57	63	99	180	--	--	--	--	--	--	--	--	--	
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	8	50%	4	0.48	0.59	1.3	1.3	1.9	2	4	0.14	0.15	1.7	2.1	4.3	4.7	--	--	--	--	--	--	--	--	--	
	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	8	88%	1	2	--	2	2	--	2	7	1.7	2.3	34	30	52	74	--	--	--	--	--	--	--	--	--	
	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	8	75%	2	0.51	--	0.71	0.71	--	0.9	6	0.27	0.36	4.4	4.1	7	8.9	--	--	--	--	--	--	--	--	--	
	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	8	75%	2	0.69	--	0.95	0.95	--	1.2	6	0.37	0.42	6.4	5.8	10	12	--	--	--	--	--	--	--	--	--	
	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	8	75%	2	0.44	--	0.66	0.66	--	0.87	6	0.34	0.42	4.2	4	7	8.5	--	--	--	--	--	--	--	--	--	
	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	8	88%	1	1.3	--	1.3	1.3	--	1.3	7	1.2	1.8	28	28	43	75	--	--	--	--	--	--	--	--	--	
	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	8	63%	3	0.85	0.85	0.98	1.5	2.6	2.6	5	0.18	0.2	3.3	2.6	4.8	6	--	--	--	--	--	--	--	--	--	
	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	8	75%	2	0.83	--	1.3	1.3	--	1.7	6	1	1.3	11	9.7	16	19	--	--	--	--	--	--	--	--	--	
	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	8	88%	1	0.63	--	0.63	0.63	--	0.63	7	0.76	1.1	16	14	23	35	--	--	--	--	--	--	--	--	--	
	2,3,7,8-Tetrachlorodibenzofuran	pg/g	8	100%	0	--	--	--	--	--	--	8	0.55	0.87	10	15	26	44	--	--	--	--	--	--	--	--	--	
	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	8	50%	4	0.1	0.15	0.4	0.38	0.59	0.61	4	0.1	0.32	1	0.85	1.2	1.3	--	--	--	--	--	--	--	--	--	
	Octachlorodibenzodioxin	pg/g	11	91%	1	4.4	--	4.4	4.4	--	4.4	10	2.4	7.6	16	43	72	160	--	--	--	--	--	--	--	--	--	
	Octachlorodibenzofuran	pg/g	11	100%	0	--	--	--	--	--	--	11	11.5	16	160	280	410	1100	--	--	--	--	--	--	--	--	--	
	TCDD TEQ	pg/g	11	-- ^c	--	--	--	--	--	--	--	11	0.8	1.5	5.4	17	35	66.8	50	1	1000	0	--	--	--	--	--	
	General Chemistry	Ammonia	mg/kg	1	0%	1	0.062	--	0.062	0.062	--	0.062	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--
Bromide		mg/kg	1	0%	1	0.22	--	0.22	0.22	--	0.22	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chlorate		mg/kg	25	52%	12	0.052	0.054	0.061	0.76	0.58	5.9	13	0.23	0.76	5.6	7.3	11	20	--	--	--	--	--	--	--	--	--	
Chloride		mg/kg	5	100%	0	--	--	--	--	--	--	5	7.7	38	95	130	230	300	--	--	--	--	--	--	--	1110	0	
Cyanide (Total)		mg/kg	66	2%	65	0.11	0.54	0.58	0.74	1.1	1.3	1	0.68	--	0.68	0.68	--	0.68	28000	0	14000	0	2	0	40	0	--	
Fluoride		mg/kg	1	0%	1	0.11	--	0.11	0.11	--	0.11	0	--	--	--	--	--	--	83000	--	41000	--	--	--	--	--	2.5	--
Iodide		mg/kg	1	0%	1	2.1	--	2.1	2.1	--	2.1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Nitrate (as N)		mg/kg	1	100%	0	--	--	--	--	--	--	1	0.27	--	0.27	0.27	--	0.27	--	--	--	--	--	--	--	102	0	
Nitrite (as N)		mg/kg	1	0%	1	0.042	--	0.042	0.042	--	0.042	0	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	
Orthophosphate as P		mg/kg	1	0%	1	0.53	--	0.53	0.53	--	0.53	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Perchlorate		mg/kg	76	93%	5	0.021	0.031	0.04	0.83	2	4	71	0.0225	1.6	9.8	49	50	830	1600	0	790	1	--	--	--	--	--	
Sulfate		mg/kg	1	100%	0	--	--	--	--	--	--	1	56.9	--	57	57	--	56.9	--	--	--	--	--	--	--	4130	0	
Sulfide		mg/kg	1	0%	1	7.7	--	7.7	7.7	--	7.7	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total Kjeldahl Nitrogen (TKN)		mg/kg	1	0%	1	16	--	16	16	--	16	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Herbicides	2,2-Dichloropropionic acid	mg/kg	1	0%	1	0.023	--	0.023	0.023	--	0.023	0	--	--	--	--	--	--	41000	--	21000	--	--	--	--	--	--	
	2,4,5-T	mg/kg	4	0%	4	0.0028	0.0034	0.0051	0.0045	0.0051	0.0051	0	--	--	--	--	--	--	14000	--	6800	--	--	--	--	--	--	
	2,4,5-TP	mg/kg	4	0%	4	0.0013	0.0018	0.0033	0.0028	0.0033	0.0033	0	--	--	--	--	--	--	11000	--	5500	--	--	--	--	--	--	
	2,4-D	mg/kg	4	0%	4	0.012</																						

TABLE 1
SUMMARY OF POST-IRM SOIL CHEMICAL DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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TABLE 1
SUMMARY OF POST-IRM SOIL CHEMICAL DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data ^a							Recreate RBSL	Count of Detects > Recreate	Maint. Worker RBSL	Count of Detects > Worker	NDEP LBCL (DAF 1)	Count of Detects > DAF 1	NDEP LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd ^b	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max										
OPPs	Diazinon	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	1200	--	620	--	--	--	--	--	--	--
	Dichlorfenthion	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dichlorvos	mg/kg	41	0%	41	0.0018	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	56	--	6.6	--	--	--	--	--	--	--
	Dimethoate	mg/kg	41	0%	41	0.0021	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dioxathion	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Disulfoton	mg/kg	44	0%	44	0.0019	0.1	0.11	0.1	0.12	0.14	0	--	--	--	--	--	--	55	--	27	--	--	--	--	--	--	--
	Ethion	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Ethoprophos	mg/kg	41	0%	41	0.0011	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Ethyl p-nitrophenyl phenylphosphorothioate	mg/kg	41	0%	41	0.0018	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Famphur	mg/kg	44	0%	44	0.0023	0.1	0.11	0.1	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Fensulfothion	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Fenthion	mg/kg	41	0%	41	0.0014	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Fonofos	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Leptophos	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Malathion	mg/kg	41	0%	41	0.0011	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	28000	--	14000	--	--	--	--	--	--	--
	Merphos	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Metathione	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Methyl parathion	mg/kg	44	0%	44	0.0011	0.1	0.11	0.1	0.12	0.14	0	--	--	--	--	--	--	340	--	170	--	--	--	--	--	--	--
	Mevinphos	mg/kg	41	0%	41	0.0046	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Monocrotophos	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naled	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	2800	--	1400	--	--	--	--	--	--	--
	O,O,O-Triethyl phosphorothioate	mg/kg	1	0%	1	0.0018	--	0.0018	0.0018	--	0.0018	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	o,o-Diethyl o-pyrazinyl phosphorothioate	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Parathion	mg/kg	44	0%	44	0.0028	0.1	0.11	0.1	0.12	0.14	0	--	--	--	--	--	--	8300	--	4100	--	--	--	--	--	--	--
	Phorate	mg/kg	44	0%	44	0.002	0.1	0.11	0.1	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phosmet	mg/kg	41	0%	41	0.016	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phosphamidon	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Ronnel	mg/kg	41	0%	41	0.0019	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	69000	--	34000	--	--	--	--	--	--	--
	Stirophos (Tetrachlorovinphos)	mg/kg	41	0%	41	0.0019	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	670	--	80	--	--	--	--	--	--	--
	Sulfotep	mg/kg	41	0%	41	0.0012	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Sulprofos	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Terbufos	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Tetraethyl pyrophosphite	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Tokuthion (Protothiofos)	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Trichlorfon	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Trichloronate	mg/kg	40	0%	40	0.1	0.11	0.11	0.11	0.12	0.14	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Organic Acids	4-Chlorobenzenesulfonic acid	mg/kg	1	0%	1	1	--	1	1	--	1	0	--	--	--	--	--	--	100000	--	100000	--	0.07	--	1.4	--	--	--
	Benzenesulfonic acid	mg/kg	1	0%	1	1	--	1	1	--	1	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--	--
	Diethyl phosphorodithioic acid	mg/kg	1	0%	1	1	--	1	1	--	1	0	--	--	--	--	--	--	100000	--	91000	--	--	--	--	--	--	--
	Dimethyl phosphorodithioic acid	mg/kg	1	0%	1	1	--	1	1	--	1	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--	--
PAHs	Acenaphthene	mg/kg	61	0%	61	0.02	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	100000	--	32000	--	29	--	580	--	--	--
	Acenaphthylene	mg/kg	61	0%	61	0.034	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	68000	--	34000	--	--	--	--	--	--	--
	Anthracene	mg/kg	61	0%	61	0.0018	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	100000	--	100000	--	590	--	11800	--	--	--
	Benzo(a)anthracene	mg/kg	62	0%	62	0.0018	0.16	0.35	0.3	0.38	0.74	0	--	--	--	--	--	--	20	--	2.3	--	0.08	--	1.6	--	--	--
	Benzo(a)pyrene	mg/kg	62	0%	62	0.0021	0.16	0.35	0.3	0.38	0.74	0	--	--	--	--	--	--	2	--	0.23	--	0.4	--	8	--		

TABLE 1
SUMMARY OF POST-IRM SOIL CHEMICAL DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data ^a							Recreate RBSL	Count of Detects > Recreate	Maint. Worker RBSL	Count of Detects > Worker	NDEP LBCL (DAF 1)	Count of Detects > DAF 1	NDEP LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd ^b	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max										
Radionuclides ^d	Actinium-228	pCi/g	6	100%	0	--	--	--	--	--	--	6	0.98	1.1	1.4	1.5	1.8	2.26	--	--	--	--	--	--	--	3.4	0	
	Bismuth-210	pCi/g	1	0%	1	--	--	--	--	--	--	0	0.96	--	0.96	0.96	--	0.96	--	--	--	--	--	--	--	2.2	0	
	Bismuth-212	pCi/g	6	33%	4	--	--	--	--	--	--	2	1.06	1.8	2.2	2	2.2	2.3	--	--	--	--	--	--	--	1.82	5	
	Bismuth-214	pCi/g	6	100%	0	--	--	--	--	--	--	6	0.76	0.79	1.1	1.1	1.4	1.51	--	--	--	--	--	--	--	1.62	0	
	Cobalt-57	pCi/g	1	0%	1	--	--	--	--	--	--	0	0.0005	--	0.0005	0.0005	--	0.0005	--	--	--	--	--	--	--	0.04	0	
	Cobalt-60	pCi/g	1	0%	1	--	--	--	--	--	--	0	0.023	--	0.023	0.023	--	0.023	--	--	--	--	--	--	--	0.082	0	
	Gross alpha	pCi/g	2	100%	0	--	--	--	--	--	--	2	16.2	--	23	23	--	29.1	--	--	--	--	--	--	--	--	--	
	Gross beta	pCi/g	2	100%	0	--	--	--	--	--	--	2	20.5	--	30	30	--	39.8	--	--	--	--	--	--	--	--	--	
	Lead-210	pCi/g	6	0%	6	--	--	--	--	--	--	0	0.96	1.7	2.5	2.2	2.8	2.9	--	--	--	--	--	--	--	2.2	3	
	Lead-212	pCi/g	6	100%	0	--	--	--	--	--	--	6	0.92	1.2	1.3	1.3	1.4	1.61	--	--	--	--	--	--	--	2.11	0	
	Lead-214	pCi/g	6	100%	0	--	--	--	--	--	--	6	0.69	0.76	0.94	0.9	1	1.06	--	--	--	--	--	--	--	1.72	0	
	Polonium-210	pCi/g	1	0%	1	--	--	--	--	--	--	0	0.96	--	0.96	0.96	--	0.96	--	--	--	--	--	--	--	1.17	0	
	Polonium-212	pCi/g	1	100%	0	--	--	--	--	--	--	1	0.68	--	0.68	0.68	--	0.68	--	--	--	--	--	--	--	1.17	--	
	Polonium-214	pCi/g	1	100%	0	--	--	--	--	--	--	1	0.89	--	0.89	0.89	--	0.89	--	--	--	--	--	--	--	1.62	0	
	Polonium-216	pCi/g	1	100%	0	--	--	--	--	--	--	1	2.95	--	3	3	--	2.95	--	--	--	--	--	--	--	2.11	1	
	Polonium-218	pCi/g	1	100%	0	--	--	--	--	--	--	1	1	--	1	1	--	1	--	--	--	--	--	--	--	2.36	0	
	Potassium-40	pCi/g	6	100%	0	--	--	--	--	--	--	6	19.5	20	24	23	24	24.7	--	--	--	--	--	--	--	35	0	
	Protactinium-234	pCi/g	1	0%	1	--	--	--	--	--	--	0	0.04	--	0.04	0.04	--	0.04	--	--	--	--	--	--	--	0.13	0	
	Radium-223	pCi/g	1	0%	1	--	--	--	--	--	--	0	0.12	--	0.12	0.12	--	0.12	--	--	--	--	--	--	--	0.4	0	
	Radium-224	pCi/g	1	100%	0	--	--	--	--	--	--	1	2.9	--	2.9	2.9	--	2.9	--	--	--	--	--	--	--	2.11	1	
	Radium-226	pCi/g	7	100%	0	--	--	--	--	--	--	7	0.69	1	1.3	1.4	1.8	2.51	0.77	6	0.025	7	0.016	7	0.32	7	2.36	1
	Radium-228	pCi/g	7	100%	0	--	--	--	--	--	--	7	0.55	0.82	1.2	1.1	1.4	1.54	1.3	3	0.045	7	0.016	7	0.32	7	2.94	0
	Thallium-208	pCi/g	6	100%	0	--	--	--	--	--	--	6	0.34	0.37	0.41	0.41	0.45	0.49	--	--	--	--	--	--	--	0.72	0	
	Thorium-228	pCi/g	7	100%	0	--	--	--	--	--	--	7	1.16	1.3	1.4	1.4	1.5	1.64	0.84	7	0.028	7	0.0023	7	0.045	7	2.28	0
	Thorium-230	pCi/g	7	100%	0	--	--	--	--	--	--	7	0.69	1.2	1.2	1.3	1.7	1.85	160	0	8.5	0	0.00084	7	0.017	7	3.01	0
	Thorium-232	pCi/g	7	100%	0	--	--	--	--	--	--	7	0.87	1.1	1.4	1.4	1.8	1.85	140	0	7.6	0	0.0029	7	0.058	7	2.23	0
	Thorium-234	pCi/g	1	100%	0	--	--	--	--	--	--	1	1.16	--	1.2	1.2	--	1.16	--	--	--	--	--	--	--	2.5	0	
	Uranium-233/234	pCi/g	7	100%	0	--	--	--	--	--	--	7	0.75	0.77	1.2	1.7	2.7	3.39	12	0	0.39	7	--	--	--	2.84	1	
	Uranium-235/236	pCi/g	7	43%	4	--	--	--	--	--	--	3	0.031	0.05	0.07	0.09	0.14	0.18	200	0	11	0	--	--	--	0.21	0	
	Uranium-238	pCi/g	7	43%	4	--	--	--	--	--	--	3	0.89	1.2	1.4	1.5	1.6	2.5	43	0	1.6	1	--	--	--	2.37	1	
SVOCs	1,2,4,5-Tetrachlorobenzene	mg/kg	4	0%	4	0.011	0.017	0.034	0.028	0.034	0.034	0	--	--	--	--	--	--	410	--	210	--	--	--	--	--	--	
	1,2-Diphenylhydrazine	mg/kg	3	0%	3	0.034	0.034	0.034	0.034	0.034	0.034	0	--	--	--	--	--	--	20	--	2.4	--	--	--	--	--	--	
	1,4-Dioxane	mg/kg	3	0%	3	0.034	0.034	0.034	0.034	0.034	0.034	0	--	--	--	--	--	--	1500	--	170	--	--	--	--	--	--	
	2,2'-/4,4'-Dichlorobenzil	mg/kg	1	0%	1	0.33	--	0.33	0.33	--	0.33	0	--	--	--	--	--	--	410	--	340	--	0.0003	--	0.006	--	--	
	2,4,5-Trichlorophenol	mg/kg	61	0%	61	0.032	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	100000	--	68000	--	14	--	280	--	--	
	2,4,6-Trichlorophenol	mg/kg	61	0%	61	0.033	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	1400	--	170	--	0.008	--	0.16	--	--	
	2,4-Dichlorophenol	mg/kg	61	0%	61	0.027	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	4100	--	2100	--	0.05	--	1	--	--	
	2,4-Dimethylphenol	mg/kg	61	0%	61	0.03	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	28000	--	14000	--	0.4	--	8	--	--	
	2,4-Dinitrophenol	mg/kg	61	0%	61	0.068	1.7	1.8	2.2	3.4	4.2	0	--	--	--	--	--	--	2800	--	1400	--	0.01	--	0.2	--	--	
	2,4-Dinitrotoluene	mg/kg	61	0%	61	0.019	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	2800	--	1400	--	0.00004	--	0.0008	--	--	
	2,6-Dinitrotoluene	mg/kg	61	0%	61	0.021	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	1400	--	680	--	0.00003	--	0.0006	--	--	
	2-Chloronaphthalene	mg/kg	61	0%	61	0.017	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	100000	--	26000	--	--	--	--	--	--	
	2-Chlorophenol	mg/kg	61	0%	61	0.015	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	1900	--	260	--	0.2	--	4	--	--	
	2																											

TABLE 1
SUMMARY OF POST-IRM SOIL CHEMICAL DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 5 of 6)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data ^a								Recreate RBSL	Count of Detects > Recreate	Maint. Worker RBSL	Count of Detects > Worker	NDEP LBCL (DAF 1)	Count of Detects > DAF 1	NDEP LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgnd ^b	Count of Detects > Bkgnd
SVOCs	bis(2-Chloroisopropyl) ether	mg/kg	61	0%	61	0.016	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	180	--	8.2	--	--	--	--	--	--	--	
	bis(2-Ethylhexyl) phthalate	mg/kg	59	41%	35	0.036	0.34	0.36	0.43	0.39	1.3	24	0.16	0.33	0.5	0.63	0.89	1.5	1100	0	140	0	180	0	3600	0	--	--	
	bis(p-Chlorophenyl) disulfide	mg/kg	1	0%	1	0.35	--	0.35	0.35	--	0.35	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	bis(p-Chlorophenyl) sulfone	mg/kg	1	0%	1	0.35	--	0.35	0.35	--	0.35	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Carbazole	mg/kg	58	0%	58	0.021	0.36	0.38	0.58	0.71	6.7	0	--	--	--	--	--	--	800	--	96	--	0.03	--	0.6	--	--	--	
	Dibenzofuran	mg/kg	58	0%	58	0.024	0.36	0.38	0.47	0.7	0.84	0	--	--	--	--	--	--	4200	--	1700	--	--	--	--	--	--	--	
	Dibutyl phthalate	mg/kg	62	3%	60	0.03	0.35	0.38	0.46	0.68	1.3	2	2.9	--	6.5	6.5	--	10	100000	0	68000	0	270	0	5400	0	--	--	
	Diethyl phthalate	mg/kg	61	0%	61	0.034	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--	--	
	Dimethyl phthalate	mg/kg	61	0%	61	0.021	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	100000	--	100000	--	--	--	--	--	--	--	
	Di-n-octyl phthalate	mg/kg	61	0%	61	0.015	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Diphenyl sulfone	mg/kg	1	0%	1	0.35	--	0.35	0.35	--	0.35	0	--	--	--	--	--	--	4100	--	2100	--	--	--	--	--	--	--	
	Fluoranthene	mg/kg	62	0%	62	0.024	0.35	0.38	0.47	0.7	1.3	0	--	--	--	--	--	--	49000	--	24000	--	210	--	4200	--	--	--	
	Fluorene	mg/kg	61	0%	61	0.02	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	77000	--	26000	--	28	--	560	--	--	--	
	Hexachloro-1,3-butadiene	mg/kg	62	0%	62	0.013	0.35	0.38	0.47	0.7	1.3	0	--	--	--	--	--	--	210	--	25	--	0.1	--	2	--	--	--	
	Hexachlorobenzene	mg/kg	62	0%	62	0.019	0.35	0.37	0.36	0.38	0.74	0	--	--	--	--	--	--	10	--	1.2	--	0.1	--	2	--	--	--	
	Hexachlorocyclopentadiene	mg/kg	61	0%	61	0.076	0.75	1.7	1.4	1.8	2.1	0	--	--	--	--	--	--	8300	--	4100	--	20	--	400	--	--	--	
	Hexachloroethane	mg/kg	61	0%	61	0.017	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	1100	--	140	--	0.02	--	0.4	--	--	--	
	Hydroxymethyl phthalimide	mg/kg	1	0%	1	0.35	--	0.35	0.35	--	0.35	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Isophorone	mg/kg	58	0%	58	0.019	0.36	0.38	0.47	0.7	0.84	0	--	--	--	--	--	--	17000	--	2000	--	0.03	--	0.6	--	--	--	
	Naphthalene	mg/kg	61	0%	61	0.016	0.35	0.38	0.45	0.69	0.84	0	--	--	--	--	--	--	1700	--	210	--	4	--	80	--	--	--	
	Nitrobenzene	mg/kg																											

TABLE 1
SUMMARY OF POST-IRM SOIL CHEMICAL DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data						Detected Data ^a							Recreate RBSL	Count of Detects > Recreate	Maint. Worker RBSL	Count of Detects > Worker	NDEP LBCL (DAF 1)	Count of Detects > DAF 1	NDEP LBCL (DAF 20)	Count of Detects > DAF 20	Max. Bkgrnd ^b	Count of Detects > Bkgrnd
					Count	Min	Q1	Median	Mean	Q3	Max	Count	Min	Q1	Median	Mean	Q3	Max									
VOCs	Bromobenzene	mg/kg	1	0%	1	0.0003	--	0.0003	0.0003	--	0.0003	0	--	--	--	--	--	--	960	--	120	--	--	--	--	--	--
	Bromodichloromethane	mg/kg	30	0%	30	0.00015	0.0011	0.0011	0.0014	0.0012	0.0061	0	--	--	--	--	--	--	79	--	2	--	0.03	--	0.6	--	--
	Bromomethane	mg/kg	30	0%	30	0.00032	0.0022	0.0055	0.0048	0.006	0.012	0	--	--	--	--	--	--	120	--	14	--	0.01	--	0.2	--	--
	Carbon disulfide	mg/kg	30	0%	30	0.00029	0.0011	0.0011	0.0014	0.0012	0.0061	0	--	--	--	--	--	--	11000	--	1300	--	2	--	40	--	--
	Carbon tetrachloride	mg/kg	30	3%	29	0.00016	0.0011	0.0055	0.0046	0.0059	0.0095	1	0.0024	--	0.0024	0.0024	--	0.0024	19	0	0.59	0	0.003	0	0.06	0	--
	CFC-11	mg/kg	30	7%	28	0.00033	0.0011	0.0055	0.0047	0.006	0.012	2	0.0013	--	0.0013	0.0013	--	0.0013	12000	0	1500	0	--	--	--	--	--
	CFC-12	mg/kg	4	0%	4	0.0003	0.00032	0.00038	0.00036	0.00038	0.00038	0	--	--	--	--	--	--	2900	--	360	--	--	--	--	--	--
	Chlorinated fluorocarbon (Freon 113)	mg/kg	4	0%	4	0.00054	0.00054	0.00055	0.00056	0.0006	0.00061	0	--	--	--	--	--	--	100000	--	78000	--	--	--	--	--	--
	Chlorobenzene	mg/kg	30	0%	30	0.00013	0.0011	0.0055	0.0042	0.0059	0.0095	0	--	--	--	--	--	--	3800	--	490	--	0.07	--	1.4	--	--
	Chlorobromomethane	mg/kg	1	0%	1	9.6E-05	--	9.6E-05	9.6E-05	--	9.6E-05	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chlorodibromomethane	mg/kg	30	0%	30	0.00029	0.0011	0.0011	0.0014	0.0012	0.0061	0	--	--	--	--	--	--	73	--	3	--	0.02	--	0.4	--	--
	Chloroethane	mg/kg	30	0%	30	0.00036	0.0011	0.0011	0.0018	0.0012	0.012	0	--	--	--	--	--	--	240	--	7.1	--	--	--	--	--	--
	Chloroform	mg/kg	30	7%	28	0.00014	0.0011	0.0055	0.0041	0.0058	0.0095	2	0.0019	--	0.0023	0.0023	--	0.0027	20	0	0.57	0	0.03	0	0.6	0	--
	Chloromethane	mg/kg	30	0%	30	0.00027	0.0011	0.0011	0.0018	0.0012	0.012	0	--	--	--	--	--	--	1500	--	180	--	--	--	--	--	--
	cis-1,2-Dichloroethylene	mg/kg	27	0%	27	0.00017	0.0011	0.0011	0.0013	0.0012	0.0031	0	--	--	--	--	--	--	1300	--	160	--	0.02	--	0.4	--	--
	cis-1,3-Dichloropropylene	mg/kg	30	0%	30	0.00016	0.0021	0.0022	0.0023	0.0024	0.0061	0	--	--	--	--	--	--	51	--	2	--	0.0002	--	0.004	--	--
	Cymene	mg/kg	1	0%	1	0.00028	--	0.00028	0.00028	--	0.00028	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibromomethane	mg/kg	4	0%	4	0.00033	0.00034	0.00036	0.00035	0.00036	0.00036	0	--	--	--	--	--	--	4200	--	590	--	--	--	--	--	--
	Dichloromethane	mg/kg	30	0%	30	0.00099	0.0026	0.0055	0.0045	0.0059	0.0095	0	--	--	--	--	--	--	650	--	22	--	0.001	--	0.02	--	--
	Ethylbenzene	mg/kg	30	0%	30	0.00018	0.0011	0.0011	0.0014	0.0012	0.0061	0	--	--	--	--	--	--	46000	--	6500	--	0.7	--	14	--	--
	Isopropylbenzene	mg/kg	1	0%	1	0.00013	--	0.00013	0.00013	--	0.00013	0	--	--	--	--	--	--	4700	--	580	--	--	--	--	--	--
	m,p-Xylene	mg/kg	25	0%	25	0.00032	0.0021	0.0022	0.0022	0.0024	0.0038	0	--	--	--	--	--	--	5800	--	710	--	10	--	200	--	--
	Methyl disulfide	mg/kg	1	0%	1	0.0053	--	0.0053	0.0053	--	0.0053	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Methyl ethyl ketone	mg/kg	29	14%	25	0.0021	0.011	0.011	0.011	0.013	0.025	4	0.0023	0.0024	0.003	0.0029	0.0032	0.0032	100000	0	100000	0	--	--	--	--	--
	Methyl iodide	mg/kg	4	0%	4	0.00026	0.00026	0.00026	0.00055	0.0011	0.0014	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Methyl isobutyl ketone	mg/kg	29	0%	29	0.0016	0.0053	0.0055	0.0066	0.0061	0.025	0	--	--	--	--	--	--	100000	--	52000	--	--	--	--	--	--
	Methyl n-butyl ketone	mg/kg	27	0%	27	0.0013	0.0032	0.0033	0.0049	0.0037	0.025	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MTBE (Methyl tert-butyl ether)	mg/kg	1	0%	1	0.00029	--	0.00029	0.00029	--	0.00029	0	--	--	--	--	--	--	2400	--	540	--	--	--	--	--	--
	n-Butyl benzene	mg/kg	1	0%	1	0.00023	--	0.00023	0.00023	--	0.00023	0	--	--	--	--	--	--	4200	--	590	--	--	--	--	--	--
	n-Heptane	mg/kg	1	0%	1	0.0053	--	0.0053	0.0053	--	0.0053	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	n-Propyl benzene	mg/kg	1	0%	1	0.00022	--	0.00022	0.00022	--	0.00022	0	--	--	--	--	--	--	4200	--	590	--	--	--	--	--	--
	o-Xylene	mg/kg	25	0%	25	0.00024	0.0011	0.0011	0.0011	0.0012	0.0019	0	--	--	--	--	--	--	100000	--	710	--	9	--	180	--	--
	Styrene (monomer)	mg/kg	27	0%	27	0.00028	0.0011	0.0011	0.0015	0.0012	0.0061	0	--	--	--	--	--	--	100000	--	22000	--	0.2	--	4	--	--
	tert-Butyl benzene	mg/kg	1	0%	1	0.00029	--	0.00029	0.00029	--	0.00029	0	--	--	--	--	--	--	3900	--	45000	--	--	--	--	--	--
	Tetrachloroethylene	mg/kg	30	3%	29	0.00028	0.0011	0.0055	0.0044	0.0059	0.0095	1	0.0022	--	0.0022	0.0022	--	0.0022	31	0	1.7	0	0.003	0	0.06	0	--
	Toluene	mg/kg	30	0%	30	0.00013	0.0022	0.0055	0.0044	0.0059	0.0095	0	--	--	--	--	--	--	100000	--	22000	--	0.6	--	12	--	--
	trans-1,2-Dichloroethylene	mg/kg	30	0%	30	0.00022	0.0011	0.0011	0.0012	0.0012	0.0031	0	--	--	--	--	--	--	1600	--	200	--	0.03	--	0.6	--	--
	trans-1,3-Dichloropropylene	mg/kg	30	0%	30	0.00021	0.0021	0.0022	0.0023	0.0024	0.0061	0	--	--	--	--	--	--	51	--	2	--	0.0002	--	0.004	--	--
	Tribromomethane	mg/kg	30	0%	30	0.00021	0.0011	0.0011	0.0014	0.0012	0.0061	0	--	--	--	--	--	--	2000	--	240	--	0.04	--	0.8	--	--
	Trichloroethylene	mg/kg	30	3%	29	0.00028	0.0011	0.0055	0.0044	0.0059	0.0095	1	0.0018	--	0.0018	0.0018	--	0.0018	190	0	5.8	0	0.003	0	0.06	0	--
	Vinyl acetate	mg/kg	27	0%	27	0.00019	0.0011	0.0011	0.0015	0.0012	0.0061	0	--	--	--	--	--	--	13000	--	1600	--	8	--	160	--	--
	Vinyl chloride	mg/kg	30	0%	30	0.00024	0.0021	0.0022	0.0023	0.0024	0.0061	0	--	--	--	--	--	--	18	--	0.84	--	0.0007	--	0.014	--	--
	Xylenes (total)	mg/kg	6	0%	6	0.00044	0.00076	0.00088	0.0025	0.0057	0.0061	0	--	--	--	--	--	--	5800	--	710	--	10	--	200	--	--

Notes:

RBSL = Preliminary risk-based screening level from the BRC *Quality Assurance Project Plan* (QAPP; BRC and ERM 2009), and BRC's *Development of Recreational Risk-Based Screening Levels (RBSLs)* . Values used are for Trespasser/Recreational Users ('Recreate') and Maintenance Workers ('Maint. Worker').

LBCL = Leaching-based soil screening levels for the migration to groundwater pathway (from NDEP 2009).

Max = Maximum

Min = Minimum

Q1 = 1st quartile (25th percentile)

Q3 = 3rd quartile (75th percentile)

This table includes data only to 10 feet bgs. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in the tables in Appendix B, which include all data, regardless of depth.

The values used in this are simply a comparison to BRC preliminary RBSL values for historical data, for information purposes only. Use of 1/10 of the risk-based screening level in the text on page 4-4 is proposed for the identification exceeding samples for the confirmation dataset. Therefore, these are two different uses of these values and should not be considered the same.

Because both non-detect and detected radionuclides have reported activity levels, calculated summary statistics (and exceedances of comparison levels) are presented as detected regardless of the lab detect flag. Lab detect flags are represented by the censored (non-detect) and detect count fields in the table.

Values for Q1, median, mean, and Q3 are rounded to 2 significant figures.

a - Range of detections include estimated values of detect results between the detection limit and reporting limit. As such some minimum detected concentrations may be below the minimum reporting limit. In these cases the respective sample results are flagged in the dataset.

b - Values used are the maximum from the shallow soils background data set presented in the Background Shallow Soil Summary Report, BMI Complex and Common Area Vicinity (BRC/TIMET 2007).

c - ATSDR screening value of 50 parts per trillion (ppt) (see text). TCDD TEQ values are calculated from congener-specific concentrations. An individual TCDD TEQ value may include detect and non-detect congeners. Therefore, a frequency of detection for TCDD TEQ is not presented.

d - Exceedances of comparison levels for radionuclides are only shown for the eight radionuclides currently included in the project analyte list. Exceedance of background is shown for all radionuclides historically analyzed for within the Western Hook Open Space sub-area.

-- = Not applicable or no value has been established.

TABLE 2
SUMMARY OF RECENT (5TH MONITORING EVENT) ALLUVIAL AQUIFER GROUNDWATER DATA
FROM MONITORING WELLS PC-79, PC-80, PC-81, PC-88, PC-90, AND PC-94
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 6)

Class	Chemical	Units	USEPA 2002 VI SL ⁽¹⁾	MCL	NDEP Water BCL	PC-79 N Apr 2008	PC-80 N Apr 2008	PC-81 N Apr 2008	PC-88 N Apr 2008	PC-90 N May 2008	PC-94 N Apr 2008	PC-94 FD Apr 2008
Aldehydes	Acetaldehyde	µg/L		--	65.7	--	< 30 UJ	--	--	--	< 30 UJ	< 30 UJ
	Chloroacetaldehyde	µg/L		--	--	--	< 10 UJ	--	--	--	< 10 U	< 10 U
	Formaldehyde	µg/L		--	1.5	--	< 60 UJ	--	--	--	< 60 UJ	< 60 UJ
General Chemistry	Alkalinity	mg/L		--	--	238	310	342	257 J-CAB	208 J-CAB	135	127
	Ammonia	µg/L		--	730	568	786	69.6	57.3	< 7.8 U	14.2 J	66 J
	Bicarbonate alkalinity	mg/L		--	--	238	310	342	257 J-CAB	208 J-CAB	135	127
	Bromide	mg/L		--	--	0.63	0.3	0.37	0.62	0.62	0.41	0.4
	Bromine	mg/L		--	--	1.3	0.6	0.75	1.2	1.2	0.82	0.8
	Carbonate alkalinity	mg/L		--	--	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
	Chlorate	mg/L		--	--	< 0.053 U	< 0.053 U	< 0.053 U	22.9	23.5	11.7	12.1
	Chloride	mg/L		250	--	501	470	585	1550 J-CAB	1390 J-CAB	664	661
	Chlorine	mg/L		--	3.7	1000	939	1170	3090	2770	1330	1320
	Chlorite	µg/L		1,000	--	< 400 U	< 400 U	< 400 U	< 1000 U	< 1000 U	< 1000 U	< 2000 U
	Cyanide (Total)	µg/L		200	200	< 2.8 U	< 2.8 U	< 2.8 U	< 2.8 U	< 2.8 U	< 2.8 U	< 2.8 U
	Fluoride	mg/L		4	4	1.2	1.6	2.7	1.6	1.8	0.66 J	0.67 J
	Hydroxide alkalinity	mg/L		--	--	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
	Iodide	mg/L		--	--	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U
	Ion Balance Difference	percent		--	--	0.4	0.8	4.8	7	8.8	4	3.6
	Nitrate (as N)	mg/L		10	10	0.047 J-	0.014 J	0.03	8 J-	8.6	15.3 J-	15.1 J-
	Nitrite (as N)	mg/L		1	1	< 0.4 UJ	< 0.4 U	< 0.4 U	< 1 UJ	< 1 U	< 0.4 UJ	< 0.4 UJ
	Orthophosphate as P	mg/L		--	--	0.14 J-	0.28 J	< 0.05 U	0.18 J-	< 0.05 U	< 0.05 UJ	< 0.05 UJ
	Perchlorate	µg/L		18/24.5 ⁽²⁾	18	--	3.86 J	< 1 U	11800	9940 J-	1900	1940
	Sulfate	mg/L		250	--	914	578	757	1320 J-CAB	1400 J-CAB	2130	2130
	Sulfide	mg/L		--	--	< 0.18 U	< 0.18 U	< 0.18 U	< 0.18 U	7.7	< 0.18 U	< 0.18 U
	Total Inorganic Carbon	mg/L		--	--	52.2	131 J	93.8 J	61 J	61 J	31.9 J	32.6 J
	Total Kjeldahl Nitrogen (TKN)	mg/L		--	--	0.94	1.1	0.36 J	0.49 J-	< 0.25 UJ	0.27 J-	0.75 J-
	Total Organic Carbon	mg/L		--	--	< 10 U	< 10 U	12.6 J	11.6 J	< 10 U	14.6 J	11.1 J
Metals	Aluminum	µg/L		50	36,500	621 J	3550 J+	719 J+	2860	< 495.5 U	614 J	527 J
	Antimony	µg/L		6	6	< 17 U	< 17 U	< 34 U	< 34 U	< 34 U	< 34 U	< 34 U
	Arsenic	µg/L		10	10	64.1 J	85 J	< 96.5 U	< 96.5 U	102 J	< 96.5 U	< 96.5 U
	Barium	µg/L		2,000	2,000	40.5 J	98.4	< 26.2 U	57.4 J	< 26.2 U	30 J	30.1 J
	Beryllium	µg/L		4	4	< 6.4 U	< 3.2 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U
	Boron	µg/L		--	7,300	< 1800 U	877 J	1120 J	2030 J-J-CAB	1960 J-J-CAB	2010 J-	1710 J-
	Cadmium	µg/L		5	5	< 1.05 U	< 1.05 U	< 2.1 U	< 2.1 U	< 2.1 U	< 25 U	< 2.1 U
	Calcium	µg/L		--	--	232000	206000	119000	250000 J-CAB	286000 J-CAB	478000	485000
	Chromium (Total)	µg/L		100	--	< 75 U	< 75 U	< 150 U	< 150 U	< 150 U	< 150 U	< 150 U
	Chromium (VI)	mg/L		--	100	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	0.024	0.02
	Cobalt	µg/L		--	11	14.3 J	13.2 J	< 12.2 U	< 12.2 U	< 12.2 U	< 12.2 U	< 12.2 U
	Copper	µg/L		1,300	1,356	< 40.5 U	< 20.25 U	< 40.5 U	< 40.5 U	< 40.5 U	< 40.5 U	< 40.5 U
	Iron	µg/L		300	25,600	729 J-	2700	< 800 U	1930 J	< 800 U	< 800 U	< 800 U
	Lead	µg/L		15	15	< 12.3 U	< 12.3 U	< 24.6 U	< 24.6 U	< 24.6 U	< 24.6 U	< 24.6 U
	Lithium	µg/L		--	73	< 500 U	139 J	177 J	170 J	< 96.2 U	< 192.4 U	< 192.4 U
	Magnesium	µg/L		--	206,955	96400	48600	55800	113000 J-CAB	115000 J-J-CAB	183000	185000
	Manganese	µg/L		50	511	1460	810	612	982	228	< 30 U	< 30 U
	Mercury	µg/L		2	11	< 0.0612 U	< 0.0612 U	< 0.0612 U	< 0.0612 U	< 0.0612 U	< 0.0612 U	< 0.0612 U
	Molybdenum	µg/L		--	183	31.4 J	22.1 J	< 22.4 U	55.3 J	63.6 J	117 J	110 J
	Nickel	µg/L		--	730	36.5 J	38.7 J	38.7 J	< 24.335 U	< 24.335 U	< 24.335 U	< 24.335 U
	Niobium	µg/L		--	--	< 137.5 U	< 68.75 U	< 137.5 U	< 137.5 U	< 137.5 U	< 137.5 U	< 137.5 U
	Palladium	µg/L		--	--	12.2 J	0.97 J	6.3	13.2 J-	23.5 J-	18.8 J-	17 J-
	Phosphorus (as P)	µg/L		25 ⁽³⁾	--	< 950 U	< 475 U	< 950 U	< 950 U	< 950 U	< 950 U	< 950 U
	Platinum	µg/L		--	--	< 4.25 U	< 2.125 U	< 4.25 U	< 4.25 U	< 4.25 U	< 4.25 U	< 4.25 U
	Potassium	µg/L		--	--	20500	20900	22700	26600 J-CAB	20800 J-CAB	47700	46400

TABLE 2
SUMMARY OF RECENT (5TH MONITORING EVENT) ALLUVIAL AQUIFER GROUNDWATER DATA
FROM MONITORING WELLS PC-79, PC-80, PC-81, PC-88, PC-90, AND PC-94
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 6)

Class	Chemical	Units	USEPA 2002 VI SL ⁽¹⁾	MCL	NDEP Water BCL	PC-79 N Apr 2008	PC-80 N Apr 2008	PC-81 N Apr 2008	PC-88 N Apr 2008	PC-90 N May 2008	PC-94 N Apr 2008	PC-94 FD Apr 2008
Metals	Selenium	µg/L		50	50	< 12.01 U	< 12.01 U	< 24.02 U	< 12.01 U	26.2 J	< 24.02 U	< 24.02 U
	Silicon	µg/L		--	--	20100	44000	39200	44700 J-CAB	34400 J-CAB	36100	34800
	Silver	µg/L		100	183	< 5.07 U	< 5.07 U	< 10.14 U	< 10.14 U	< 10.14 U	< 10.14 U	< 10.14 U
	Sodium	µg/L		--	--	418000	413000	642000	1010000 J-CAB	860000 J-CAB	480000	476000
	Strontium	µg/L		--	21,900	5480	3700	4700	6570	7180	9800	10200
	Sulfur	µg/L		--	--	320000 J	195000	258000	395000	449000	579000	619000
	Thallium	µg/L		2	2	< 33.75 U	< 3.375 U	< 6.75 U	< 6.75 U	< 6.75 U	< 6.75 U	< 6.75 U
	Tin	µg/L		--	21,900	< 17 U	< 17 U	< 34 U	< 34 U	< 34 U	< 34 U	< 34 U
	Titanium	µg/L		--	146,000	29.4 J+	181	72.8 J	< 50.5 U	< 50.5 U	< 50.5 U	< 50.5 U
	Tungsten	µg/L		--	274	< 37.75 U	< 37.75 U	< 75.5 U	< 75.5 U	< 75.5 U	< 75.5 U	< 75.5 U
	Uranium	µg/L		30	30	27.7	28	30.7 J	27.6 J	36.7 J	27.7 J	27.7 J
	Vanadium	µg/L		--	183	< 52.275 U	< 52.275 U	< 104.55 U	< 104.55 U	< 104.55 U	< 104.55 U	< 104.55 U
	Zinc	µg/L		500	10,950	< 100 UJ	< 100 U	< 200 U	595	< 200 U	< 200 U	< 200 U
	Zirconium	µg/L		--	--	< 45 U	< 22.5 U	< 45 U	< 45 U	< 45 U	< 45 U	< 45 U
Organic Acids	4-Chlorobenzenesulfonic acid	mg/L		--	36,500	< 0.05 U	< 0.05 U	< 0.05 U	--	--	< 0.05 U	< 0.05 U
	Benzenesulfonic acid	mg/L		--	18,250	< 0.05 U	< 0.05 U	< 0.05 U	--	--	< 0.05 U	< 0.05 U
	Diethyl phosphorodithioic acid	mg/L		--	2,920	< 0.05 U	< 0.05 U	< 0.05 U	--	--	< 0.05 U	< 0.05 U
	Dimethyl phosphorodithioic acid	mg/L		--	3,650	< 0.25 U	< 0.25 U	< 0.25 U	--	--	< 0.25 U	< 0.25 U
	Phthalic acid	mg/L		--	73,000	< 0.05 U	< 0.05 U	< 0.05 U	--	--	< 0.05 U	< 0.05 U
Organo- chlorine Pesticides	2,4-DDD	µg/L		--	--	< 0.0071 U	< 0.0071 U	< 0.0071 U	< 0.0071 U	< 0.0071 U	--	--
	2,4-DDE	µg/L		--	--	< 0.012 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.012 U	--	--
	4,4-DDD	µg/L		--	0.28	< 0.0075 U	< 0.0075 U	< 0.0075 U	< 0.0075 U	< 0.0075 U	--	--
	4,4-DDE	µg/L		--	0.2	< 0.013 U	< 0.013 U	< 0.013 U	< 0.013 U	< 0.013 U	--	--
	4,4-DDT	µg/L		--	0.2	< 0.013 U	< 0.013 U	< 0.013 U	< 0.013 U	< 0.013 U	--	--
	Aldrin	µg/L		--	0.004	< 0.0044 U	< 0.0044 U	< 0.0044 U	< 0.0044 U	< 0.0044 U	--	--
	alpha-BHC	µg/L		--	0.011	0.14	0.24	0.17	0.27	0.18	--	--
	alpha-Chlordane	µg/L		--	--	< 0.0057 U	< 0.0057 U	< 0.0057 U	< 0.0057 U	< 0.0057 U	--	--
	beta-BHC	µg/L		--	0.037	0.65	0.25	0.42	0.16	0.2	--	--
	Chlordane	µg/L		2	2	< 0.099 U	< 0.099 U	< 0.099 U	< 0.099 U	< 0.099 U	--	--
	delta-BHC	µg/L		--	--	0.11	0.27	0.24	0.86	0.52	--	--
	Dieldrin	µg/L		--	0.0042	< 0.0057 U	< 0.0057 U	< 0.0057 U	< 0.0057 U	< 0.0057 U	--	--
	Endosulfan I	µg/L		--	--	< 0.0078 U	< 0.0078 U	< 0.0078 U	< 0.0078 U	< 0.0078 U	--	--
	Endosulfan II	µg/L		--	--	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	--	--
	Endosulfan sulfate	µg/L		--	--	< 0.0063 U	< 0.0063 U	< 0.0063 U	< 0.0063 U	< 0.0063 U	--	--
	Endrin	µg/L		2	2	< 0.0068 U	< 0.0068 U	< 0.0068 U	< 0.0068 U	< 0.0068 U	--	--
	Endrin aldehyde	µg/L		--	--	< 0.009 U	< 0.009 U	< 0.009 U	< 0.009 U	< 0.009 U	--	--
	Endrin ketone	µg/L		--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	--
	gamma-Chlordane	µg/L		--	--	< 0.0088 U	< 0.0088 U	< 0.0088 U	< 0.0088 U	< 0.0088 U	--	--
	Heptachlor	µg/L		0.4	0.4	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	--	--
	Heptachlor epoxide	µg/L		0.2	0.2	< 0.0062 U	< 0.0062 U	< 0.0062 U	< 0.0062 U	< 0.0062 U	--	--
	Lindane	µg/L		0.2	0.2	< 0.0032 U	< 0.0032 U	< 0.0032 U	< 0.0032 U	< 0.0032 U	--	--
	Methoxychlor	µg/L		40	40	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	--	--
	Toxaphene	µg/L		3	3	< 0.59 U	< 0.59 U	< 0.59 U	< 0.59 U	< 0.59 U	--	--
Radio- nuclides	Radium-226	pCi/L		--	--	--	0.61 U	0.543 U	0.677	0.212 U	0.481 U	0.602
	Radium-228	pCi/L		--	--	--	0.464 U	0.356 U	1.21	1.05	2.84 J	0.168 UJ
	Radium-226/228	pCi/L		5 ⁽⁶⁾	--	--	1.1	0.90	1.9	1.3	3.3	0.77
	Thorium-228	pCi/L		--	--	--	0.136 U	0.0798 U	1.94 J	0.185 U	2.07 J	1.98 J
	Thorium-230	pCi/L		--	--	--	0.0948 U	0.364 U	1 U	0.426 U	0.236 U	0.0738 U
	Thorium-232	pCi/L		--	--	--	0.0766 U	-0.0187 U	0.285 U	-0.0251 U	-0.00399 U	-0.159 U
	Uranium-233/234	pCi/L		--	--	--	15.2	16.6	17.3 J	1.97	15.2 J	16.4 J
	Uranium-235/236	pCi/L		--	--	--	1.44	1.44	1.12	0.0667	1.48	0.591
	Uranium-238	pCi/L		--	--	--	10.3	11.4	11.2	1.15	10.9	9.59

TABLE 2
SUMMARY OF RECENT (5TH MONITORING EVENT) ALLUVIAL AQUIFER GROUNDWATER DATA
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WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 3 of 6)

Class	Chemical	Units	USEPA 2002 VI SL ⁽¹⁾	MCL	NDEP Water BCL	PC-79 N Apr 2008	PC-80 N Apr 2008	PC-81 N Apr 2008	PC-88 N Apr 2008	PC-90 N May 2008	PC-94 N Apr 2008	PC-94 FD Apr 2008
SVOCs	1,2,4,5-Tetrachlorobenzene	µg/L		--	11	--	--	--	--	--	--	--
	1,2-Diphenylhydrazine	µg/L		--	0.084	--	--	--	--	--	--	--
	1,4-Dioxane	µg/L		--	6.1	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	µg/L		--	3,650	--	--	--	--	--	--	--
	2,4,6-Trichlorophenol	µg/L		--	6.1	--	--	--	--	--	--	--
	2,4-Dichlorophenol	µg/L		--	110	--	--	--	--	--	--	--
	2,4-Dimethylphenol	µg/L		--	730	--	--	--	--	--	--	--
	2,4-Dinitrophenol	µg/L		--	73	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	µg/L		--	0.22	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	µg/L		--	36.5	--	--	--	--	--	--	--
	2-Chloronaphthalene	µg/L		--	2920	--	--	--	--	--	--	--
	2-Chlorophenol	µg/L		--	183	--	--	--	--	--	--	--
	2-Methylnaphthalene	µg/L		--	--	--	--	--	--	--	--	--
	2-Nitroaniline	µg/L		--	110	--	--	--	--	--	--	--
	2-Nitrophenol	µg/L		--	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	µg/L		--	0.15	--	--	--	--	--	--	--
	3-Methylphenol/4-Methylphenol	µg/L		--	183	--	--	--	--	--	--	--
	3-Nitroaniline	µg/L		--	--	--	--	--	--	--	--	--
	4-Bromophenyl phenyl ether	µg/L		--	--	--	--	--	--	--	--	--
	4-Chloro-3-Methylphenol	µg/L		--	--	--	--	--	--	--	--	--
	4-Chlorophenyl phenyl ether	µg/L		--	--	--	--	--	--	--	--	--
	4-Chlorothioanisole	µg/L		--	--	--	--	--	--	--	--	--
	4-Nitrophenol	µg/L		--	292	--	--	--	--	--	--	--
	Acenaphthene	µg/L		--	2,190	--	--	--	--	--	--	--
	Acenaphthylene	µg/L		--	1,095	--	--	--	--	--	--	--
	Acetophenone	µg/L		--	3,650	--	--	--	--	--	--	--
	Aniline	µg/L		--	11.8	--	--	--	--	--	--	--
	Anthracene	µg/L		--	10,940	--	--	--	--	--	--	--
	Azobenzene	µg/L		--	0.54	--	--	--	--	--	--	--
	Benzenethiol	µg/L		--	--	--	--	--	--	--	--	--
	Benzo(a)anthracene	µg/L		--	0.092	--	--	--	--	--	--	--
	Benzo(a)pyrene	µg/L			0.2	0.2	--	--	--	--	--	--
	Benzo(b)fluoranthene	µg/L		--	0.092	--	--	--	--	--	--	--
	Benzo(g,h,i)perylene	µg/L		--	1,095	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	µg/L		--	0.92	--	--	--	--	--	--	--
	Benzoic acid	µg/L		--	146,000	--	--	--	--	--	--	--
	Benzyl alcohol	µg/L		--	18,250	--	--	--	--	--	--	--
	Benzyl butyl phthalate	µg/L		--	7,300	--	--	--	--	--	--	--
	bis(2-Chloroethoxy) methane	µg/L		--	--	--	--	--	--	--	--	--
	bis(2-Chloroethyl) ether	µg/L		--	0.054	--	--	--	--	--	--	--
	bis(2-Chloroisopropyl) ether	µg/L		--	0.9	--	--	--	--	--	--	--
	bis(2-Ethylhexyl) phthalate	µg/L			6	6	--	--	--	--	--	--
	bis(p-Chlorophenyl) disulfide	µg/L		--	--	--	--	--	--	--	--	--
	bis(p-Chlorophenyl) sulfone	µg/L		--	--	--	--	--	--	--	--	--
Carbazole	µg/L		--	3.4	--	--	--	--	--	--	--	
Chrysene	µg/L		--	9.2	--	--	--	--	--	--	--	
Dibenzo(a,h)anthracene	µg/L		--	0.0092	--	--	--	--	--	--	--	
Dibenzofuran	µg/L		--	73	--	--	--	--	--	--	--	
Dibutyl phthalate	µg/L		--	3,650	--	--	--	--	--	--	--	
Diethyl phthalate	µg/L		--	29,200	--	--	--	--	--	--	--	
Dimethyl phthalate	µg/L		--	365,000	--	--	--	--	--	--	--	
Di-n-octyl phthalate	µg/L		--	--	--	--	--	--	--	--	--	

TABLE 2
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WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 6 of 6)

Class	Chemical	Units	USEPA 2002 VI SL ⁽¹⁾	MCL	NDEP Water BCL	PC-79 N Apr 2008	PC-80 N Apr 2008	PC-81 N Apr 2008	PC-88 N Apr 2008	PC-90 N May 2008	PC-94 N Apr 2008	PC-94 FD Apr 2008
VOCs	Tribromomethane	µg/L		80 ⁽⁷⁾	8.5	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U	< 0.27 U
	Trichloroethene	µg/L		5	5	0.19 J	< 0.11 U	< 0.11 U	0.57 J	0.51 J	< 0.11 U	< 0.11 U
	Vinyl acetate	µg/L		--	16,222	< 0.22 U	< 0.22 U	< 0.22 U	< 0.22 U	< 0.22 U	< 0.22 U	< 0.22 U
	Vinyl chloride	µg/L		2	2	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U	< 0.13 U
	Xylenes (total)	µg/L		10,000	10,000	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U
Water Quality Parameters	Conductivity	umhos/cm		--	--	3690	3130	3890	6690	6240	5210	5240
	Hardness, Total	mg/L		--	--	980	720	520	1180	598	2040	2060
	pH (Hydrogen Ion)	--		6.5-9 ⁽³⁾	--	7.2 J	7.4 J	7.4 J	7.2 J	7.3 J	7.3 J	7.2 J
	Total Dissolved Solids	mg/L		500	--	3000	2270	2860	4360	4810	4160	4680
	Total Suspended Solids	mg/L		--	--	67	187	41	55	9	24	23

⁽¹⁾Groundwater to indoor air vapor intrusion screening level; from USEPA. 2002. Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). Table 2c (Generic Screening Levels and Summary Sheet; Risk = 1 x 10⁻⁶). Note: Not included as a comparison value for this sub-area.

⁽²⁾A MCL for perchlorate has not been promulgated. The USEPA Drinking Water Equivalent Level of 24.5 ug/L was used.

⁽³⁾A NDEP water quality standard was used for Class A (municipal or domestic supply) waters for pH and total phosphorus based on Nevada Administrative Code (NAC) 445A.118 through 445A.225.

⁽⁴⁾The MCL for Alpha Particles was used as comparison to Gross Alpha results. The MCL excludes the contributions from radon and uranium. The Gross Alpha concentrations were not adjusted due to contributions from radon nor uranium prior to comparison to MCL.

⁽⁵⁾The MCL for Beta particles photon emitters is 4 millirems per year and was not used to compare to Gross Beta concentrations.

⁽⁶⁾The constituent is regulated under the MCL for the combined concentration of radium-226 and radium-228. For comparison to the MCL, concentrations of both constituents are summed.

⁽⁷⁾The constituent is regulated under the MCL for Total Trihalomethanes (TTHM). For comparison to the MCL for TTHM, concentrations of all TTHM constituents need to be considered. Chloroform was the only TTHM detected and the detection limits of all TTHM analyzed for do not sum to a concentration that would exceed the TTHM MCL.

Bold values indicate value exceeds lowest comparison level; *italicized* values indicate detection limit exceeds lowest comparison level.

TABLE 3
2008 DEBRIS SURVEY RESULTS
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 1 of 1)

Station No.	Item Descriptions	Sample Location
D1	Burned tires by MW PC-94	OSC1-JS06
D2	Lumber, paint cans	None
D3	Two 5-gallon spilled buckets of petroleum product	OSC1-JS07
D4	Large soil stockpile mixed with debris, scattered furniture, lumber, metal and plastic parts, concrete	None
D5	Concrete debris, soil stockpiles, trash, plant cuttings, glass, five 1-qt oil containers (empty)	OSC1-JS08

Notes:

Results are based on a ground survey conducted December 2008.

See Table 5 for analyses at each sample location.

All debris locations will be removed/scraped prior to initiation of sampling activities at the Site.

TABLE 4
SAMPLE-SPECIFIC COLLECTION DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 3)

Sample Location	Sample Type	Grading Plan	Sample Depth 1	Sample Depth 2	Sample Depth 3
OSC1-BG18	Random	Fill +1	0 (Surface)	10 (Subsurface)	--
OSC1-BH18	Random with Flux	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-BH19	Random	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-BI18	Random with Flux	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-BI19	Random	Cut -8	0 (Fill/Surface)	8 (Surface)	18 (Subsurface)
OSC1-BJ18	Random with Flux	Fill +1	0 (Surface)	10 (Subsurface)	--
OSC1-BJ19	Random	Cut -10	0 (Fill/Surface)	10 (Surface)	20 (Subsurface)
OSC1-BK19	Random	Cut -7	0 (Fill/Surface)	7 (Surface)	17 (Subsurface)
OSC1-BL12	Random with Flux	Fill +5	0 (Surface)	10 (Subsurface)	--
OSC1-BL13	Random with Flux	Fill +2	0 (Surface)	10 (Subsurface)	--
OSC1-BL14	Random with Flux	Fill +2	0 (Surface)	10 (Subsurface)	--
OSC1-BL15	Random with Flux	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
OSC1-BL16	Random with Flux	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-BL17	Random with Flux	Fill +2	0 (Surface)	10 (Subsurface)	--
OSC1-BL18	Random with Flux	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-BL19	Random with Flux	Cut -6	0 (Fill/Surface)	6 (Surface)	16 (Subsurface)
OSC1-BM11	Random	Fill +5	0 (Surface)	10 (Subsurface)	--
OSC1-BM12	Random with Flux	Fill +4	0 (Surface)	10 (Subsurface)	--
OSC1-BM13	Random with Flux	Fill +5	0 (Surface)	10 (Subsurface)	--
OSC1-BM14	Random	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-BM15	Random	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
OSC1-BM16	Random with Flux	Fill +4	0 (Surface)	10 (Subsurface)	--
OSC1-BM17	Random with Flux	Fill +3	0 (Surface)	10 (Subsurface)	--
OSC1-BM18	Random	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
OSC1-BM19	Random with Flux	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-BM20	Random	Cut -6	0 (Fill/Surface)	6 (Surface)	16 (Subsurface)
OSC1-BN11	Random	Fill +5	0 (Surface)	5 (Subsurface)*	--
OSC1-BN12	Random with Flux	Fill +5	0 (Surface)	5 (Subsurface)*	--
OSC1-BN13	Random with Flux	-- 0	0 (Surface)	5 (Subsurface)*	--
OSC1-BN14	Random	Fill +2	0 (Surface)	5 (Subsurface)*	--
OSC1-BN15	Random	-- 0	0 (Surface)	5 (Subsurface)*	--
OSC1-BN16	Random with Flux	Fill +4	0 (Surface)	5 (Subsurface)*	--
OSC1-BN17	Random with Flux	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-BN18	Random	Cut -1	0 (Fill/Surface)	5 (Subsurface)*	--
OSC1-BN19	Random with Flux	Cut -1	0 (Fill/Surface)	5 (Subsurface)*	--
OSC1-BN20	Random	Cut -1	0 (Fill/Surface)	5 (Subsurface)*	--
OSC1-BO11	Random with Flux	-- 0	0 (Surface)	5 (Subsurface)*	--
OSC1-BO12	Random with Flux	Fill +1	0 (Surface)	5 (Subsurface)*	--
OSC1-BO13	Random with Flux	Cut -2	0 (Fill/Surface)	5 (Subsurface)*	--
OSC1-BO14	Random	Fill +7	0 (Surface)	5 (Subsurface)*	--
OSC1-BO15	Random	Fill +7	0 (Surface)	5 (Subsurface)*	--
OSC1-BO16	Random with Flux	Fill +6	0 (Surface)	5 (Subsurface)*	--
OSC1-BO17	Random	Fill +6	0 (Surface)	5 (Subsurface)*	--
OSC1-BO18	Random	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-BO19	Random with Flux	-- 0	0 (Surface)	5 (Subsurface)*	--
OSC1-BO20	Random	Fill +4	0 (Surface)	5 (Subsurface)*	--

TABLE 4
SAMPLE-SPECIFIC COLLECTION DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 3)

Sample Location	Sample Type	Grading Plan	Sample Depth 1	Sample Depth 2	Sample Depth 3
OSC1-BP11	Random with Flux	Fill +1	0 (Surface)	5 (Subsurface)*	--
OSC1-BP12	Random with Flux	-- 0	0 (Surface)	5 (Subsurface)*	--
OSC1-BP13	Random	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-BP14	Random	Fill +4	0 (Surface)	5 (Subsurface)*	--
OSC1-BP15	Random	Fill +2	0 (Surface)	5 (Subsurface)*	--
OSC1-BP16	Random	Fill +7	0 (Surface)	5 (Subsurface)*	--
OSC1-BP17	Random	Fill +7	0 (Surface)	5 (Subsurface)*	--
OSC1-BP18	Random with Flux	Fill +4	0 (Surface)	5 (Subsurface)*	--
OSC1-BP19	Random with Flux	Fill +6	0 (Surface)	5 (Subsurface)*	--
OSC1-BP20	Random	Cut -1	0 (Fill/Surface)	5 (Subsurface)*	--
OSC1-JD01	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD02	Ditch	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JD03	Ditch	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JD04	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD05	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD06	Ditch with Flux	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-JD07	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD08	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD09	Ditch with Flux	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JD10	Ditch	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-JD11	Ditch with Flux	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-JD12	Ditch	Fill +1	0 (Surface)	10 (Subsurface)	--
OSC1-JD13	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD14	Ditch	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JD15	Ditch with Flux	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JD16	Ditch	Fill +1	0 (Surface)	5 (Subsurface)*	--
OSC1-JD17	Ditch with Flux	Fill +2	0 (Surface)	5 (Subsurface)*	--
OSC1-JD18	Ditch	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-JD19	Ditch with Flux	Fill +4	0 (Surface)	5 (Subsurface)*	--
OSC1-JD20	Ditch	Fill +5	0 (Surface)	5 (Subsurface)*	--
OSC1-JD21	Ditch	-- 0	0 (Surface)	5 (Subsurface)*	--
OSC1-JD22	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD23	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD24	Ditch	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JD25	Ditch	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JD26	Ditch with Flux	-- 0	0 (Surface)	10 (Subsurface)	--
OSC1-JD27	Ditch	-- 0	0 (Surface)	5 (Subsurface)*	--
OSC1-JD28	Ditch with Flux	Fill +2	0 (Surface)	5 (Subsurface)*	--
OSC1-JD29	Ditch	Fill +5	0 (Surface)	5 (Subsurface)*	--
OSC1-JD30	Ditch with Flux	Fill +2	0 (Surface)	5 (Subsurface)*	--
OSC1-JD31	Ditch	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-JD32	Ditch	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-JD33	Ditch	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-JD34	Ditch with Flux	Fill +4	0 (Surface)	5 (Subsurface)*	--
OSC1-JD35	Ditch	Fill +4	0 (Surface)	5 (Subsurface)*	--
OSC1-JD36	Ditch	Fill +3	0 (Surface)	5 (Subsurface)*	--

TABLE 4
SAMPLE-SPECIFIC COLLECTION DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 3 of 3)

Sample Location	Sample Type	Grading Plan	Sample Depth 1	Sample Depth 2	Sample Depth 3
OSC1-JP01	Biased with Flux	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-JP02	Biased with Flux	Fill +6	0 (Surface)	5 (Subsurface)*	--
OSC1-JP03	Biased with Flux	Fill +1	0 (Surface)	10 (Subsurface)	--
OSC1-JP04	Biased	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
OSC1-JP05	Biased with Flux	Fill +3	0 (Surface)	10 (Subsurface)	--
OSC1-JP06	Biased with Flux	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-JP07	Biased	Fill +2	0 (Surface)	5 (Subsurface)*	--
OSC1-JP08	Biased with Flux	Fill +1	0 (Surface)	10 (Subsurface)	--
OSC1-JP09	Biased with Flux	Fill +6	0 (Surface)	5 (Subsurface)*	--
OSC1-JP10	Biased with Flux	Fill +7	0 (Surface)	5 (Subsurface)*	--
OSC1-JP11	Biased with Flux	Fill +6	0 (Surface)	5 (Subsurface)*	--
OSC1-JS01	Biased with Flux	Fill +9	0 (Surface)	5 (Subsurface)*	--
OSC1-JS02	Biased	Fill +9	0 (Surface)	5 (Subsurface)*	--
OSC1-JS03	Biased with Flux	Fill +7	0 (Surface)	5 (Subsurface)*	--
OSC1-JS04	Biased with Flux	Fill +5	0 (Surface)	5 (Subsurface)*	--
OSC1-JS05	Biased with Flux	Fill +3	0 (Surface)	5 (Subsurface)*	--
OSC1-JS06	Biased with Flux	Fill +5	0 (Surface)	5 (Subsurface)*	--
OSC1-JS07	Biased with Flux	Cut -7	0 (Fill/Surface)	7 (Surface)	17 (Subsurface)
OSC1-JS08	Biased with Flux	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
OSC1-JS09	Biased	Cut -2	0 (Fill/Surface)	5 (Subsurface)*	--

Note: Because sample collection will be over a two to three foot depth interval, sample locations with an anticipated cut depth less than three feet will only be sampled at the surface and one post-grade subsurface depth.

*Because groundwater at the northern portion of this Site is less than 10 ft bgs, samples at these sample locations will be collected at a maximum depth of 5 feet bgs (see text).

Yellow shaded locations OSC1-BG18 and OSC1-BM11) indicates deep soil samples will be collected for physical parameter analyses.

Green shaded locations OSC1-BM15 and OSC1-BO17) indicates subsurface soil samples will also include synthetic precipitation leaching procedure (SPLP) sampling and analysis. Depths are in feet bgs (current grade).

TABLE 5
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 12)

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Ions	EPA 300.0	Bromide	24959-67-9	✓	✓	(g)	(h)
		Bromine	7726-95-6	(a)	(a)	(a)	(h)
		Chlorate	14866-68-3	✓	✓	(g)	(h)
		Chloride	16887-00-6	✓	✓	(g)	(h)
		Chlorine (soluble)	7782-50-5	(a)	(a)	(a)	(h)
		Chlorite	14998-27-7	(a)	(a)	(a)	(h)
		Fluoride	16984-48-8	✓	✓	(g)	(h)
		Nitrate (as N)	14797-55-8	✓	✓	(g)	(h)
		Nitrite (as N)	14797-65-0	✓	✓	(g)	(h)
		Orthophosphate	14265-44-2	✓	✓	(g)	(h)
		Sulfate	14808-79-8	✓	✓	(g)	(h)
	EPA 377.1	Sulfite	14265-45-3	(a)	(a)	(a)	(h)
	EPA 314.0	Perchlorate	14797-73-0	✓	✓	(g)	✓
Dissolved Gases	RSK 175	Ethane	74-84-0	(a)	(a)	(a)	(h)
		Ethylene	74-85-1	(a)	(a)	(a)	(h)
		Methane	74-82-8	(a)	(a)	(a)	(h)
Chlorinated Compounds	EPA 551.1	Chloral	75-87-6	(i)	(i)	(g)	(h)
		Dichloroacetaldehyde	79-02-7	(i)	(i)	(g)	(h)
Polychlorinated Dibenzo-dioxins/ Dibenzofurans	EPA 8290	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	✓	(e)	(e)	(h)
		1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	✓	(e)	(e)	(h)
		1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	✓	(e)	(e)	(h)
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	✓	(e)	(e)	(h)
		1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	✓	(e)	(e)	(h)
		1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	✓	(e)	(e)	(h)
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	✓	(e)	(e)	(h)
		1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	✓	(e)	(e)	(h)
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	✓	(e)	(e)	(h)
		1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	✓	(e)	(e)	(h)
		1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	✓	(e)	(e)	(h)
		1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	✓	(e)	(e)	(h)
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	✓	(e)	(e)	(h)
		2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	✓	(e)	(e)	(h)
		2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	✓	(e)	(e)	(h)
		2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	✓	(e)	(e)	(h)
		2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	✓	(e)	(e)	(h)
Asbestos	Elutriator/TEM	Asbestos	1332-21-4	✓	(f)	(f)	(h)

TABLE 5
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 12)

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
General Chemistry Parameters	EPA 350.2	Ammonia (as N)	7664-41-7	✓	✓	(g)	(h)
	EPA 9010/9014	Cyanide (Total)	57-12-5	✓	✓	(g)	(h)
	EPA 345.1	Iodine	7553-56-2	(a)	(a)	(a)	(h)
	EPA 9045C	pH in soil	pH	✓	✓	✓	(h)
	EPA 9040B	pH in water	pH	(a)	(a)	(a)	(h)
	EPA 376.1/376.2	Sulfide	18496-25-8	✓	✓	(g)	(h)
	Mod. EPA 415.1	Total inorganic carbon	7440-44-0	✓	✓	(g)	(h)
	EPA 351.2	Total Kjeldahl nitrogen (TKN)	TKN	✓	✓	(g)	(h)
	EPA 415.1	Total organic carbon (TOC)	7440-44-0	✓	✓	✓	(h)
Metals	EPA 6020/6010B	Aluminum	7429-90-5	✓	✓	(g)	✓
		Antimony	7440-36-0	✓	✓	(g)	✓
		Arsenic	7440-38-2	✓	✓	(g)	✓
		Barium	7440-39-3	✓	✓	(g)	✓
		Beryllium	7440-41-7	✓	✓	(g)	✓
		Boron	7440-42-8	✓	✓	(g)	✓
		Cadmium	7440-43-9	✓	✓	(g)	✓
		Calcium	7440-70-2	✓	✓	(g)	✓
		Chromium	7440-47-3	✓	✓	(g)	✓
		Cobalt	7440-48-4	✓	✓	(g)	✓
		Copper	7440-50-8	✓	✓	(g)	✓
		Iron	7439-89-6	✓	✓	(g)	✓
		Lead	7439-92-1	✓	✓	(g)	✓
		Lithium	1313-13-9	✓	✓	(g)	✓
		Magnesium	7439-95-4	✓	✓	(g)	✓
		Manganese	7439-96-5	✓	✓	(g)	✓
		Molybdenum	7439-98-7	✓	✓	(g)	✓
		Nickel	7440-02-0	✓	✓	(g)	✓
		Niobium	7440-03-1	(i)	(i)	(g)	✓
		Palladium	7440-05-3	(i)	(i)	(g)	✓
		Phosphorus	7723-14-0	(i)	(i)	(g)	✓
		Platinum	7440-06-4	(i)	(i)	(g)	✓
		Potassium	7440-09-7	✓	✓	(g)	✓
		Selenium	7782-49-2	✓	✓	(g)	✓
		Silicon	7440-21-3	(i)	(i)	(g)	✓
		Silver	7440-22-4	✓	✓	(g)	✓
		Sodium	7440-23-5	✓	✓	(g)	✓
		Strontium	7440-24-6	✓	✓	(g)	✓

TABLE 5
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Metals (continued)	EPA 6020/6010B	Sulfur	7704-34-9	(i)	(i)	(g)	✓
		Thallium	7440-28-0	✓	✓	(g)	✓
		Tin	7440-31-5	✓	✓	(g)	✓
		Titanium	7440-32-6	✓	✓	(g)	✓
		Tungsten	7440-33-7	✓	✓	(g)	✓
		Uranium	7440-61-1	✓	✓	(g)	✓
		Vanadium	7440-62-2	✓	✓	(g)	✓
		Zinc	7440-66-6	✓	✓	(g)	✓
		Zirconium	7440-67-7	(i)	(i)	(g)	✓
	EPA 7196A	Chromium (VI)	18540-29-9	✓	✓	(g)	✓
	EPA 7470/7471A	Mercury	7439-97-6	✓	✓	(g)	✓
Organophosphorous Pesticides	EPA 8141A	Azinphos-ethyl	264-27-19	(b)	(b)	(b)	(h)
		Azinphos-methyl	86-50-0	(b)	(b)	(b)	(h)
		Carbophenothion	786-19-6	(b)	(b)	(b)	(h)
		Chlorpyrifos	2921-88-2	(b)	(b)	(b)	(h)
		Coumaphos	56-72-4	(b)	(b)	(b)	(h)
		Demeton-O	298-03-3	(b)	(b)	(b)	(h)
		Demeton-S	126-75-0	(b)	(b)	(b)	(h)
		Diazinon	333-41-5	(b)	(b)	(b)	(h)
		Dichlorvos	62-73-7	(b)	(b)	(b)	(h)
		Dimethoate	60-51-5	(b)	(b)	(b)	(h)
		Disulfoton	298-04-4	(b)	(b)	(b)	(h)
		EPN	2104-64-5	(b)	(b)	(b)	(h)
		Ethoprop	13194-48-4	(b)	(b)	(b)	(h)
		Ethyl parathion	56-38-2	(b)	(b)	(b)	(h)
		Fampphur	52-85-7	(b)	(b)	(b)	(h)
		Fenthion	55-38-9	(b)	(b)	(b)	(h)
		Malathion	121-75-5	(b)	(b)	(b)	(h)
		Methyl carbophenothion	953-17-3	(b)	(b)	(b)	(h)
		Methyl parathion	298-00-0	(b)	(b)	(b)	(h)
		Mevinphos	7786-34-7	(b)	(b)	(b)	(h)
		Naled	300-76-5	(b)	(b)	(b)	(h)
		O,O,O-Triethyl phosphorothioate (TEPP)	297-97-2	(b)	(b)	(b)	(h)
		Phorate	298-02-2	(b)	(b)	(b)	(h)

TABLE 5
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 4 of 12)

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Organophosphorous Pesticides (continued)	EPA 8141A	Phosmet	732-11-6	(b)	(b)	(b)	(h)
		Ronnel	299-84-3	(b)	(b)	(b)	(h)
		Stiropfos (Tetrachlorovinphos)	22248-79-9	(b)	(b)	(b)	(h)
		Sulfotep	3689-24-5	(b)	(b)	(b)	(h)
Chlorinated Herbicides	EPA 8151A	2,4,5-T	93-76-5	(b)	(b)	(b)	(h)
		2,4,5-TP (Silvex)	93-72-1	(b)	(b)	(b)	(h)
		2,4-D	94-75-7	(b)	(b)	(b)	(h)
		2,4-DB	94-82-6	(b)	(b)	(b)	(h)
		Dalapon	75-99-0	(b)	(b)	(b)	(h)
		Dicamba	1918-00-9	(b)	(b)	(b)	(h)
		Dichloroprop	120-36-5	(b)	(b)	(b)	(h)
		Dinoseb	88-85-7	(b)	(b)	(b)	(h)
		MCPA	94-74-6	(b)	(b)	(b)	(h)
		MCPP	93-65-2	(b)	(b)	(b)	(h)
Organic Acids	HPLC	4-Chlorobenzene sulfonic acid	98-66-8	(b)	(b)	(b)	(h)
		Benzenesulfonic acid	98-11-3	(b)	(b)	(b)	(h)
		O,O-Diethylphosphorodithioic acid	298-06-6	(b)	(b)	(b)	(h)
		O,O-Dimethylphosphorodithioic acid	756-80-9	(b)	(b)	(b)	(h)
Nonhalogenated Organics	EPA 8015B	Ethylene glycol	107-21-1	(b)	(b)	(b)	(h)
		Ethylene glycol monobutyl ether	111-76-2	(b)	(b)	(b)	(h)
		Methanol	67-56-1	(b)	(b)	(b)	(h)
		Propylene glycol	57-55-6	(b)	(b)	(b)	(h)
Organochlorine Pesticides	EPA 8081A	2,4-DDD	53-19-0	✓	✓	(g)	✓
		2,4-DDE	3424-82-6	✓	✓	(g)	✓
		4,4-DDD	72-54-8	✓	✓	(g)	✓
		4,4-DDE	72-55-9	✓	✓	(g)	✓
		4,4-DDT	50-29-3	✓	✓	(g)	✓
		Aldrin	309-00-2	✓	✓	(g)	✓
		alpha-BHC	319-84-6	✓	✓	(g)	✓
		alpha-Chlordane	5103-71-9	✓	✓	(g)	✓
		beta-BHC	319-85-7	✓	✓	(g)	✓
		Chlordane	57-74-9	✓	✓	(g)	✓
		delta-BHC	319-86-8	✓	✓	(g)	✓
		Dieldrin	60-57-1	✓	✓	(g)	✓
		Endosulfan I	959-98-8	✓	✓	(g)	✓
		Endosulfan II	33213-65-9	✓	✓	(g)	✓
		Endosulfan sulfate	1031-07-8	✓	✓	(g)	✓

TABLE 5
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Organochlorine Pesticides (continued)	EPA 8081A	Endrin	72-20-8	✓	✓	(g)	✓
		Endrin aldehyde	7421-93-4	✓	✓	(g)	✓
		Endrin ketone	53494-70-5	✓	✓	(g)	✓
		gamma-BHC (Lindane)	58-89-9	✓	✓	(g)	✓
		gamma-Chlordane	5103-74-2	✓	✓	(g)	✓
		Heptachlor	76-44-8	✓	✓	(g)	✓
		Heptachlor epoxide	1024-57-3	✓	✓	(g)	✓
		Methoxychlor	72-43-5	✓	✓	(g)	✓
		Toxaphene	8001-35-2	✓	✓	(g)	✓
Polychlorinated Biphenyls	EPA 8082	Aroclor 1016 (j)	12674-11-2	✓	(e)	(e)	(h)
		Aroclor 1221 (j)	11104-28-2	✓	(e)	(e)	(h)
		Aroclor 1232 (j)	11141-16-5	✓	(e)	(e)	(h)
		Aroclor 1242 (j)	53469-21-9	✓	(e)	(e)	(h)
		Aroclor 1248 (j)	12672-29-6	✓	(e)	(e)	(h)
		Aroclor 1254 (j)	11097-69-1	✓	(e)	(e)	(h)
		Aroclor 1260 (j)	11096-82-5	✓	(e)	(e)	(h)
	EPA 1668	PCB-77	32598-13-3	✓	(e)	(e)	(h)
		PCB-81	70362-50-4	✓	(e)	(e)	(h)
		PCB-105	32598-14-4	✓	(e)	(e)	(h)
		PCB-114	74472-37-0	✓	(e)	(e)	(h)
		PCB-118	31508-00-6	✓	(e)	(e)	(h)
		PCB-123	65510-44-3	✓	(e)	(e)	(h)
		PCB-126	57465-28-8	✓	(e)	(e)	(h)
		PCB-156	38380-08-4	✓	(e)	(e)	(h)
		PCB-157	69782-90-7	✓	(e)	(e)	(h)
		PCB-167	52663-72-6	✓	(e)	(e)	(h)
		PCB-169	32774-16-6	✓	(e)	(e)	(h)
		PCB-189	39635-31-9	✓	(e)	(e)	(h)
		PCB-209	2051-24-3	✓	(e)	(e)	(h)
Polynuclear Aromatic Hydrocarbons	EPA 8310 ¹ or EPA 8270SIM	Acenaphthene	83-32-9	✓	✓	(g)	(h)
		Acenaphthylene	208-96-8	✓	✓	(g)	(h)
		Anthracene	120-12-7	✓	✓	(g)	(h)
		Benzo(a)anthracene	56-55-3	✓	✓	(g)	(h)
		Benzo(a)pyrene	50-32-8	✓	✓	(g)	(h)
		Benzo(b)fluoranthene	205-99-2	✓	✓	(g)	(h)
		Benzo(g,h,i)perylene	191-24-2	✓	✓	(g)	(h)
		Benzo(k)fluoranthene	207-08-9	✓	✓	(g)	(h)

TABLE 5
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Polynuclear Aromatic Hydrocarbons (continued)	EPA 8310 ¹ or EPA 8270SIM	Chrysene	218-01-9	✓	✓	(g)	(h)
		Dibenzo(a,h)anthracene	53-70-3	✓	✓	(g)	(h)
		Indeno(1,2,3-cd)pyrene	193-39-5	✓	✓	(g)	(h)
		Phenanthrene	85-01-8	✓	✓	(g)	(h)
		Pyrene	129-00-0	✓	✓	(g)	(h)
Radionuclides	EPA 900.0 or EPA 9310	Gross alpha	G_Alpha	(c)	(c)	(c)	(h)
		Gross beta	G_Beta	(c)	(c)	(c)	(h)
	EPA 901.1/ HASL GA-01-R	Actinium-228	14331-83-0	(c)	(c)	(c)	(h)
		Bismuth-212	14913-49-6	(c)	(c)	(c)	(h)
		Bismuth-214	14733-03-0	(c)	(c)	(c)	(h)
		Cobalt-57	13981-50-5	(c)	(c)	(c)	(h)
		Cobalt-60	10198-40-0	(c)	(c)	(c)	(h)
		Lead-210	14255-04-0	(c)	(c)	(c)	(h)
		Lead-211	015816-77-0	(c)	(c)	(c)	(h)
		Lead-212	15092-94-1	(c)	(c)	(c)	(h)
		Lead-214	15067-28-4	(c)	(c)	(c)	(h)
		Potassium-40	13966-00-2	(c)	(c)	(c)	(h)
		Thallium-208	14913-50-9	(c)	(c)	(c)	(h)
		Thorium-227	15623-47-9	(c)	(c)	(c)	(h)
		Thorium-234	15065-10-8	(c)	(c)	(c)	(h)
	HASL A-01-R	Thorium-232	7440-29-1	✓	✓	(g)	(h)
		Thorium-228	14274-82-9	✓	✓	(g)	(h)
		Thorium-230	14269-63-7	✓	✓	(g)	(h)
		Uranium-233/234	13966-29-5	✓	✓	(g)	(h)
		Uranium 235/236	15117-96-1	✓	✓	(g)	(h)
		Uranium-238	7440-61-1	✓	✓	(g)	(h)
	EPA 903.0 / 903.1	Radium-226	13982-63-3	✓	✓	(g)	✓
	EPA 904.0	Radium-228	15262-20-1	✓	✓	(g)	✓
	Quantitate from Parent or Daughter Radionuclide	Actinium-227 (from Th-227)	14952-40-0	(c)	(c)	(c)	(h)
		Bismuth-210 (from Pb-210)	14331-79-4	(c)	(c)	(c)	(h)
		Bismuth-211 (from Pb-211)	15229-37-5	(c)	(c)	(c)	(h)
		Polonium-210 (from Pb-210)	13981-52-7	(c)	(c)	(c)	(h)
		Polonium-212 (from Bi-212)	13981-52-7	(c)	(c)	(c)	(h)
		Polonium-214 (from Bi-214)	15735-67-8	(c)	(c)	(c)	(h)
		Polonium-216 (from Pb-212)	15756-58-8	(c)	(c)	(c)	(h)
		Polonium-218 (from Pb-214)	15422-74-9	(c)	(c)	(c)	(h)
		Protactinium-231 (from U-235)	14331-85-2	(c)	(c)	(c)	(h)

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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Radionuclides (continued)	Quantitate from Parent or Daughter Radionuclide	Protactinium-234 (from Th-234)	15100-28-4	(c)	(c)	(c)	(h)
		Radium-223 (from Th-227)	15623-45-7	(c)	(c)	(c)	(h)
		Radium-224 (from Pb-212)	13233-32-4	(c)	(c)	(c)	(h)
		Thallium-207 (from Pb-211)	14133-67-6	(c)	(c)	(c)	(h)
		Thorium-231 (from U-235)	14932-40-2	(c)	(c)	(c)	(h)
Radon	FLUX	Radon-220	22481-48-7	(d)	(d)	(d)	(h)
		Radon-222	14859-67-7	(d)	(d)	(d)	(h)
Aldehydes	EPA 8315A	Acetaldehyde	75-07-0	✓	✓	(g)	(h)
		Chloroacetaldehyde	107-20-0	(i)	(i)	(g)	(h)
		Dichloroacetaldehyde	79-02-7	(i)	(i)	(g)	(h)
		Formaldehyde	50-00-0	✓	✓	(g)	(h)
		Trichloroacetaldehyde	75-87-6	(i)	(i)	(g)	(h)
Semivolatile Organic Compounds	EPA 8270C ²	1,2,4,5-Tetrachlorobenzene	95-94-3	✓	✓	(g)	✓
		1,2-Diphenylhydrazine	122-66-7	✓	✓	(g)	✓
		1,4-Dioxane	123-91-1	✓	✓	(g)	✓
		2,2'/4,4'-Dichlorobenzil	3457-46-3	✓	✓	(g)	✓
		2,4,5-Trichlorophenol	95-95-4	✓	✓	(g)	✓
		2,4,6-Trichlorophenol	88-06-2	✓	✓	(g)	✓
		2,4-Dichlorophenol	120-83-2	✓	✓	(g)	✓
		2,4-Dimethylphenol	105-67-9	✓	✓	(g)	✓
		2,4-Dinitrophenol	51-28-5	✓	✓	(g)	✓
		2,4-Dinitrotoluene	121-14-2	✓	✓	(g)	✓
		2,6-Dinitrotoluene	606-20-2	✓	✓	(g)	✓
		2-Chloronaphthalene	91-58-7	✓	✓	(g)	✓
		2-Chlorophenol	95-57-8	✓	✓	(g)	✓
		2-Methylnaphthalene	91-57-6	✓	✓	(g)	✓
		2-Nitroaniline	88-74-4	✓	✓	(g)	✓
		2-Nitrophenol	88-75-5	✓	✓	(g)	✓
		3,3-Dichlorobenzidine	91-94-1	✓	✓	(g)	✓
		3-Nitroaniline	99-09-2	✓	✓	(g)	✓
		4,4'-Dichlorobenzil	3457-46-3	✓	✓	(g)	✓
		4-Bromophenyl phenyl ether	101-55-3	✓	✓	(g)	✓
		4-Chloro-3-methylphenol	59-50-7	✓	✓	(g)	✓
		4-Chlorophenyl phenyl ether	7005-72-3	✓	✓	(g)	✓
		4-Chlorothioanisole	123-09-1	✓	✓	(g)	✓
		4-Chlorothiophenol	106-54-7	✓	✓	(g)	✓
		4-Nitroaniline	100-01-6	✓	✓	(g)	✓

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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Semivolatile Organic Compounds (continued)	EPA 8270C ²	4-Nitrophenol	100-02-7	✓	✓	(g)	✓
		Acenaphthene	83-32-9	✓	✓	(g)	✓
		Acenaphthylene	208-96-8	✓	✓	(g)	✓
		Acetophenone	98-86-2	✓	✓	(g)	✓
		Aniline	62-53-3	✓	✓	(g)	✓
		Anthracene	120-12-7	✓	✓	(g)	✓
		Azobenzene	103-33-3	✓	✓	(g)	✓
		Benzo(a)anthracene	56-55-3	✓	✓	(g)	✓
		Benzo(a)pyrene	50-32-8	✓	✓	(g)	✓
		Benzo(b)fluoranthene	205-99-2	✓	✓	(g)	✓
		Benzo(g,h,i)perylene	191-24-2	✓	✓	(g)	✓
		Benzo(k)fluoranthene	207-08-9	✓	✓	(g)	✓
		Benzoic acid	65-85-0	✓	✓	(g)	✓
		Benzyl alcohol	100-51-6	✓	✓	(g)	✓
		bis(2-Chloroethoxy)methane	111-91-1	✓	✓	(g)	✓
		bis(2-Chloroethyl) ether	111-44-4	✓	✓	(g)	✓
		bis(2-Chloroisopropyl) ether	108-60-1	✓	✓	(g)	✓
		bis(2-Ethylhexyl) phthalate	117-81-7	✓	✓	(g)	✓
		bis(Chloromethyl) ether	542-88-1	✓	✓	(g)	✓
		bis(p-Chlorophenyl) sulfone	80-07-9	✓	✓	(g)	✓
		bis(p-Chlorophenyl)disulfide	1142-19-4	✓	✓	(g)	✓
		Butylbenzyl phthalate	85-68-7	✓	✓	(g)	✓
		Carbazole	86-74-8	✓	✓	(g)	✓
		Chrysene	218-01-9	✓	✓	(g)	✓
		Dibenzo(a,h)anthracene	53-70-3	✓	✓	(g)	✓
		Dibenzofuran	132-64-9	✓	✓	(g)	✓
		Dichloromethyl ether	542-88-1	✓	✓	(g)	✓
		Diethyl phthalate	84-66-2	✓	✓	(g)	✓
		Dimethyl phthalate	131-11-3	✓	✓	(g)	✓
		Di-n-butyl phthalate	84-74-2	✓	✓	(g)	✓
		Di-n-octyl phthalate	117-84-0	✓	✓	(g)	✓
		Diphenyl disulfide	882-33-7	✓	✓	(g)	✓
		Diphenyl sulfide	139-66-2	✓	✓	(g)	✓
		Diphenyl sulfone	127-63-9	✓	✓	(g)	✓
		Fluoranthene	206-44-0	✓	✓	(g)	✓
		Fluorene	86-73-7	✓	✓	(g)	✓
		Hexachlorobenzene	118-74-1	✓	✓	(g)	✓

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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Semivolatile Organic Compounds (continued)	EPA 8270C ²	Hexachlorobutadiene	87-68-3	✓	✓	(g)	✓
		Hexachlorocyclopentadiene	77-47-4	✓	✓	(g)	✓
		Hexachloroethane	67-72-1	✓	✓	(g)	✓
		Hydroxymethyl phthalimide	118-29-6	✓	✓	(g)	✓
		Indeno(1,2,3-cd)pyrene	193-39-5	✓	✓	(g)	✓
		Isophorone	78-59-1	✓	✓	(g)	✓
		m,p-Cresol	106-44-5	✓	✓	(g)	✓
		Naphthalene	91-20-3	✓	✓	(g)	✓
		Nitrobenzene	98-95-3	✓	✓	(g)	✓
		N-nitrosodi-n-propylamine	621-64-7	✓	✓	(g)	✓
		N-nitrosodiphenylamine	86-30-6	✓	✓	(g)	✓
		o-Cresol	95-48-7	✓	✓	(g)	✓
		Octachlorostyrene	29082-74-4	✓	✓	(g)	✓
		p-Chloroaniline (4-Chloroaniline)	106-47-8	✓	✓	(g)	✓
		p-Chlorobenzenethiol	106-54-7	✓	✓	(g)	✓
		Pentachlorobenzene	608-93-5	✓	✓	(g)	✓
		Pentachlorophenol	87-86-5	✓	✓	(g)	✓
		Phenanthrene	85-01-8	✓	✓	(g)	✓
		Phenol	108-95-2	✓	✓	(g)	✓
		Phthalic acid	88-99-3	✓	✓	(g)	✓
		Pyrene	129-00-0	✓	✓	(g)	✓
		Pyridine	110-86-1	✓	✓	(g)	✓
		Thiophenol	108-98-5	✓	✓	(g)	✓
		Tentatively Identified Compounds (TICs)		✓	✓	(g)	✓
Volatile Organic Compounds	EPA 8260B	1,1,1,2-Tetrachloroethane	630-20-6	✓	✓	(g)	(h)
		1,1,1-Trichloroethane	71-55-6	✓	✓	(g)	(h)
		1,1,2,2-Tetrachloroethane	79-34-5	✓	✓	(g)	(h)
		1,1,2-Trichloroethane	79-00-5	✓	✓	(g)	(h)
		1,1-Dichloroethane	75-34-3	✓	✓	(g)	(h)
		1,1-Dichloroethene	75-35-4	✓	✓	(g)	(h)
		1,1-Dichloropropene	563-58-6	✓	✓	(g)	(h)
		1,2,3-Trichlorobenzene	87-61-6	✓	✓	(g)	(h)
		1,2,3-Trichloropropane	96-18-4	✓	✓	(g)	(h)
		1,2,4-Trichlorobenzene	120-82-1	✓	✓	(g)	(h)
		1,2,4-Trimethylbenzene	95-63-6	✓	✓	(g)	(h)
		1,2-Dichlorobenzene	95-50-1	✓	✓	(g)	(h)
		1,2-Dichloroethane	107-06-2	✓	✓	(g)	(h)

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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Volatile Organic Compounds (continued)	EPA 8260B	1,2-Dichloroethene	540-59-0	✓	✓	(g)	(h)
		1,2-Dichloropropane	78-87-5	✓	✓	(g)	(h)
		1,3,5-Trichlorobenzene	108-70-3	✓	✓	(g)	(h)
		1,3,5-Trimethylbenzene	108-67-8	✓	✓	(g)	(h)
		1,3-Dichlorobenzene	541-73-1	✓	✓	(g)	(h)
		1,3-Dichloropropene	542-75-6	✓	✓	(g)	(h)
		1,3-Dichloropropane	142-28-9	✓	✓	(g)	(h)
		1,4-Dichlorobenzene	106-46-7	✓	✓	(g)	(h)
		2,2-Dichloropropane	594-20-7	✓	✓	(g)	(h)
		2,2-Dimethylpentane	590-35-2	✓	✓	(g)	(h)
		2,2,3-Trimethylbutane	464-06-2	✓	✓	(g)	(h)
		2,3-Dimethylpentane	565-59-3	✓	✓	(g)	(h)
		2,4-Dimethylpentane	108-08-7	✓	✓	(g)	(h)
		2-Chlorotoluene	95-49-8	✓	✓	(g)	(h)
		2-Hexanone	591-78-6	✓	✓	(g)	(h)
		2-Methylhexane	591-76-4	✓	✓	(g)	(h)
		2-Nitropropane	79-46-9	✓	✓	(g)	(h)
		3,3-Dimethylpentane	562-49-2	✓	✓	(g)	(h)
		3-Ethylpentane	617-78-7	✓	✓	(g)	(h)
		3-Methylhexane	589-34-4	✓	✓	(g)	(h)
		4-Chlorobenzene	108-90-7	✓	✓	(g)	(h)
		4-Chlorotoluene	106-43-4	✓	✓	(g)	(h)
		4-Methyl-2-pentanone (MIBK)	108-10-1	✓	✓	(g)	(h)
		Acetone	67-64-1	✓	✓	(g)	(h)
		Acetonitrile	75-05-8	✓	✓	(g)	(h)
		Benzene	71-43-2	✓	✓	(g)	(h)
		Bromobenzene	108-86-1	✓	✓	(g)	(h)
		Bromodichloromethane	75-27-4	✓	✓	(g)	(h)
		Bromoform	75-25-2	✓	✓	(g)	(h)
		Bromomethane	74-83-9	✓	✓	(g)	(h)
		Carbon disulfide	75-15-0	✓	✓	(g)	(h)
		Carbon tetrachloride	56-23-5	✓	✓	(g)	(h)
		Chlorobenzene	108-90-7	✓	✓	(g)	(h)
		Chlorobromomethane	74-97-5	✓	✓	(g)	(h)
		Chlorodibromomethane	124-48-1	✓	✓	(g)	(h)
		Chloroethane	75-00-3	✓	✓	(g)	(h)
		Chloroform	67-66-3	✓	✓	(g)	(h)

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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Volatile Organic Compounds (continued)	EPA 8260B	Chloromethane	74-87-3	✓	✓	(g)	(h)
		cis-1,2-Dichloroethene	156-59-2	✓	✓	(g)	(h)
		cis-1,3-Dichloropropene	10061-01-5	✓	✓	(g)	(h)
		Cymene (Isopropyltoluene)	99-87-6	✓	✓	(g)	(h)
		Dibromochloroethane	73506-94-2	✓	✓	(g)	(h)
		Dibromochloromethane	124-48-1	✓	✓	(g)	(h)
		Dibromochloropropane	96-12-8	✓	✓	(g)	(h)
		Dibromomethane	74-95-3	✓	✓	(g)	(h)
		Dichloromethane (Methylene chloride)	75-09-2	✓	✓	(g)	(h)
		Dimethyldisulfide	624-92-0	✓	✓	(g)	(h)
		Ethanol	64-17-5	✓	✓	(g)	(h)
		Ethylbenzene	100-41-4	✓	✓	(g)	(h)
		Freon-11	75-69-4	✓	✓	(g)	(h)
		Freon-113	76-13-1	✓	✓	(g)	(h)
		Freon-12	75-71-8	✓	✓	(g)	(h)
		Heptane	142-82-5	✓	✓	(g)	(h)
		Isoheptane	31394-54-4	✓	✓	(g)	(h)
		Isopropylbenzene	98-82-8	✓	✓	(g)	(h)
		m,p-Xylene	mp-XYL	✓	✓	(g)	(h)
		Methyl ethyl ketone (2-Butanone)	78-93-3	✓	✓	(g)	(h)
		Methyl iodide	74-88-4	✓	✓	(g)	(h)
		MTBE (Methyl tert-butyl ether)	1634-04-4	✓	✓	(g)	(h)
		n-Butyl benzene	104-51-8	✓	✓	(g)	(h)
		n-Propylbenzene	103-65-1	✓	✓	(g)	(h)
		Nonanal	124-19-6	✓	✓	(g)	(h)
		o-Xylene	95-47-6	✓	✓	(g)	(h)
		sec-Butylbenzene	135-98-8	✓	✓	(g)	(h)
		Styrene	100-42-5	✓	✓	(g)	(h)
		tert-Butyl benzene	98-06-6	✓	✓	(g)	(h)
		Tetrachloroethene	127-18-4	✓	✓	(g)	(h)
		Toluene	108-88-3	✓	✓	(g)	(h)
		trans-1,2-Dichloroethene	156-60-5	✓	✓	(g)	(h)
		trans-1,3-Dichloropropene	10061-02-6	✓	✓	(g)	(h)
		Trichloroethene	79-01-6	✓	✓	(g)	(h)
		Vinyl acetate	108-05-4	✓	✓	(g)	(h)
		Vinyl chloride	75-01-4	✓	✓	(g)	(h)
		Xylenes (total)	1330-20-7	✓	✓	(g)	(h)
		Tentatively Identified Compounds (TICs)		✓	✓	(g)	(h)

TABLE 5
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 12 of 12)

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 4)			SPLP
				Depth 1	Depth 2/3	Deep	
Water Quality Parameters	EPA 120.1	Conductivity	COND	(a)	(a)	(a)	(h)
	EPA 130.2	Hardness, total	Hardness	(a)	(a)	(a)	(h)
	EPA 160.1	Total dissolved solids	TDS	(a)	(a)	(a)	(h)
	EPA 160.2	Total suspended solids	TSS	(a)	(a)	(a)	(h)
	EPA 310.1	Alkalinity, Total (as CaCO ₃)	ALK	(a)	(a)	(a)	(h)
		Bicarbonate alkalinity	71-52-3	(a)	(a)	(a)	(h)
		Carbonate alkalinity	3812-32-6	(a)	(a)	(a)	(h)
		Hydroxide alkalinity	OH-ALK	(a)	(a)	(a)	(h)
Flashpoint	EPA 1010	Flammables	NA	(b)	(b)	(b)	(h)
Total Petroleum Hydrocarbons	EPA 8015	Diesel	64742-46-7	(b)	(b)	(b)	(h)
		Gasoline	8006-61-9	(b)	(b)	(b)	(h)
		Grease	68153-81-1	(b)	(b)	(b)	(h)
		Mineral Spirits	NA	(b)	(b)	(b)	(h)
White Phosphorus	EPA 7580M	White phosphorus	12185-10-3	(b)	(b)	(b)	(h)
Methyl Mercury	EPA 1630	Methyl mercury	22967-92-6	(b)	(b)	(b)	(h)
Soil Physical Parameters	ASTM D2937/ MOSA1Ch .13	Dry bulk density	NA	(g)	✓	✓	(h)
	ASTM D2435/ MOSA1Ch .18	Total porosity	NA	(g)	✓	✓	(h)
	ASTM D5084	Soil permeability/saturated hydraulic cond.	NA	(g)	✓	✓	(h)
	ASTM D854	Specific gravity of soils	NA	(g)	✓	✓	(h)
	SW846 Method 9081	Cation exchange capacity	NA	(g)	✓	✓	(h)
	ASTM D2216/D4643/D2974	Volumetric water content	NA	(g)	✓	✓	(h)
	ASTM D422	Grain size analysis by sieve and hydrometer	NA	(g)	✓	✓	(h)
	EPA 415.1/ASTM 2947	Fractional organic carbon content	NA	(g)	✓	✓	(h)

Notes:

Laboratory limits are subject to matrix interferences and may not always be achieved in all samples.

The laboratory will be instructed to report the top 25 Tentatively Identified Compounds (TICs) under method 8260B and 8270C.

NA = Not applicable.

a - Groundwater only analyte.

b - Removed based on rationale provided in the text.

c - Removed consistent with approved list of radionuclides for project analysis.

d - Radon will be sampled and analyzed via surface flux sampling and analysis protocols.

e - Dioxins/furans and PCBs will only be analyzed for in fill and surface soil samples only.

f - Asbestos will only be analyzed for in current grade surface soil samples only.

g - Soil physical parameters will be collected from at-depth samples only; from two sample locations (see Table 4).

h - Rationale provided in text for analyte list for synthetic precipitation leaching procedure (SPLP); from two subsurface sample locations (see Table 4).

i - Removed based on Revisions to the Analyte List Technical Memorandum approved by NDEP on 10/16/2008.

j - Extraction only; analyze for Aroclors only if the sum of PCB congeners is greater than 33 ppb.

¹For polynuclear aromatic hydrocarbons, either Method 8310 or Method 8270SIM is the primary analytical method.

⁴Method 3540 for extraction and Method 3640 for cleanup are to be used as appropriate.

TABLE 6
PROPOSED SOIL VAPOR FLUX SAMPLE ANALYSES
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 3)

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m ³	RL µg/m ³
List of Compounds for USEPA Method TO-15 Full Scan Mode Operation and MDLs					
1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.51	0.72	3.62
1,1,1-Trichloroethane	71-55-6	0.1	0.52	0.58	2.89
1,1,2,2-Tetrachloroethane	79-34-5	0.1	0.52	0.73	3.65
1,1,2-Trichloroethane	79-00-5	0.1	0.51	0.57	2.86
1,1-Dichloroethane	75-34-3	0.1	0.52	0.43	2.15
1,1-Dichloroethene	75-35-4	0.1	0.52	0.42	2.13
1,1-Dichloropropene	563-58-6	0.1	0.49	0.46	2.3
1,2,3-Trichloropropane	96-18-4	0.11	0.55	0.68	3.39
1,2,4-Trichlorobenzene	120-82-1	0.1	0.52	0.79	3.94
1,2,4-Trimethylbenzene	95-63-6	0.1	0.52	0.52	2.61
1,2-Dibromo-3-chloropropane	96-12-8	0.22	1.1	2.2	10.98
1,2-Dibromoethane	106-93-4	0.1	0.52	0.82	4.09
1,2-Dichlorobenzene	95-50-1	0.1	0.52	0.64	3.2
1,2-Dichloroethane	107-06-2	0.1	0.52	0.43	2.15
1,2-Dichloropropane	78-87-5	0.1	0.52	0.49	2.46
1,3,5-Trimethylbenzene	108-67-8	0.1	0.52	0.53	2.64
1,3-Dichlorobenzene	541-73-1	0.1	0.52	0.64	3.2
1,3-Dichloropropane	142-28-9	0.11	0.54	0.52	2.58
1,4-Dichlorobenzene	106-46-7	0.1	0.52	0.64	3.2
1,4-Dioxane	123-91-1	0.09	0.44	0.33	1.64
2,2-Dichloropropane	594-20-7	0.11	0.53	0.5	2.53
2-Butanone	78-93-3	0.09	0.43	0.26	1.31
2-Hexanone	591-78-6	0.09	0.44	0.37	1.86
Acetone	67-64-1	0.09	0.45	0.22	1.1
Acetonitrile	75-05-8	0.22	1.12	0.48	2.39
Benzene	71-43-2	0.1	0.52	0.34	1.7
Benzyl chloride	100-44-7	0.09	0.45	0.48	2.41
Bromochloromethane	74-97-5	0.1	0.51	0.55	2.76
Bromodichloromethane	75-27-4	0.08	0.4	0.55	2.77
Bromoform	75-25-2	0.09	0.47	0.99	4.96
Bromomethane	74-83-9	0.1	0.51	0.41	2.04
Carbon disulfide	75-15-0	0.09	0.45	0.29	1.45
Carbon tetrachloride	56-23-5	0.1	0.52	0.67	3.38
Chlorobenzene	108-90-7	0.1	0.52	0.5	2.48
Chloroethane	75-00-3	0.1	0.51	0.28	1.39
Chloroform	67-66-3	0.1	0.52	0.52	2.59
Chloromethane	74-87-3	0.1	0.51	0.22	1.09
cis-1,2-Dichloroethene	156-59-2	0.1	0.52	0.42	2.11
cis-1,3-Dichloropropene	10061-01-5	0.1	0.52	0.48	2.41
Dibromochloromethane	124-48-1	0.09	0.44	0.77	3.87
Dibromomethane	74-95-3	0.11	0.55	0.97	4.84

TABLE 6
PROPOSED SOIL VAPOR FLUX SAMPLE ANALYSES
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 3)

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m³	RL µg/m³
Dichlorodifluoromethane	75-71-8	0.1	0.51	0.52	2.61
Dichloromethane	75-09-2	0.1	0.52	0.37	1.86
Ethanol	64-17-5	0.22	1.12	0.44	2.18
Ethylbenzene	100-41-4	0.1	0.52	0.46	2.33
Freon 113	76-13-1	0.1	0.52	0.81	4.07
Hexachlorobutadiene	87-68-3	0.1	0.52	1.14	5.68
Isobutyl alcohol	78-83-1	0.23	1.13	0.84	4.21
Isopropylbenzene	98-82-8	0.11	0.57	0.58	2.89
Isopropyltoluene	99-87-6	0.11	0.55	0.62	3.12
m & p-Xylene	108-38-3	0.21	1.03	0.92	4.61
Methyl iodide	4227-95-6	0.19	0.94	1.13	5.67
Methyl Isobutyl Ketone	108-10-1	0.09	0.46	0.38	1.95
Methyl tert butyl ether	1634-04-4	0.08	0.39	0.29	1.45
Naphthalene	91-20-3	0.22	1.09	1.19	5.9
n-Butylbenzene	104-51-8	0.1	0.52	0.59	2.95
n-Heptane	142-82-5	0.08	0.42	0.35	1.78
n-Propylbenzene	103-65-1	0.11	0.54	0.55	2.74
o-Xylene	95-47-6	0.1	0.52	0.46	2.31
sec-Butylbenzene	135-98-8	0.11	0.52	0.59	2.95
Styrene	100-42-5	0.1	0.52	0.45	2.26
tert-Butylbenzene	98-06-6	0.11	0.52	0.59	2.85
Tetrachloroethene	127-18-4	0.1	0.52	0.72	3.61
Toluene	108-88-3	0.1	0.52	0.4	2
trans-1,2-Dichloroethene	156-60-5	0.09	0.44	0.36	1.8
trans-1,3-Dichloropropene	10061-02-6	0.1	0.52	0.48	2.41
Trichloroethene	79-01-6	0.1	0.52	0.57	2.85
Trichlorofluoromethane	75-69-4	0.1	0.51	0.59	2.95
Vinyl acetate	108-05-4	0.09	0.43	0.31	1.56
Vinyl chloride	75-01-4	0.1	0.51	0.27	1.35

TABLE 6
PROPOSED SOIL VAPOR FLUX SAMPLE ANALYSES
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 3 of 3)

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m³	RL µg/m³
List of Compounds for USEPA Method TO-15 Selective Ion Mode (SIM) Operation and MDLs					
1,1,1,2-Tetrachloroethane	630-20-6	0.005	0.026	0.035	0.18
1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.026	0.035	0.18
1,1,2-Trichloroethane	79-00-5	0.005	0.026	0.028	0.14
1,2,3-Trichloropropane	96-18-4	0.005	0.026	0.031	0.16
1,2-Dibromo-3-chloropropane	96-12-8	0.01	0.026	0.098	0.26
1,2-Dibromoethane	106-93-4	0.005	0.026	0.039	0.2
1,2-Dichlorobenzene	95-50-1	0.005	0.026	0.031	0.16
1,2-Dichloroethane	107-06-2	0.005	0.026	0.021	0.11
1,2-Dichloropropane	78-87-5	0.005	0.026	0.024	0.12
1,3-Dichlorobenzene	541-73-1	0.005	0.026	0.031	0.16
1,4-Dichlorobenzene	106-46-7	0.005	0.026	0.031	0.16
Benzene	71-43-2	0.005	0.026	0.016	0.085
Benzyl chloride	100-44-7	0.005	0.026	0.026	0.14
Bromodichloromethane	75-27-4	0.005	0.026	0.034	0.18
Carbon tetrachloride	56-23-5	0.005	0.026	0.032	0.17
Chloroform	67-66-3	0.005	0.026	0.025	0.13
Dibromochloromethane	124-48-1	0.005	0.026	0.043	0.23
Hexachlorobutadiene	87-68-3	0.01	0.026	0.108	0.28
Naphthalene	91-20-3	0.01	0.026	0.534	0.14
Tetrachloroethene	127-18-4	0.005	0.026	0.035	0.18
Trichloroethene	79-01-6	0.005	0.026	0.027	0.14
Vinyl chloride	75-01-4	0.005	0.026	0.013	0.068

Note:

The actual reported MDL may vary based on Canister dilution or matrix interferences.

CAS - Chemical abstract system

MDL - Method detection limit

RL - Reporting limit

ppbv - Parts per billion by volume

µg/m³ - microgram per cubic meter

APPENDIX A

NDEP COMMENTS AND BRC'S RESPONSE TO COMMENTS

**Response to NDEP Comments Received June 2, 2009 on the Sampling and Analysis Plan
for the Western Hook-Open Space Sub-Area dated May 2009**

1. General comment, in response to General Comment #4 from the previous round of comments, several of the recreational risk-based screening levels (RBSLs) that were part of the May 20, 2009 Technical Memorandum – *Development of Recreational Risk-Based Screening Levels (RBSLs), BMI Common Areas (Eastside) Site, Clark County, Nevada* do not match up correctly with those listed on the figures in Appendix C. For example, the recreational RBSL for cadmium is 1,100 mg/kg, but figures C-3 and C-4 show the RBSL as 2,249 mg/kg. Other differences between the RBSLs listed in the technical memorandum and Appendix C include total chromium and Radium-226. In addition, Radium-226 is being reported in Figure C-12 as mg/kg (it appears that this should be pCi/g).

Response: *The latest draft of the Western Hook-Open Space Sampling and Analysis Plan (dated May 2009) was submitted to NDEP before the recreational RBSL Technical Memorandum was generated. The RBSLs associated with a recreational land use that were incorporated in the SAP were for (1) a recreational user, and (2) an outdoor maintenance worker, and were calculated in May 2009. The revised version of the report now references the May 20, 2009, recreational RBSLs in place of the April 2009 recreational RBSLs and the maintenance worker RBSLs have been updated to reflect current toxicity criteria and Closure Plan methods; corresponding changes were made in Table 1, the Appendix C figures, and in the main text.*

Figure C-12 has been revised to show the correct units.

In addition to the RBCL revisions, NDEP Leachate-based BCLs for protection of groundwater (LBCLs) and water BCLs were also updated in the revised SAP to reflect the most current values.

2. General comment, there are many instances in this revision where “Maintenance RBSL” is actually referred to as “Recreational RBSL”. Other than a reference made in footnote 6 on page 2-8, there is nothing else in this report to indicate that “Recreational RBSLs” are actually “Maintenance RBSLs”. The idea of switching these two is very confusing, considering both values are reported in the Tables section of this report. It is requested that the correct RBSL is referenced when highlighting a point in the text. For comparison purposes, the most stringent applicable comparison level should be used.

Response: *For clarity, the specific RBSL (recreational user vs. outdoor maintenance worker) is now referenced in the revised SAP.*

3. General comment, there are several instances in which the scenario under consideration is described including residential exposure scenario aspects. These need to be removed or modified throughout the report.

Response: *BRC searched for references to residential exposures associated with the Site in the document, and revised or removed descriptions that were associated with residential land uses.*

For example, the discussion on page 2-2, fourth paragraph, to deed restrictions precluding use of private water wells by residences (and businesses) for drinking water, irrigation water, or other non-potable uses (e.g., washing cars, filling swimming pools) was revised to remove the references to residences and businesses, because the Site will not be developed into either of those land uses. Similarly, discussions regarding indoor air intrusion were modified to reflect the fact that Open Space land uses would not involve this migration pathway.

The few other references to residential land use found in the document applied to off-site locations, where residential land use is planned.

4. General comment, the majority of this document focuses on soil sampling and there is a lack of discussion on soil gas or flux sampling. It appears that the majority of this discussion appears in Section 4.0. Please expand the discussion on soil gas or flux sampling.

Response: *The discussion of and references to sampling media other than soil (i.e., soil flux sampling) have been expanded throughout the report.*

A footnote has been added on page 1-3 discussing the upcoming surface flux/soil gas comparison study that will be conducted for the project. Recommendations from this study will be implemented for this and subsequent sub-area SAPs. Note that this will only affect the sampling method, and does not change the sample locations or laboratory analytical methods and analyte lists.

5. Page 2-1, Section 2.1, and related Figures. Figures 7 and 9 show seep areas. One seep area is associated in part with the Open Space area that is the subject of this sampling and analysis plan (SAP). However, another seep area is depicted in the area of the Galleria sub-area. It would be helpful to see a map that shows the entirety of the seep areas, but not necessarily as part of this SAP. Also, please confirm that the Galleria, and any other SAPs that need to do so, have identified the full extent of the sub-area specific seep areas.

Response: *Potential evidence of historical seep areas has been observed only in the following three sub-areas of the Common Areas:*

- The Western Hook – Open Space sub-area;
- The Sunset North Commercial sub-area; and
- The Galleria North sub-area.

These potential historical seep areas are addressed in the SAPs specific to those sub-areas. The Western Hook – Open Space SAP includes a discussion of the presumed historical seeps within the Site in Section 2.3. No changes were made to the Western Hook- Open Space SAP in response to this comment.

6. Page 2-1, Section 2.1, 3rd paragraph. Reference is made to an “unknown linear feature”. It is not clear what this is, either by the description here, or on the figures. Further discussion is provided on Page 2-6, however, here it is not clear what this refers to. Please clarify here.

Response: *The reference to the feature has been expanded on Page 2-6 for additional clarification. However, as noted in the text, this is an unknown feature, with no documentation or evidence found as to what it is. Therefore, no further discussion can be made regarding this feature. However, as noted on page 4-2, five sample locations have been placed within this feature.*

7. Page 2-1, Section 2.1, 4th paragraph, last sentence. The discussion about the potential effects of daylighting should be expanded to identify where with respect to important site features. For example, did the daylighting occur in the ponds? Or, does the northern portion of the site refer to areas north of the ponds?

Response: *The subject text has been expanded to clarify the presumed locations of potential daylighting (i.e., former seep areas), with reference to Section 2.3 for further discussion.*

8. Page 2-3, Section 2.1, 1st partial paragraph. Indoor air does not seem to be part of any scenario for this Site. Please clarify and refer to Figure 8, which does not include an indoor air pathway.

Response: *Given the proposed land use for the Site, BRC agrees that indoor air should not be part of the exposure scenarios for the Site, as reflected by its absence on Figure 8. The subject text has been expanded on page 2-3 to clarify that this pathway would not apply to the Site because structures intended for human occupancy are not anticipated.*

9. Page 2-8 to 2-10, Section 2.4, Table. The recreational RBSLs need to be checked carefully and modified as appropriate. For example, the May20, 2009 Technical Memorandum – *Development of Recreational Risk-Based Screening Levels (RBSLs), BMI Common Areas (Eastside) Site, Clark County, Nevada* indicates that the recreational RBSL for arsenic is 36 mg/kg, but it is represented as 4.2 mg/kg in the text. If the intention is to use the “Maintenance RBSL”, please do not call it a “Recreational RBSL”, it is confusing.

Response: *See response to Comment #1. The recreational RBSLs in the subject text have been revised to reflect the values presented in the May 20, 2009, Technical Memorandum cited in the comment. In addition, for clarity, the specific RBSL (distinguishing between the recreational user and outdoor maintenance worker values [from the most recent project QAPP]) is identified in the revised text.*

10. Page 2-14, Section 2.8, Arsenic Sub-section. The statement “...background concentrations for arsenic are appreciably higher than the screening levels; therefore, comparison to background concentrations is more appropriate than using the recreational RBSL...” is incorrect. If the idea is to use the screening level that is the highest in terms of concentration, the recreational RBSL for arsenic (36 mg/kg) is greater than the maximum background concentration (7.2 mg/kg).

Response: The purpose of the comparison that is the subject of the comment was not to use the screening level (RBSLs) that was the highest in concentration, but rather the lowest (i.e., the maintenance worker RBSL). The statement has been revised on page 2-15 to clarify that the comparison being made refers to the outdoor maintenance worker RBSL (4.2 mg/kg), which is lower than background.

11. Pages 2-14 to 2-23, Section 2.8, Antimony sub-section and all other chemical sub-sections, including the summary section. The reference to “recreational RBSL” is misleading because this is actually the “maintenance RBSL”. Each section needs to be rewritten to include the true recreational RBSL value. The summary section on page 2-23 is particularly confusing. The statement “The few recreational RBSL exceedances were associated with TCDD TEQ, perchlorate, arsenic, and iron.” is misleading. The TCDD TEQ exceedances are true recreational RBSL exceedances (1 exceedance). However the perchlorate, arsenic, and iron exceedances are actually maintenance worker RBSLs.

Response: The subject text has been revised to clarify whether the RBSL exceedances refer to the recreational user or outdoor maintenance worker RBSL.

12. Page 2-20, Section 2.8, Semi-Volatile Organic Compound sub-section. The reporting limits for n-nitrosodi-n-propylamine are not greater than the recreational RBSL. Please clarify.

Response: The subject text has been revised on page 2-23 to indicate that the reporting limits for n-nitrosodi-n-propylamine are greater than the RBSL for the maintenance worker receptor, as opposed to the park user.

13. Page 2-21, Section 2.8, Polychlorinated Aromatic Hydrocarbons sub-section. The reporting limits for benzo(a)pyrene and dibenzo(a,h)anthracene are not greater than the recreational RBSL. Please clarify.

Response: The subject text has been revised on page 2-24 to indicate that the reporting limits for benzo(a)pyrene and dibenzo(a,h)anthracene are greater than the RBSL for the maintenance worker receptor, as opposed to the park user.

14. Page 2-22, Section 2.8, radionuclides sub-section. A discussion of secular equilibrium would be appropriate herein.

Response: A discussion of secular equilibrium has been added to Section 2.8, pages 2-25 and 2-26.

15. Section 2.9. There does not appear to be a discussion of the radionuclide results for groundwater. The radionuclide results all appear to exceed the BCLs presented in Table 2, including considerably elevated levels of both U-234 and U-238.

Response: *The radionuclide BCLs were incorrectly provided in Table 2 of the prior version, and have been removed from the revised SAP. Because these screening levels have not been established, there are no BCL exceedances, and no discussion of radionuclide exceedances was warranted.*

16. Page 4-2, Section 4.1, 1st sentence under table. NDEP suggests that BRC reword this sentence. 42 samples will be collected, rather than sample locations. Or, samples will be collected from these 42 locations.

Response: *The subject sentence has been reworded on page 4-2 to indicate that 42 of the sampling locations are within the former seep areas. Because samples will be collected from more than one depth at each location, the number of samples associated with the former seep locations is greater than 42.*

17. Appendix C figures. Figure C-1 includes for direct comparison the maximum background value from the 2005 background dataset. A note is included that the Upper Muddy Creek formation (UMCf) maximum is 24.8 mg/kg, considerably higher than the 7.2 mg/kg from the 2005 dataset. It would be more helpful to have included the higher value directly in the plots, considering background comparisons will probably be performed against the UMCf background data. In other Figures, the 2nd background level (for the UMCf background) has not been given. This seems inconsistent.

Response: *The Appendix C figures have been revised to show both the shallow and UMCf maximum background values, where applicable. In addition, for those analytes that had large relative differences between these values (arsenic and radium-226), an additional symbol was included on the figures to show those locations that exceeded either level.*

**Response to NDEP Comments Received April 13, 2009 on the Sampling and Analysis Plan
for the Western Hook-Open Space Sub-Area dated March 2009**

1. General comment 1 from the previous round of comments still stands despite comparisons to a recreational scenario (i.e., there are still exceedances for arsenic, manganese, dioxins/furans, and perchlorate). It is not evident why remediation is not going to be conducted prior to sampling. It would help if some explanation was provided regarding the expectation that human health risk for a recreational scenario will not be unacceptable.

Response: *As has been discussed with NDEP previously, BRC feels that remediation should follow the sampling proposed in this sampling and analysis plan to provide additional information for where remediation should take place. The historical data does not provide adequate coverage, nor does it provide enough information on determining the extent of remediation that is necessary at this sub-area. That is what the sampling proposed in this sampling and analysis plan will provide. BRC has weighed the cost-benefit of this approach and feels that this is a better use of its finite resources for the project. Whatever remediation that occurs on the site will fully comply with the project Closure Plan and intended land use.*

2. General comment, BRC argues the idea that the Upper Muddy Creek formation (UMCf) is a potential reason why elevated arsenic levels are being observed. However, many of the background exceedances for arsenic are a concern as many of the hits appear to be centered in various ponds. This again points to the idea that remediation prior to sampling might be a better strategy (and potentially cost-saving).

Response: *See response to comment #1 above.*

3. General comment, in addition, the comparisons to maximum background concentrations appear to use the BRC/TIMET background data, and not background data that might be associated with the UMCf. This does not help the arguments being made. Even the Deep Background data (report not approved yet by NDEP) indicates lower levels of arsenic than have been seen in this area historically. It would seem that there is arsenic contamination or there is another geologic unit playing a role in background at the site. Please note that BRC will need to provide suitable documentation to support this assertion prior to the proposal of remediation limits or completion of a risk assessment. **Please identify a schedule for submitting this documentation (in the form of a technical memorandum) as part of the RTC.**

Response: *Based on the data collected to date at the site, BRC believes that arsenic is present both as background and also likely as a result of historical site operations in certain locations. As discussed in response to comment #9, BRC and NDEP are in the process of determining the appropriate dataset to which the data from this Site should be compared. BRC is also currently working on an approach to better understand arsenic concentrations and sources at this Site and the Western Hook-Development sub-area. As part of this effort, which is being discussed with the NDEP, BRC will prepare a work plan, collect data, and then submit a technical memorandum. A submittal date for this technical memorandum regarding this issue is still being determined.*

4. General comment, BRC has developed recreational risk-based screening levels (RBSLs). Please note that the NDEP has not verified these calculations, however, NDEP requests that BRC provide the back-up for these RBSLs as soon as possible so that the NDEP can verify them prior to remediation being proposed. **Please identify a schedule for submitting this documentation (in the form of a technical memorandum) as part of the RTC.**

Response: *The recreational risk-based screening levels (RBSLs) were developed consistent with the risk assessment methodology in the Closure Plan. A technical memorandum on the development of the recreational RBSLs will be provided by May 22, 2009.*

Specific Comments:

5. Page 1-3; 2nd paragraph, 1st sentence. Please change “such the” to “such that”.

Response: *In response to the next comment, this sentence has been revised, and the subject phrase was removed.*

6. Page 1-3; 2nd full paragraph, 1st sentence. The sentence reads “The SAP presents sampling procedures that will be performed to assess current site conditions such that (*sic*) potential impacts from chemicals present in soils to future Site uses can be determined.” A large part of this sentence is repeated later on the same page. The sentence is still awkward. It is long and contains several thoughts. In terms of sentence structure, it is not clear what “future Site uses” relates to, or what “can be determined” relates to.

Response: *The subject sentence has been revised on page 1-3 for clarification.*

7. Pages 2-4 to 2-5; 1st paragraph. The discussion about the UMCf being near the surface is a concern and should be addressed in more detail with respect to arsenic. More evidence is needed to support this claim. In addition, if the UMCf is in fact the reason for arsenic exceedances, how are future background comparisons going to be conducted for this sub-area? Do the UMCf background data come from the Deep Background dataset, or some other dataset? More information is needed. Also, see General Comment above.

Response: *Text has been added to the revised report on page 2-5 to note that characterization of soil properties in the Western Hook sub-areas is currently on-going, and should provide data that will assist in determining the shallow soil conditions with respect to arsenic. See response to comment #9 regarding the background data.*

8. Pages 2-5 to 2-6; Footnote. Please keep footnotes on one page.

Response: *The pagination has been adjusted so that the entire footnote is presented on one page.*

9. Page 2-8; Footnote 7. This footnote is confusing. First, the word “that” should be removed from the first sentence. On page 2-5, there is some discussion about why arsenic levels might be elevated (UMCf layer) and on page 2-14 it seems to indicate this issue encompasses

this sub-area. How is it not yet conclusive whether or not the deep background dataset will be applicable? Some more explanation is needed, probably including reference to the Deep Background dataset. The data are approved (via the approval of the data validation summary report (DVSR)), but the Deep Background report is not approved. It seems that the data need to be used here in some fashion.

Response: The word “that” has been removed from the footnote on page 2-8. Without having a background dataset specifically approved by NDEP for use at this Site, the background dataset used was the approved 2005 shallow background dataset, with an accompanying notation that the Deep background dataset could also be applicable. Changing the specific background dataset used in the SAP will not affect the locations and number of borings identified, and it is therefore not considered necessary for the purposes of this SAP to define the applicable background dataset at this time. After additional samples are collected in accordance with this SAP to refine our understanding of current Site conditions, chemical occurrence patterns will be re-evaluated, incorporating our then current understanding of background conditions, including the study being planned as discussed in response to general comment #3.

10. Pages 2-8 through 2-10; Tables. As noted in the text, the Tables show the maximum background concentration from the 2005 background dataset. It is not clear that is helpful for this site, given the discussion about the UMCf and potential appropriateness of the deep background data.

Response: See response to comment #9 above. The analyte that is most affected by this is arsenic. As discussed in response to comment #13 below, arsenic exceedances of the deep background maximum concentration are provided in Section 2.8, page 2-14.

11. Page 2-10; Footnote. The asbestos footnote is still vague. At a minimum, please describe what asbestos-containing materials were excavated.

Response: The footnote has been expanded on page 2-10 briefly to include additional information regarding the nature of the asbestos observed and excavated.

12. Page 2-13. Based on the criteria for creating a figure in Appendix C, it appears that iron should also be included in this section.

Response: Iron was not included in the graphical depictions because it only had a single RBSL exceedance. The subject text has been revised on page 2-13 as follows: “SRCs were generally selected for graphical depictions if (1) a sufficient number of analyses for that constituent were performed; (2) multiple recreational RBSL exceedances were observed for that constituent at concentrations in excess of background concentrations; and/or (3) an appreciable number of BCL_{LS} exceedances were observed for that constituent at concentrations in excess of background concentrations.”

13. Page 2-14. Footnote 10. Rationale has been added for excluding the specific arsenic detections that exceed background. Surely the arsenic exceedances can be included in a table

to provide some consistency in presentation of the other chemicals' exceedances. Also, note if the deep background data are used and the maximum background is 24.8 mg/kg as indicated in Section 2.3., then the number of exceedances will be fewer.

Response: As previously noted, the applicable background dataset for the Site is yet to be determined. In the meantime, there are 64 detections higher than the shallow soil maximum background concentration. BRC maintains that including a list that long in the text would be of limited value, particularly since the background exceedances are readily identified in the Appendix B tables and Appendix C figures. However, the text has been modified on page 2-15 to identify the seven arsenic detections that exceed the deep background maximum concentration of 24.8 mg/kg (that is, sample locations PLJ-01 [28 mg/kg], PLJ-02 [37 mg/kg], PLH-04 [33.7 mg/kg], PLH-03SCD [41 mg/kg], PLH-03SCOM [35 mg/kg], PLH--03PA-1 [28 mg/kg], and PLH-03SED [27 mg/kg]).

14. Page 2-16; Chromium paragraph. Please include the maximum background concentration for comparison purposes.

Response: The text includes the information requested. See third sentence of the paragraph, which reads: "The majority of these detections were within the range of background concentrations (16.7 mg/kg maximum background detection); however, 14 results were higher than background," followed by a listing of those 14 background exceedances.

15. Page 2-19; 1st paragraph under bullet section. The first sentence is confusing and should be reworded. The second half of the sentence is a consequence of the first half – the sentence structure or wording can make that clearer.

Response: The subject text has been reworded on page 2-19 for clarification.

16. Page 2-27; 2nd bullet. There appears to be an erroneous reference to arsenic in this bullet.

Response: The subject text has been revised on page 2-27 to correct the error.

17. Page 3-9; Section 3.4.5. Reference to the residential exposure scenario is confusing. Why is a residential scenario going to be used when the site is slated for recreational use? Also, the BRC *Statistical Methodology Report* (Newfields, 2006) states that recreational and maintenance worker exposure scenarios have a nominal scale of ½ acre, not 1/8 acre as stated in the Sampling and Analysis Plan (SAP). Some more work is needed to ensure that the focus of the risk assessment for this site is recreational rather than residential.

Response: The text has been revised on page 3-9 to reflect a recreational, rather than a residential, land use for the Site. The sentence with reference to a 1/8th acre residential lot size has been revised to read: "To facilitate the redevelopment of the Site with the fewest practical constraints due to residual contamination, the nominal scale for decision making for the proposed recreational exposure scenario will be equal to one-half acre, consistent with the Statistical Methodology Report."

18. Page 4-1; Footnote 17. Please change “original” to “originally”.

Response: *The subject text has been revised as noted on page 4-1.*

19. Page 4-2 and 4-3; last paragraph starting on page 4-2. The focus of this paragraph on former activities and plan to sample subsurface only, implies that any subsequent contamination will be ignored. NDEP does not concur. Surface soil samples must be included in these areas.
Please provide revised tables and figures as part of the RTC to address this matter.

Response: *Agree. The subject paragraph has been removed from pages 4-2 and 4-3, and these samples have been added in Table 4. No changes to the figures are necessary; however, the sample numbers have been revised on page 4-4 based on the addition of these samples.*

20. Page 4-5; last bullet on page. It is not clear how arsenic be handled, given the potential issue with the UMCf as described earlier in the text? Will it (and other analytes) be compared to the deep soil background dataset? Given this was highlighted in an earlier section and exceeds the shallow background dataset for most samples, it is worth describing which background data are proposed for background comparison.

Response: *See response to comment #9 above; a footnote has been added to this section on page 4-5 that reads: “The specific background dataset that will be used for this purpose will be determined upon consultation with NDEP prior to the data evaluation procedures noted in this section.”*

Response to NDEP Comments Received February 23, 2009 on the Sampling and Analysis Plan for the Western Hook-Open Space Sub-Area dated January 2009

General Comments:

1. There are elevated levels of arsenic, manganese, dioxins/furans, and perchlorate in the historical data which makes it difficult to understand why there will be no remediation conducted prior to sampling.

Response: As demonstrated in the revised Sampling and Analysis Plan (SAP), consistent with general comment #2 below, comparisons are now made to a recreational use scenario, based on the proposed land use for this sub-area. This results in fewer exceedances, and causes this sub-area to be consistent with the approach for SAPs prepared for other sub-areas for the project. This SAP has been revised based on this proposed land use scenario.

2. The development plans show the intent for recreational use rather than residential. Throughout the entire sampling and analysis plan (SAP), however, reference is made to residential risk assessment, and comparisons are made between the historical Site data and residential Basic Comparison Levels (BCLs). There are additional references that allude to the intent to conduct a risk assessment using the data collected as outlined in this SAP to estimate the risk under a residential scenario. These references need to be rectified so that it is clear that the intent of this SAP is to ultimately support risk assessment for a recreational-user scenario.

Response: The SAP has been revised to address the intended recreational use scenario for this sub-area, rather than a residential scenario.

Specific Comments:

3. Page 1-3; last paragraph in Section 1.0, 1st sentence. It is not clear what this sentence means. Please rewrite or clarify. Sampling procedures sounds like field sampling activities, although that does not appear to be the intent. And, it is not clear what is meant by remaining contaminants will be determined.

Response: The subject text has been rewritten for clarification.

4. Page 1-3; first paragraph in Section 1.1, 4th sentence. Please note that the objective is to collect information to perform a risk assessment. Site characterization is part of the process, but, as noted in the 2nd last sentence, the objective ultimately is risk assessment.

Response: The subject sentence has been revised to clarify the objective.

5. Page 2-1; 2nd paragraph, 2nd sentence. 77 acres have been described, but the other 74 have not (note that they are described in Section 3, but they also need to be described here).

Response: *The text has been expanded on page 2-1 to include a brief description of the remaining (74 acres) non-pond portion of the Site.*

6. Page 2-1; 2nd paragraph: Please clarify where the aerial photographs depict an east-west trending linear feature. It is not very evident.

Response: *The text has been moved to the end of Section 2.3 (page 2-6), and reference to Figure 7 has been provided. In addition, the feature is identified on Figure 7.*

7. Page 2-2; 1st full paragraph, 3rd and 4th sentences. It is not clear that the 4th sentence follows from the 3rd. Please clarify why ecological receptors do not need to be addressed.

Response: *The subject text, which as been moved to its own paragraph below its previous location (page 2-2), has been revised to clarify why ecological receptors do not need to be addressed.*

8. Page 2-2; 2nd paragraph. The imported soils will probably not be “top soils” in the gardening context of that term. They will just be fill material imported from other Sites. The word “top” should probably be deleted.

Response: *The word “top” has been removed from the subject sentence.*

9. Page 2-5; last paragraph. Please clarify where the seeps are on the figure.

Response: *The cited figure (Figure 7) has been revised to clearly indicate the seep locations.*

10. Page 2-5; footnote 5. “Therefore” should be deleted from the beginning of the 2nd sentence.

Response: *The subject sentence has been revised as noted in NDEP’s comment.*

11. Page 2-6; top. Please clarify if there is a conceptual site model basis for the high arsenic levels at this Site.

Response: Text has been added to Section 2.3 (page 2-5) that explains that the Upper Muddy Creek formation may be found at the surface at this Site. Because background levels of arsenic are generally higher in this formation, this may explain, in part, the high arsenic levels detected at the Site.

12. Page 2-7 to 2-9; Table. The NDEP has the following comments:

- a. It is unclear why this SAP compares pre-interim remedial measure (IRM) data to residential soil BCLs when this sub-area is targeted for recreational use. This table and other areas of this SAP need to be reworked so that the goal of a recreational risk assessment is clear. Comparison with residential BCLs might be reasonable if it is couched in terms of the problem (i.e., recreational risk assessment will be performed, but to get a handle on the historical data comparisons are made to residential BCLs, because they are available. Alternately, BRC could use the risk based screening levels (RBSLs) that BRC derived for a recreational scenario.

Response: Given the planned recreational land use, in response to NDEP's comment, the text has been revised to incorporate risk-based screening levels (RBSLs) developed for recreational land use based on the Closure Plan methodology, as part of the project QAPP, in place of those developed for residential land uses.

- b. Also, please add a column for the range of background concentrations, as applicable.

Response: The table has been expanded to include a column presenting the maximum background concentration.

13. Page 2-9. The paragraph at the bottom of the page mentions that remediation is warranted for arsenic *and* asbestos. NDEP could not locate the fiber count data or any information on what types of asbestiform fibers are present. Please clarify.

Response: Because the results of asbestos analyses conducted on samples collected from the Site prior to this SAP are suitable neither for risk assessment nor site characterization purposes, they are not included in this SAP. A footnote has been added to the text on page 2-10 to explain this and that excavation of asbestos-containing soils was based on the visual observation of asbestos-containing materials in the soils. The revised approach to asbestos sampling and analysis proposed in this SAP has been designed to provide asbestos data usable for risk assessment.

14. Page 2-10; 2nd paragraph. Related to the previous comment, this SAP has no discussion regarding the historical asbestos data other than basic acknowledgement that it exists and is a problem.

Response: See response to comment #13 above.

15. Page 2-10; 2nd paragraph. Please clarify the pond locations on Figure 2.

Response: Figure 2 has been revised to clearly indicate the ponds in which the IRM was conducted. In addition, individual pond rows and pond identification numbers have been added for reference.

16. Page 2-10; 3rd paragraph. Please clarify the evidence of tamarisk removal on Figure 2.

Response: Figure 2 has been revised to clearly indicate the ponds in which the tamarisk removal was conducted.

17. Page 2-12; bulleted list. The NDEP has the following comments:

- a. Some of the referenced figures are not very useful. Many of the figures show categories of sample concentrations that are not distinguishable, in which case it is not possible to discern a spatial pattern. This is in part because they are BCL based categories, when background or protection of groundwater based categories might be more appropriate.

Response: The comparison levels on the figures have been adjusted to reflect the recreational land use scenario, and are more specific to each individual chemical, including inclusion of protection of groundwater levels, where appropriate.

- b. It is not clear how BRC selected the compounds that are listed in these bullets or how these compounds relate to the toxicity, fate and transport for their respective chemical classes. It is necessary to provide this justification or discuss all of the compounds.

Response: The text has been expanded to include a reference to the discussions of these listed constituents, which occurs later in the section.

18. Page 2-13; last paragraph. The description “an appreciably smaller number of samples...” should be removed. The number is still about 50%, begging the question of what appreciably smaller means. Exceedance of background is also still a concern.

Response: The term in question has been removed from the subject sentence.

19. Page 2-14; 2nd paragraph. Please list those locations where cadmium exceeds background.

Response: The text has been expanded to identify that the five reported cadmium concentrations higher than the applicable screening levels also exceeded background. In general, throughout this section, exceedances of background conditions are only listed when background ranges are higher than the BCL.

20. Page 2-14. It is not clear why sample locations are specified for chromium, selenium, and perchlorate, and not for other chemicals called out in this section.

Response: For all metals, unless the number of screening level exceedances was too large (i.e., more than 20), samples locations associated with these exceedances are listed in the text. For arsenic, the associated footnote explains this. For certain other metals with many screening level exceedances, the lists within the body of the text focused on those exceedances that were higher than the range of background concentrations. The examples cited in NDEP's comment reflect those inorganic constituents for which locations are listed out in bullet form; however, a more careful reading of the other sections reveals that exceedances have been identified by location and reported concentration as described in this response. For any exceptions, the discussion has been expanded in the revised document to include specific sampling locations. This data presentation approach has been added as a footnote to this section in the revised document.

21. Page 2-14; Footnote. The footnote on the bottom of the page is rather confusing. Please rework this to clarify the sample naming convention.

Response: The footnote in question has been relocated to the beginning of the section (page 2-13), and expanded for clarification.

22. Page 2-15; 2nd paragraph. Please list those locations where iron exceeds background.

Response: The text has been expanded to clarify that the sole recreational RBSL exceedance for iron was higher than background. [Note: three other detections exceeded the background range.]

23. Page 2-15; last paragraph. Please list those locations where manganese exceeds background.

Response: After revising the SAP to reflect a proposed recreational land use (which included making comparisons of detections to recreational RBSLs instead of residential BCL values) the paragraph discussion of manganese that is the subject of this comment has been removed, because there were no RBSL exceedances.

24. Page 2-16; 1st paragraph. Please list those locations where mercury exceeds background.

Response: *The text has been expanded to clarify that the sole recreational RBSL exceedance for mercury was higher than background. [Note: no other detections exceeded the background range.]*

25. Page 2-20; PCBs paragraph. Please clarify whether the PCB analysis was for Aroclors or PCB congeners or both.

Response: *The text has been revised on page 2-21 to clarify that the PCB analyses were for the Aroclors.*

26. Page 2-22; 1st paragraph. Please note that Uranium-233/234 also exceeds background.

Response: *The text has been revised on page 2-22 to clarify that in addition to radium-226 and uranium-238, one uranium-233/234 detection exceeded the screening levels and background.*

27. Pages 2-23 through 2-25, bulleted list, please note that for compounds that do not have a United States Environmental Protection Agency (USEPA) Maximum Contaminant Level, it is necessary to compare to the NDEP BCL.

Response: *The text has been revised to include comparisons to the NDEP residential water BCLs.*

28. Page 2-25; end of section. It is not clear if any of these exceedances are cause for concern. Please provide some interpretation.

Response: *The text has been expanded to note that chemical occurrence in both the shallow and deep water-bearing zones beneath the Eastside and CAMU areas is currently being characterized separately and that a more detailed presentation of chemical occurrence patterns within these water-bearing zones (including comparisons to background conditions) and an assessment of the potential health risks will be provided upon completion of the on-going groundwater investigation, and the CSM for the Eastside and CAMU areas will be updated accordingly.*

29. Pages 3-1 to 3-10; Section 3.0. The DQO section needs to be reworked such that it discusses what the primary focus will be (i.e., recreational scenario for risk assessment, not a residential scenario).

Response: *The DQO section has been revised to reflect a focus on the planned recreational use (vs residential).*

30. Page 3-3; last paragraph. It is not clear where the adjacent residential housing development as is specified in the last sentence of this paragraph. Please clarify.

Response: *The text has been revised on page 3-4 to identify future residential developments in the adjacent Western Hook Development and Galleria North sub-areas.*

31. Page 3-6; 6th bullet. Please change “it is not unknown” to not be a double negative.

Response: *The subject text has been revised on page 3-6 to reflect the fact that it is currently not definitively known whether imported fill will be used on the Site.*

32. Page 3-9; Soil Vapor Flux. The first sentence says that soil vapor flux will be derived from existing soil and groundwater conditions. It is not clear what this means. Flux chamber sampling seems to be part of the plan, in which case, surely, the soil vapor flux will be derived from these data. Please clarify.

Response: *The subject text has been revised on page 3-9 for clarification.*

33. Page 3-9; Section 3.4.5. Please rewrite this section such that it outlines the scale of decision making for recreational use.

Response: *Although the proposed land use for the Site is recreational, as noted in this section the final redevelopment plans for the Site have not been completed. Therefore, recognition that the future land use will likely be recreational has been added on page 3-9, but the scale of decision making remains as residential. However, as noted in this section, if, as expected, the concentration distribution across the Site is statistically homogeneous representing a single population of concentrations for each chemical, then the decision unit will be the entire Site.*

34. Page 4-1; Section 4.1, 1st bullet. Given that the statistical methodology report focused on residential scenarios, please clarify why a 3-acre grid is suitable for sampling if the risk endpoint is a recreational user. If this is the preferred default for recreational to match the concepts behind the statistical methodology report, that is fine, but please clarify.

Response: *See response to comment #33 above. Also, given an exposure area for a recreational land use is likely to be greater than that for a residential land use area, a 3-acre grid is considered adequate. A footnote on this issue has been added to this section.*

35. Page 4-2, last paragraph. The rationale for sub-surface only sampling is not clear. For the planned risk assessment, future receptors will be exposed to what is there currently at the surface. Although the conditions might have changed, it might still be important from a risk assessment perspective to understand what is there currently.

Response: Because Pabco Road is a public road and the major access route to the Las Vegas Wash in this area, this stretch of the sub-area has been greatly disturbed since the Site was actively used for waste disposal operations. Therefore, because the objective of the field investigation is to identify and characterize the distribution of Site-related chemicals to evaluate soil and soil vapor conditions that may have been impacted at the Site from former activities, this objective is impossible to differentiate from subsequent activities for surface soil in this area (and similarly for the Beta Ditch adjacent to the City of Henderson WRF, where construction activities have eliminated this portion of the ditch). Therefore, BRC continues to propose the collection of subsurface samples only in these areas to characterize past Site activities. The above language has been added to this paragraph on pages 4-2 and 4-3.

36. Figure 8. Given that the potential future human receptors are going to be recreational users and the site will be developed for recreational use, why are adult and child residents and indoor commercial workers indicated as potential future receptors? Please clarify.

Response: Figure 8 has been revised to reflect a recreational use scenario for this sub-area.

~~REDLINE/STRIKEOUT TEXT~~

1.0 INTRODUCTION

Basic Remediation Company (BRC) has prepared this Sampling and Analysis Plan (SAP) for the Western Hook-Open Space sub-area.¹ The SAP describes tasks for performance of confirmation sampling of Site soils and soil vapor flux in order to obtain a no further action determination (NFAD) for this area. The term NFAD is defined in the *Settlement Agreement and Administrative Order on Consent: BMI Common Areas, Phase 3* (AOC3; Nevada Division of Environmental Protection [NDEP] 2006) in Section XVII. This revision of the SAP, Revision ~~34~~, incorporates comments received from the NDEP, dated June 2, 2009, on Revision 2 of the Western Hook-Open Space SAP, dated May 2009; comments received April 13, 2009, on Revision 1 of the Western Hook-Open Space SAP, dated March 2009; and comments received February 23, 2009, on Revision 0 of the Western Hook-Open Space SAP, dated January 2009. The NDEP comments and BRC's response to these comments are included in Appendix A. Also included in Appendix A is a redline/strikeout version of the text showing the revisions from the January 2009 version of the SAP. An electronic version of the entire report, as well as original format files (MS Word and MS Excel) of all text and tables are included in Appendix B.

The Western Hook-Open Space sub-area (hereinafter "the Site") is one of several sub-areas of the BMI Common Areas (Eastside) located in Clark County, Nevada (Figure 1). The Site encompasses an area of approximately 151 acres (Figure 2). The Site includes former ponds, ditches, and areas that were not used for any known waste disposal. This SAP relies upon information provided in the *BRC Closure Plan, BMI Common Areas, Clark County, Nevada* (BRC *et al.* 2007; hereinafter "Closure Plan"). The main text of the Closure Plan provides discussions of the following elements relative to the BMI Common Areas project as a whole:

- The project history, including cleanup goals and project objective (Closure Plan Sections 1 and 2);
- The list of site-related chemicals (Closure Plan Section 3);
- The conceptual site model (CSM) addressing potential contaminant sources, the nature and extent of chemical of potential concern (COPC) occurrence, and potential exposure pathways (Closure Plan Section 4; a CSM discussion specific to the Site is provided in Section 2 of this SAP);
- Data verification and validation procedures (Closure Plan Section 5);

¹ This sub-area is referred to as "Trails & Recreation" sub-area in the *BRC Closure Plan for the BMI Common Areas* (BRC *et al.* 2007).

- The procedures used to evaluate the usability and adequacy of data for use in the risk assessment (Closure Plan Sections 6 and 9);
- The data quality objectives (DQOs; Closure Plan Section 7; a DQO discussion specific to the Site is provided in Section 3 of this SAP);
- The remedial alternative study process for the Site (Closure Plan Section 8);
- Risk assessment procedures that will be used for Site closure (Closure Plan Section 9 for human health and Section 10 for ecological); and
- Data quality assessment (Closure Plan Section 5).

For certain areas within the BMI Common Areas, remediation is planned based on existing Site data, and will be performed prior to conducting the site characterization activities proposed under this SAP; however, none is planned for this Site other than clearing of obvious contamination (e.g., burn pits, stained soil, abandoned vehicles, and other debris). These clearing activities will occur prior to implementing the procedures described in this SAP. The following data gaps associated with the existing Site characterization have been identified: several of the previous samples were composite samples; most of the previous soil samples were collected at least seven years ago; few of the previous samples have been analyzed for all of the major chemicals or chemical families and several analyses used different analytical methods than established in the current analytical program for the BMI Common Areas; no soil vapor flux samples have been collected; and spatial coverage of the Site is incomplete.

Therefore, because of these various factors, risk assessments for the Site will be conducted using the data collected as part of this SAP, which has been designed to produce data representative of the conditions to which current or future users would be exposed. The need for remediation will be primarily based on these data, which represent a more robust sampling coverage and additional media of concern beyond those assessed~~than employed~~ during the historical sampling events (i.e., soil vapor flux) and can thus be more reliably used to delineate areas requiring remediation. Validated, reliable historical data will be used as appropriate to augment the dataset derived from the SAP activities.² However, because the historical data represent incomplete coverage for certain constituents and will be redundant for others after implementation of this SAP, BRC anticipates that the historical data will not generally be included in the risk assessment. However, a data usability evaluation will be conducted to determine whether any of

² Only those historical data that are representative of the conditions to which current or future users would be exposed (i.e., exclude data associated with soils subsequently removed from the Site) and pass a data usability evaluation will be included in the risk assessment for the Site.

the historical data can or should be used in the risk assessment or it will be explained why the new data supplants the old data. These historical data are useful for CSM purposes and are discussed in Section 2.0.

Sampling performed as described in this SAP relies on the statistical methodologies presented in the *Statistical Methodology Report, BMI Common Areas (Eastside), Henderson, Nevada* (NewFields 2006; hereinafter “Statistical Methodology Report”). The Statistical Methodology Report describes the statistical methods that will be used to confirm the final soils closure at each of the Eastside sub-areas of the BMI Common Areas.

The SAP presents sampling procedures that will be performed to assess current ~~site~~ conditions in soils and soil vapor flux at the Site. As described in the Closure Plan, this information will be used to determine potential impacts to future Site users from chemicals currently present in site soils~~.~~ In this SAP, as recommended in the Statistical Methodology Report, soil samples will be collected throughout the Site on a systematic sampling basis, consisting of a regular 3-acre grid overlay across the property with a randomly placed sample within each grid cell to provide enough samples for completion of a statistically robust assessment of contaminant distribution, and subsequently, to provide a robust dataset upon which to perform a human health risk assessment. Additional biased sampling locations will be selected within or near small-scale contamination points of interests; including, but not limited to, previous debris locations, ponds, berm walls, and the conveyance ditches. Soil vapor flux samples will be collected from a subset of the soil sampling locations.³

1.1 PURPOSE OF THE SAP

The purpose of this SAP is to evaluate soil and soil vapor conditions (including any indirect impacts from underlying groundwater) that may have been impacted at the Site from former activities and adjoining lands. The scope of this investigation is limited to soil and soil vapor flux sampling in an effort to assess issues that might directly impact Site development potential consistent with the Closure Plan. However, the data will be used to determine any impacts to groundwater from future site uses. That is, data will be collected to evaluate the soil-to-groundwater leaching pathway. The objective of the field investigation is to identify and characterize the distribution of Site-related chemicals (SRC) such that the potential impacts from

³ This SAP assumes that surface flux sampling will be conducted at the Site. BRC is currently undergoing a surface flux/soil gas comparison study for the project. Implementation of this SAP will utilize the recommended approach from this study. Sample locations and laboratory analyses in this SAP are not affected regardless of sampling method.

chemicals present in site soils to future Site users can be determined through risk assessment. Surface and subsurface samples that will be collected are depth-discrete soil matrix samples and surface vapor flux samples. Although this SAP does include data collection for evaluating groundwater as a potential source to the vapor intrusion pathway,⁴ it does not address potential groundwater issues, which are being investigated separately by BRC pursuant to AOC3 (NDEP 2006) as part of an overall evaluation of the BMI Common Areas. The investigation is designed to provide sufficient data to support risk-based decisions (including decisions to seek an NFAD) for the Site. The NFAD for the Site will contain a deed restriction precluding potable use of groundwater beneath the Site.

⁴ The vapor intrusion pathway would only apply if structures designed for human occupancy were to be constructed on the Site; given the planned future use of the Site, this is not anticipated. However, this data can also be used to evaluate outdoor air exposures.

2.0 CONCEPTUAL SITE MODEL

The following sections provide information about the Site, previous investigations that have been conducted at the Site, interim remedial measures (IRMs) that have occurred, and the existing Site dataset. An overview of the CSM for the Site is provided in the Closure Plan. Consistent with the structure of prior SAPs, this section includes a summary of the investigations performed at the Site during the following primary project phases: prior to IRM performance (Section 2.4); during or immediately following any IRMs (Section 2.6); and subsequent to IRM performance (Section 2.7).

2.1 SITE DESCRIPTION

The Site (Figure 2) comprises approximately 151 acres that gently slope to the northeast. The western half of the Site contains a portion of the Lower Ponds (77 acres), which were once associated with historical conveyance and/or disposal of operations effluent and cooling water by companies operating at the BMI Complex. The individual ponds (typically approximately 2 to 12 acres in size) are distinct and defined by berms generally along the north, east, and west sides. In general, the berms are relatively uniformly-shaped, often with angular corners showing little evidence of erosion. The berms are typically 4 to 6 feet tall. The remaining approximately 74-acre portion of the site without ponds is vacant land, for which there are no known historical uses. As depicted on Figure 2, a portion of a former effluent conveyance ditch (the Beta Ditch) passes through the Site and a second effluent conveyance ditch (the Alpha Ditch) forms the Site's eastern boundary.

The Site was undeveloped desert land until the construction of the Lower Ponds and conveyance ditches, into which various plant wastewaters were discharged from 1942 through 1976. ~~Based on evidence from historical aerial photographs (i.e., darkened coloration suggesting the presence of liquids), the period of use of the unknown linear feature north of the ponds appears to coincide with that time frame.~~ Since 1976, the Site has been vacant and unused.

The native soils are compacted, poorly sorted, non-plastic, light brown to red silty sand with varying amounts of gravel. Within individual Lower Ponds, surficial material consists of very fine material that grades in color from greenish-gray to light yellowish-brown; in places, the ground surface is white. This discolored material has been interpreted to be residual sediment associated with historic effluent disposal in the ponds. It may also be a result of potential evaporative deposits from the daylighting of groundwater (i.e., especially in historical seep areas, see Section 2.3) ~~the northern portion of the Site.~~

Exposures to current receptors (*i.e.*, trespassers/visitors, occasional on-site workers, and off-site residents) are being managed through Site access control. Under the prospective redevelopment plan, the Site will be used for public parks, with Site uses including trails, playfields, roads, and parking areas (Figure 3). The entire Site will be enhanced by restoration and redevelopment once remediation is complete. Future receptors identified as “on-site receptors” are defined as receptors located within the current Site boundaries (Figure 2), while future “off-site receptors” are those located outside the current Site boundaries. Many potential human receptors are possible at the Site in the period during and after redevelopment. The potentially exposed populations and their potential routes of exposure are discussed in Section 9 of the Closure Plan.

The current development plan for the Site is shown on Figure 3. To construct recreational facilities, the land will be cut and/or filled, paved with roads or parking areas, and nurtured with imported soils from other areas within the BMI Common Areas⁵ as needed. Figure 4 shows the current grading plan for the Site, indicating which areas will be filled and which areas will be cut.

As indicated above and shown on Figure 4, the current development plans indicate that the Site will receive a substantial amount of fill material and be developed for non-residential uses after remediation is complete. This area is not intended to and will not include habitat attractive to support native plant and wildlife populations. Based on discussions between BRC and NDEP during the Closure Plan process, it is currently the belief that these developments do not constitute suitable habitat in this sub-area or in any of the other sub-areas. Therefore, exposures to ecological receptors will be mitigated or removed (see Section 10 of the Closure Plan), and hence an ecological risk assessment will not be necessary.

Because the background general water quality (*i.e.*, high salt concentrations) of the groundwater beneath the Site and in the surrounding area is poor and because BRC will place institutional controls in the form of a deed restriction to prevent future users from utilizing groundwater beneath the Site, the use of private water wells by ~~residents, businesses, or~~ parks for drinking water, irrigation water, or other non-potable uses (*e.g.*, washing cars, filling swimming pools) will not occur in the post-redevelopment phase.

Although direct exposures to groundwater will not occur; indirect exposures are possible. The primary indirect exposure pathway from groundwater is the infiltration of volatile organic

⁵ Note: Imported soil data will not be included in risk assessment calculations. However, the chemical data for fill material from the Site may be useful for evaluating sub-areas to receive this fill (that is, imported fill that may be used at the Site will have been included in risk assessments for sub-areas where this fill was obtained).

compounds (VOCs) and radon from soil and groundwater to indoor and/or outdoor air. The indoor air exposure pathway is only a complete pathway if structures designed for human occupancy were to be constructed on the Site. Therefore, given the intended land use is for recreational purposes, the indoor air exposure pathway is not considered a complete pathway for this Site. In addition, residual levels of chemicals in soil may leach and impact groundwater quality beneath the Site. Collection of data to evaluate both of these migration pathways at the Site is presented in this SAP.

The Site is surrounded on most sides by lands outside the BMI Common Areas boundaries. Adjacent land uses are as follows:

- Open space (Wetlands Park) is located immediately adjacent to the north of the Site, followed by the Las Vegas Wash, which is within approximately 650 feet of the Site.
- The City of Henderson Bird Viewing Preserve, a wetlands area comprising 83 acres of individual ponds, is located immediately adjacent to the Site, to the southwest.
- The City of Henderson Wastewater Reclamation Facility (WRF), which is associated with City water treatment operations, is located immediately adjacent to the south and west of the Site. The Pittman Lateral pipeline, which forms the southern boundary of the WRF, is located approximately 900 feet south of the Site. This east-west trending subsurface feature is a major water supply conduit for the Las Vegas Valley.
- The City of Henderson northern rapid infiltration basins (RIBs), which are associated with City water treatment operations, are immediately east of the Site.

The Site is bordered to the west by the Western Hook–Development sub-area (227 acres) and to the south by the Galleria North sub-area (144 acres⁶). Chemicals detected in these sub-areas are similar to those found at the Site. The phased remediation schedule for the Eastside sub-areas calls for these sub-areas to be remediated prior to the Site. Other sub-areas to the south contain elevated chemicals in soil, and remediation of those sub-areas is scheduled to occur after remediation of the Site. However, impacts from these areas to the Site are considered negligible because dust suppression/mitigation measures and storm water pollution prevention controls will

⁶ These acreage estimates reflect a change from those presented in the Closure Plan that has resulted from the revision of site boundaries that occurred subsequent to Closure Plan finalization. The Galleria North acreage has increased from the 136 acres presented in the Closure Plan, due in large part to the incorporation of part of the Sunset North Commercial sub-area.

be implemented during remediation activities. Analytical results for the Western Hook-Development and Galleria North sub-areas are presented further in Section 2.8 below.

2.2 SURFACE WATER

Surface water flow occurs for brief periods of time during periodic precipitation events. The nature of the Lower Ponds and their construction currently serve to reduce overland transport of surface waters collected within the former Ponds area. However, the presence of the drainage ditches and the proximity of the Wash suggest the current potential for rainfall to be carried from other portions of the Site to the Wash.

After development, when the former wastewater conveyance features (*e.g.*, the Upper Pond berms and ditches) have presumably been removed, there will be a lower likelihood that surface waters generated within the Site will migrate via overland transport to the Las Vegas Wash from the Site. Storm water features as part of the future development of the Site will also reduce the potential for overland transport.

2.3 GEOLOGY/HYDROGEOLOGY

As is common throughout the Las Vegas Valley, Site soils are primarily sand and gravel, with occasional cobbles. This is consistent with the depositional environment of an alluvial fan. The Site is located on alluvial fan sediments, with a surface that slopes to the north-northeast at a gradient of approximately 0.02 foot per foot (ft/ft) towards the Las Vegas Wash. Regional drainage is generally to the east.

The uppermost strata beneath the Site consist primarily of alluvial sands and gravels derived primarily from the volcanic source rocks in the McCullough Range, as well as from the River Mountains, located to the southwest and southeast of the Site, respectively. These uppermost alluvial sediments were deposited within the last two million years and are of Quaternary age, and are thus mapped and referred to as the Quaternary alluvium (Qal; Carlsen *et al.* 1991). The Qal is typically on the order of 30 to 50 feet thick at the BMI Common Areas (Eastside) with variations due, in part, to the non-uniform contact between the Qal and the underlying Upper Muddy Creek Formation (UMCf). At the Site; however, the Qal thickness is less and the UMCf is near the surface, and may in fact be at the surface in some areas of the Site.

The UMCf underlies the Qal. The Muddy Creek formation, of which the UMCf is the uppermost part, is a lacustrine deposition from the Tertiary Age, and it underlies much of the Las Vegas

Valley. It is more than 2,000 feet thick in places. The lithology of the UMCf underlying the Site is typically fine-grained (sandy silt and clayey silt), although layers with increased sand content are sporadically encountered. As indicated above, the UMCf is near the surface, and may in fact be at the surface in some areas of the Site. Characterization of soil properties in both Western Hook (Open Space and Development) sub-areas is currently on-going and should provide data that will better determine naturally-occurring arsenic conditions in this portion of the project.

Because background concentrations of arsenic in the UMCf are higher than in the Qal (*e.g.*, the maximum arsenic concentration in the UMCf background dataset is 24.8 mg/kg versus a maximum arsenic concentration of 7.2 mg/kg in the shallow soil [Qal] background dataset), this likely explains the higher arsenic concentrations found across the Site discussed in Section 2.8. These UMCf materials have typically low permeability, with hydraulic conductivities on the order of 10^{-6} to 10^{-8} centimeters per second (Weston 1993). The UMCf in the vicinity of the Site was encountered to the maximum explored depth of 400 feet below ground surface (bgs). Lithologic cross-sections using Site-specific stratigraphic information are shown on Figures 5 and 6.

Two distinct, laterally continuous water-bearing zones are present within the upper 400 feet of the Site subsurface: (1) an upper, unconfined water-bearing zone primarily within the Qal (referred to as the Shallow Zone); and (2) a deep, confined water-bearing zone that occurs in a sandier depth interval within the silts of the deeper UMCf (referred to as the Deep Zone). Between these two distinct water-bearing zones, a series of saturated sand stringers were sporadically and unpredictably encountered during drilling (referred to as the Middle Zone).

The Shallow Zone is an unconfined, shallower, water-bearing zone that occurs across the BMI Common Areas. Within the Site boundaries, water in the Shallow Zone occurs in the Qal. The water surface in the Shallow Zone generally follows topography, with the water surface sloping towards the Las Vegas Wash. According to recent groundwater monitoring performed in April-May 2008 (BRC and MWH 2008), the depth from the surface to first groundwater at the Site ranges from approximately 25 feet bgs in the southern portion of the Site to approximately five feet bgs in the northern portion of the Site. Wells completed in the Shallow Zone are not highly productive, with sustainable flows typically less than five gallons per minute. Chemical

occurrence within this water-bearing zone, based on recent monitoring data associated with wells installed within and in the vicinity of the Site, is discussed in Section 2.9.⁷

Groundwater seeps currently exist at various locations within the BMI Common Areas near the Las Vegas Wash. No seeps currently exist within the Western Hook-Open Space sub-area; however, they may have occurred in the past. An evaluation of historical aerial photos taken between 1964 and 1970 indicates that seeps may have historically appeared in the northern non-pond portions of the Site, at the southernmost portion of the Site, and at nearby off-site locations (see Figure 7, an aerial photo from 1969 showing the seep areas within the Site) in association with past effluent infiltration at the Eastside ponds and with infiltration of municipal wastewater at the southern RIBs. Evidence of seeps was not observed in aerial photographs after 1972. The extent to which these former seeps historically affected contaminant transport (*e.g.*, by means of enhanced surface water transport to the Wash or upward migration into overlying soils) is unknown.

In addition, historical aerial photographs depict the presence of an east-west trending linear feature north of the ponds areas and roughly coincident with the northern Site boundary. This feature is shown on Figure 7. The purpose of and historical uses of this feature are unknown. Based on evidence from historical aerial photographs (*i.e.*, darkened coloration suggesting the presence of liquids), the period of use of the unknown linear feature north of the ponds appears to coincide with the time frame of historical uses of the Site.

2.4 INVESTIGATIONS PRIOR TO INTERIM REMEDIAL MEASURE PERFORMANCE

Shallow soil samples were collected within the Site prior to 2001 (*i.e.*, initiation of the IRM) during the following six separate events (see Figure 2 for sample locations; sample locations are differentiated between pre- and post-IRM; the results of these field sampling events are summarized in the database excerpt provided in Appendix B):

- The BMI Common Areas Environmental Conditions Investigation (ECI) conducted during March and April 1996 (dataset 1a). The soil investigation activities were performed in

⁷ Chemical occurrence in both the shallow and deep water-bearing zones beneath the Eastside and CAMU areas is currently being characterized under a process separate from the Closure Plan process under which this SAP has been prepared, which focuses on site soils. This SAP summarizes chemical occurrence trends in the shallow water-bearing zone, which is more likely to affect potential users under current and future land uses. A more detailed presentation of chemical occurrence patterns within both zones will be provided upon completion of the on-going groundwater investigation, and the CSM for the Eastside and CAMU areas will be updated accordingly.

accordance with a work plan approved by NDEP in February 1996 (ERM-West, Inc. [ERM] 1996a). The soil sampling results for the investigation activities were previously presented in the ECI report (ERM 1996b), which was approved by NDEP in March 1997. Data validation results are presented in the Data Validation Summary Report (DVSR) for dataset 1a (ERM 2006a), which was approved by NDEP on September 12, 2006.

- Additional soil sampling conducted in May 1999 to establish the extent of antimony, manganese, thallium, and perchlorate occurrence in Site soils (dataset 6c). These data were not collected under a formal NDEP-approved work plan. The results were previously summarized in the IRM Completion Report (ERM 2000), which has not been approved by NDEP. Data validation results are presented in the DVSR for dataset 6c (ERM 2006b), which was approved by NDEP on October 10, 2006.
- Additional soil sampling conducted in February 2000 to assess the extent of various compound classes in soils in the Lower Ponds (dataset 7b). These data were not collected under a formal NDEP-approved work plan. The results were previously summarized in the IRM Completion Report (ERM 2000), which has not been approved by NDEP. Data validation results are presented in the DVSR for dataset 7b (ERM 2006c), which was approved by NDEP on September 13, 2006.
- Discrete/composite soil investigation conducted in July 2000 (dataset 8a). The soil investigation activities were performed in accordance with ERM's work plan submitted in July 2000 and approved by NDEP on July 18, 2000. The soil sampling results for the investigation activities were previously presented in letters to NDEP dated August 11, 2000 (soil sampling results) and August 28, 2000 (statistical analysis of results); these letters have not been approved by NDEP. Data validation results are presented in the DVSR for dataset 8a (ERM 2006d), which was approved by NDEP on October 10, 2006.
- Additional soil sampling conducted in February and March 2000 within the northernmost Upper and Lower ponds (dataset 8b). These data were not collected under a formal NDEP-approved work plan. The results were previously summarized in the IRM Completion Report (ERM 2000), which has not been approved by NDEP. Data validation results are presented in the DVSR for dataset 8b (ERM 2006e), which was approved by NDEP on September 14, 2006.
- Supplemental soil investigation conducted in October 2000 (dataset 8c) in the Northwestern Ditch, Western Ditch, and Pond PLE-09. These data were not collected under a formal

NDEP-approved work plan. Data validation results are presented in the DVSR for dataset 8c (ERM 2006f), which was approved by NDEP on October 26, 2006.

During these investigations, soil samples at various depths were collected and analyzed for VOCs, semi-volatile organic compounds (SVOCs), polynuclear aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs), dioxins/furans, metals, perchlorate, radionuclides, and/or asbestos.

The following compounds were detected in soils collected during the sampling events listed above at concentrations greater than the following comparison levels:

- Risk-based screening levels, (RBSLs) for a recreational user under an Open Space land use scenario (RBSL_{REC}) as presented in the *Technical Memorandum – Development of Recreational Risk-Based Screening Levels (RBSLs), BMI Common Areas (Eastside) Site, Clark County, Nevada* (BRC 2009 [In Review]), and in the *BRC Quality Assurance Project Plan* (QAPP; BRC and ERM 2009);
- RBSLs for an outdoor maintenance worker under an Open Space land use scenario (RBSL_{MW}) as presented in the project QAPP (BRC and ERM 2009); or
- NDEP Leaching-based Basic Comparison Levels for the protection of groundwater (LBCL; dilution attenuation factor [DAF] = 1) (NDEP 2009a):

<u>Location</u>	<u>Site-Related Chemical</u>	<u>RBSL_{REC} (mg/kg)</u>	<u>RBSL_{MW} (mg/kg)</u>	<u>LBCL (mg/kg)</u>	<u>Maximum Background Detection⁸ (mg/kg)</u>	<u>Maximum Detection (mg/kg)</u>
<u>PLG-01</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>12</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>180*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>20</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>620*</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>13*</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.0024</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.023</u>
<u>PLG-02</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>13</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>150*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>15*</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>570*</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>16*</u>

⁸ Note that the maximum background concentration is from the 2005 shallow soil background dataset. As indicated in Section 2.3, the UMCf background dataset may also be applicable for the Site but this is not yet conclusive and is therefore not included as a comparison level in this report.

<u>Location</u>	<u>Site-Related Chemical</u>	<u>RBSL_{REC} (mg/kg)</u>	<u>RBSL_{MW} (mg/kg)</u>	<u>LBCL (mg/kg)</u>	<u>Maximum Background Detection⁸ (mg/kg)</u>	<u>Maximum Detection (mg/kg)</u>
<u>PLG-04</u>	<u>Aluminum</u>	<u>100,000</u>	<u>100,000</u>	<u>75</u>	<u>15,300</u>	<u>12,000*</u>
	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>72</u>
	<u>Iron</u>	<u>100,000</u>	<u>100,000</u>	<u>7.56</u>	<u>19,700</u>	<u>15,000*</u>
	<u>Magnesium</u>	<u>--</u>	<u>--</u>	<u>649</u>	<u>17,500</u>	<u>17,000*</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>1,300</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.018</u>
<u>PLG-05</u>	<u>Aluminum</u>	<u>100,000</u>	<u>100,000</u>	<u>75</u>	<u>15,300</u>	<u>9,400*</u>
	<u>Antimony</u>	<u>910</u>	<u>450</u>	<u>0.3</u>	<u>0.5</u>	<u>0.55</u>
	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>39</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>130*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>13*</u>
	<u>Iron</u>	<u>100,000</u>	<u>100,000</u>	<u>7.56</u>	<u>19,700</u>	<u>16,000*</u>
	<u>Magnesium</u>	<u>--</u>	<u>--</u>	<u>649</u>	<u>17,500</u>	<u>23,000</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>1,300</u>
	<u>Molybdenum</u>	<u>11,000</u>	<u>5,700</u>	<u>3.64</u>	<u>2</u>	<u>5</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>9.4*</u>
	<u>Selenium</u>	<u>11,000</u>	<u>5,700</u>	<u>0.3</u>	<u>0.6</u>	<u>0.65</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.011</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.016</u>
	<u>Radium-226</u>	<u>0.77</u>	<u>0.025</u>	<u>0.0161</u>	<u>2.36</u>	<u>0.92*</u>
	<u>Radium-228</u>	<u>1.3</u>	<u>0.045</u>	<u>0.0595</u>	<u>2.94</u>	<u>0.91*</u>
	<u>Thorium-228</u>	<u>0.84</u>	<u>0.028</u>	<u>3.3</u>	<u>2.28</u>	<u>1.94*</u>
	<u>Thorium-230</u>	<u>160</u>	<u>8.5</u>	<u>0.303</u>	<u>3.01</u>	<u>2.07*</u>
	<u>Thorium-232</u>	<u>140</u>	<u>7.6</u>	<u>0.303</u>	<u>2.23</u>	<u>1.5*</u>
	<u>Uranium-233/234</u>	<u>12</u>	<u>0.39</u>	<u>--</u>	<u>2.84</u>	<u>2.19*</u>
	<u>Uranium-235/236</u>	<u>200</u>	<u>11</u>	<u>--</u>	<u>0.21</u>	<u>0.058*</u>
	<u>Uranium-238</u>	<u>43</u>	<u>1.6</u>	<u>--</u>	<u>2.37</u>	<u>1.72*</u>
<u>PLH-01</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>11</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>180*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>12*</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.0045</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.035</u>
<u>PLH-02</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>14</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>110*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>14*</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>410*</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>12*</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.014</u>
<u>PLH-03</u>	<u>Aluminum</u>	<u>100,000</u>	<u>100,000</u>	<u>75</u>	<u>15,300</u>	<u>14,000*</u>
	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>41</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>170*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>18</u>
	<u>Iron</u>	<u>100,000</u>	<u>100,000</u>	<u>7.56</u>	<u>19,700</u>	<u>116,000</u>
	<u>Magnesium</u>	<u>--</u>	<u>--</u>	<u>649</u>	<u>17,500</u>	<u>23,000</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>910*</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>13*</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.014</u>

<u>Location</u>	<u>Site-Related Chemical</u>	<u>RBSL_{REC} (mg/kg)</u>	<u>RBSL_{MW} (mg/kg)</u>	<u>LBCL (mg/kg)</u>	<u>Maximum Background Detection⁸ (mg/kg)</u>	<u>Maximum Detection (mg/kg)</u>
<u>PLH-04</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>5.2*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>2.9*</u>
	<u>Selenium</u>	<u>11,000</u>	<u>5,700</u>	<u>0.3</u>	<u>0.6</u>	<u>0.76</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.0096</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.0049</u>
<u>PLI-01</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>4.5*</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>240*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>12*</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>300*</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>12*</u>
<u>PLI-02</u>	<u>Aluminum</u>	<u>100,000</u>	<u>100,000</u>	<u>75</u>	<u>15,300</u>	<u>8,700*</u>
	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>17</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>16*</u>
	<u>Iron</u>	<u>100,000</u>	<u>100,000</u>	<u>7.56</u>	<u>19,700</u>	<u>14,000*</u>
	<u>Magnesium</u>	<u>--</u>	<u>--</u>	<u>649</u>	<u>17,500</u>	<u>11,000*</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>1,100</u>
	<u>Mercury</u>	<u>680</u>	<u>340</u>	<u>0.1</u>	<u>0.11</u>	<u>0.15</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>9.4*</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.0061</u>
<u>PLI-03</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>19</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>260*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>18</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>290*</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>14*</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.01</u>
<u>PLJ-01</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>28</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>170*</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>13*</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.011</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.027</u>
<u>PLJ-02</u>	<u>Antimony</u>	<u>910</u>	<u>450</u>	<u>0.3</u>	<u>0.5</u>	<u>0.65</u>
	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>37</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>19</u>
	<u>Manganese</u>	<u>93,000</u>	<u>34,000</u>	<u>3.26</u>	<u>1,090</u>	<u>7,200</u>
	<u>Nickel</u>	<u>45,000</u>	<u>23,000</u>	<u>7</u>	<u>30</u>	<u>9.5*</u>
	<u>Perchlorate</u>	<u>1,600</u>	<u>790</u>	<u>--</u>	<u>--</u>	<u>830</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.058</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.07</u>
	<u>Radium-226</u>	<u>0.77</u>	<u>0.025</u>	<u>0.0161</u>	<u>2.36</u>	<u>0.69*</u>
	<u>Radium-228</u>	<u>1.3</u>	<u>0.045</u>	<u>0.0595</u>	<u>2.94</u>	<u>0.55*</u>
	<u>Thorium-228</u>	<u>0.84</u>	<u>0.028</u>	<u>3.3</u>	<u>2.28</u>	<u>1.16*</u>
	<u>Thorium-230</u>	<u>160</u>	<u>8.5</u>	<u>0.303</u>	<u>3.01</u>	<u>0.69*</u>
	<u>Thorium-232</u>	<u>140</u>	<u>7.6</u>	<u>0.303</u>	<u>2.23</u>	<u>0.87*</u>
	<u>Uranium-233/234</u>	<u>12</u>	<u>0.39</u>	<u>--</u>	<u>2.84</u>	<u>3.39</u>
	<u>Uranium-235/236</u>	<u>200</u>	<u>11</u>	<u>--</u>	<u>0.21</u>	<u>0.05*</u>
	<u>Uranium-238</u>	<u>43</u>	<u>1.6</u>	<u>--</u>	<u>2.37</u>	<u>2.5</u>

<u>Location</u>	<u>Site-Related Chemical</u>	<u>RBSL_{REC}</u> <u>(mg/kg)</u>	<u>RBSL_{MW}</u> <u>(mg/kg)</u>	<u>LBCL</u> <u>(mg/kg)</u>	<u>Maximum Background Detection⁸</u> <u>(mg/kg)</u>	<u>Maximum Detection</u> <u>(mg/kg)</u>
<u>Alpha Ditch</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>13</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>300*</u>
	<u>Cadmium</u>	<u>1,100</u>	<u>560</u>	<u>0.4</u>	<u>0.16</u>	<u>0.57</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>16*</u>
	<u>Selenium</u>	<u>11,000</u>	<u>5,700</u>	<u>0.3</u>	<u>0.6</u>	<u>1</u>
<u>Beta Ditch</u>	<u>Arsenic</u>	<u>36</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>16</u>
	<u>Barium</u>	<u>100,000</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>390*</u>
	<u>Cadmium</u>	<u>1,100</u>	<u>560</u>	<u>0.4</u>	<u>0.16</u>	<u>0.54</u>
	<u>Chromium</u>	<u>100,000</u>	<u>450</u>	<u>2</u>	<u>16.7</u>	<u>14.1*</u>
	<u>alpha-BHC</u>	<u>3.3</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.00069</u>
	<u>beta-BHC</u>	<u>12</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.0074</u>

The following compounds were detected in soils collected during the sampling events listed above at concentrations greater than risk-based screening levels (RBSLs) for a recreational land use scenario⁹ or NDEP Basic Comparison Levels for the protection of groundwater ((BCL_{LS}; dilution attenuation factor [DAF] = 1)) (NDEP 2008):

<u>Location</u>	<u>Site-Related Chemical</u>	<u>Recreational RBSL</u> <u>(mg/kg)</u>	<u>BCL_{LS}</u> <u>(mg/kg)</u>	<u>Maximum Background Detection¹⁰</u> <u>(mg/kg)</u>	<u>Maximum Detection</u> <u>(mg/kg)</u>
<u>PLG-01</u>	<u>Arsenic</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>12</u>
	<u>Barium</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>180*</u>
	<u>Chromium</u>	<u>498</u>	<u>2</u>	<u>16.7</u>	<u>20</u>
	<u>Nickel</u>	<u>22,711</u>	<u>7</u>	<u>30</u>	<u>13*</u>
	<u>alpha-BHC</u>	<u>0.4</u>	<u>0.00003</u>	<u>--</u>	<u>0.0024</u>
	<u>beta-BHC</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.023</u>
<u>PLG-02</u>	<u>Arsenic</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>13</u>
	<u>Barium</u>	<u>100,000</u>	<u>82</u>	<u>836</u>	<u>150*</u>
	<u>Chromium</u>	<u>498</u>	<u>2</u>	<u>16.7</u>	<u>15*</u>
	<u>Nickel</u>	<u>22,711</u>	<u>7</u>	<u>30</u>	<u>16*</u>
<u>PLG-04</u>	<u>Arsenic</u>	<u>4.2</u>	<u>1</u>	<u>7.2</u>	<u>72</u>
	<u>beta-BHC</u>	<u>1.4</u>	<u>0.0001</u>	<u>--</u>	<u>0.018</u>

⁹ Because the Site is not planned for residential development, NDEP residential BCLs are not used for comparisons purposes. The planned land use for the Site is recreational; however, BCLs have not been established for a recreational land use scenario. Two primary receptors have been identified for this land use: trespassers/recreational users, and outdoor maintenance workers. Preliminary RBSLs have been developed for both these receptors and are included in the BRC QAPP. These RBSLs have been established using the human health risk assessment methodology in the BRC Closure Plan. Both RBSLs associated with recreational land use (i.e., recreational users and outdoor maintenance workers) are provided for comparison purposes in Table 1. However, in the tables in the text of the report the term recreational RBSL refers to the maintenance worker RBSL, which is the lower of the two RBSL values.

¹⁰ Note that the maximum background concentration is from the 2005 shallow soil background dataset. As indicated in Section 2.3, the UMCf background dataset may also be applicable for the Site but this is not yet conclusive and is therefore not included as a comparison level in this report.

Location	Site-Related Chemical	Recreational RBSL (mg/kg)	BC _L _{LS} (mg/kg)	Maximum Background Detection ¹⁰ (mg/kg)	Maximum Detection (mg/kg)
PLG-05	Antimony	454	0.3	0.5	0.55
	Arsenic	4.2	1	7.2	39
	Barium	100,000	82	836	130*
	Chromium	498	2	16.7	13*
	Nickel	22,711	7	30	9.4*
	Selenium	5,678	0.3	0.6	0.65
	alpha-BHC	0.4	0.00003	—	0.011
	beta-BHC	1.4	0.0001	—	0.016
	Radium-226	0.026	0.0161	2.36	0.92*
	Radium-228	0.15	0.0595	2.94	0.91*
	Thorium-228	0.25	3.3	2.28	1.94*
	Thorium-230	21	0.303	3.01	2.07*
	Thorium-232	20	0.303	2.23	1.5*
	Uranium-235/236	0.39	0.0389	0.21	0.058*
	Uranium-238	1.8	0.0061	2.37	1.72*
PLH-01	Arsenic	4.2	1	7.2	11
	Barium	100,000	82	836	180*
	Chromium	498	2	16.7	12*
	alpha-BHC	0.4	0.00003	—	0.0045
	beta-BHC	1.4	0.0001	—	0.035
PLH-02	Arsenic	4.2	1	7.2	14
	Barium	100,000	82	836	110*
	Chromium	498	2	16.7	14*
	Nickel	22,711	7	30	12*
	beta-BHC	1.4	0.0001	—	0.014
PLH-03	Arsenic	4.2	1	7.2	41
	Barium	100,000	82	836	170*
	Chromium	498	2	16.7	18
	Iron	100,000	—	19,700	116,000
	Nickel	22,711	7	30	13*
	beta-BHC	1.4	0.0001	—	0.014
PLH-04	Arsenic	4.2	1	7.2	5.2*
	Chromium	498	2	16.7	2.9*
	Selenium	5,678	0.3	0.6	0.76
	alpha-BHC	0.4	0.00003	—	0.0096
	beta-BHC	1.4	0.0001	—	0.0049
PLI-01	Arsenic	4.2	1	7.2	4.5*
	Barium	100,000	82	836	240*
	Chromium	498	2	16.7	12*
	Nickel	22,711	7	30	12*
PLI-02	Arsenic	4.2	1	7.2	17
	Chromium	498	2	16.7	16*
	Mercury	341	0.1	0.11	0.15
	Nickel	22,711	7	30	9.4*
	beta-BHC	1.4	0.0001	—	0.0061
PLI-03	Arsenic	4.2	1	7.2	19
	Barium	100,000	82	836	260*

Location	Site-Related Chemical	Recreational RBSL (mg/kg)	BC _L _{LS} (mg/kg)	Maximum Background Detection ¹⁰ (mg/kg)	Maximum Detection (mg/kg)
	Chromium	498	2	16.7	18
	Nickel	22,711	7	30	14*
	alpha-BHC	0.4	0.00003	—	0.01
PLJ-01	Arsenic	4.2	1	7.2	28
	Barium	100,000	82	836	170*
	Chromium	498	2	16.7	13*
	alpha-BHC	0.4	0.00003	—	0.011
	beta-BHC	1.4	0.0001	—	0.027
PLJ-02	Antimony	454	0.3	0.5	0.65
	Arsenic	4.2	1	7.2	37
	Chromium	498	2	16.7	19
	Manganese	63,093	—	1,090	7,200
	Nickel	22,711	7	30	9.5*
	Perchlorate	795	—	—	830
	alpha-BHC	0.4	0.00003	—	0.058
PLJ-02	beta-BHC	1.4	0.0001	—	0.07
	Radium-226	0.026	0.0161	2.36	0.69*
	Radium-228	0.15	0.0595	2.94	0.55*
	Thorium-228	0.25	3.3	2.28	1.16*
	Thorium-230	21	0.303	3.01	0.69*
	Thorium-232	20	0.303	2.23	0.87*
	Uranium-235/236	0.39	0.0389	0.21	0.05*
	Uranium-238	1.8	0.0061	2.37	2.5
Alpha Ditch	Arsenic	4.2	1	7.2	13
	Barium	100,000	82	836	300*
	Cadmium	1,128	0.4	0.16	0.57
	Chromium	498	2	16.7	16*
	Selenium	5,678	0.3	0.6	1
Beta Ditch	Arsenic	4.2	1	7.2	16
	Barium	100,000	82	836	390*
	Cadmium	1,128	0.4	0.16	0.54
	Chromium	498	2	16.7	14.1*
	alpha-BHC	0.4	0.00003	—	0.00069
	beta-BHC	1.4	0.0001	—	0.0074

mg/kg = Milligrams per kilogram

Note: Only those compounds with comparison screening level exceedances are included in the table above.

* Within range of background concentrations.

As indicated above, all of the barium, nickel, and radionuclide exceedances and most of the chromium exceedances were within the range of background concentrations. Ultimately, it was concluded that remediation was warranted for Site pond PLG-05 and the western portion of

PLG-04 to address the presence of arsenic, as well as asbestos, which was observed in surface soils in these two ponds.¹¹

2.5 INTERIM REMEDIAL MEASURES

To expedite restoration of the BMI Common Areas, BRC elected to perform an IRM for certain Lower Ponds. This IRM was performed following the procedures specified in the NDEP-approved *Sunset North Area IRM Workplan* (ERM 1999). The IRM work plan was approved by NDEP on August 27, 1999. IRM activities consisted of excavation of the impacted shallow soils, transportation to a secured location within the Upper Ponds, and treatment to prevent generation of wind-blown dusts and runoff.

The primary phase of soil excavation was performed between October 1999 and May 2000, and addressed ponds in the Western Hook-Development, Sunset North Commercial and Upper Ponds sub-areas. Results of the IRM were presented in the IRM completion report (ERM 2000); this report has not been approved by NDEP. Subsequently, after completion of this initial IRM phase, based on sampling results that indicated the presence of elevated concentrations of arsenic and visual evidence of asbestos in the soils, additional surface soil excavation was performed in additional Lower Ponds, specifically, PLG-04, PLG-05 within the Site and PLG-06 within the Western Hook-Development sub-area. This excavation work followed the procedures specified in the IRM work plan, but was not performed in accordance with an NDEP-approved work plan specific to those three ponds. The areas of soil removal within the Site are shown on Figure 2.

In addition, in 2007 BRC conducted a broad-scale removal of tamarisk plants in the Site; evidence of the ground surface disturbance from those plant removal activities can be seen on Figure 2. These tamarisk removal efforts covered an area of approximately 98 acres and involved the removal of minimal amounts of site soil incorporated in the plant roots.

2.6 INTERIM REMEDIAL MEASURE-RELATED CONFIRMATION SAMPLING

Recognizing that a significant area-wide soil sampling event was to be performed shortly after the soil removal efforts in ponds PLG-04 and PLG-05 were completed (see following section),

¹¹ The results of asbestos analyses conducted on samples collected from the Site prior to this SAP are not suitable for risk assessment nor site characterization purposes, and are not included in this report. Excavation of asbestos-containing soils was based on the visual observation of clumps of suspect asbestos containing materials (origin unknown) in the soils.

no confirmation samples were collected in these areas. Based on those area-wide sampling data, SRC concentrations in Site soils were reduced as follows:

Pond ID	Site-Related Chemical	Pre-IRM Maximum Detection (mg/kg)	Post-IRM Maximum Detection (mg/kg)
PLG-04 (post-IRM samples PRNSNP-17 and -30C)	Arsenic	72	20.4
	<u>Manganese</u>	<u>1,300</u>	<u>554</u>
	beta-BHC	0.018	0.012
PLG-05 (post-IRM sample PRNSNP-29C)	Antimony	0.55	--
	Arsenic	39	19.1
	<u>Magnesium</u>	<u>23,000</u>	<u>16,800</u>
	<u>Manganese</u>	<u>1,300</u>	<u>181</u>
	<u>Molybdenum</u>	<u>5</u>	<u>0.3</u>
	Selenium	0.65	0.12
	alpha-BHC	0.011	ND
	beta-BHC	<u>0.01606</u>	ND

Note: Results summarized only for those compounds noted in the prior section as exceeding comparisonecreening levels and outside the range of background concentrations.

2.7 INVESTIGATIONS SUBSEQUENT TO INTERIM REMEDIAL MEASURE

Shallow soil samples were collected within the Site after conducting the soil removal activities in PLG-04 and PLG-05 (*i.e.*, 2001 and later) during the following three separate events (see Figure 2 for sample locations; sample locations are differentiated between pre- and post-IRM; the results of these field sampling events are summarized in the database excerpt provided in Appendix B):

- Supplemental soil investigation conducted in May/June 2001 (dataset 20c). These data were not collected under a formal NDEP-approved work plan. Data validation results are presented in the DVSR for dataset 20c (ERM 2007), which was approved by NDEP on February 5, 2007.
- Discussions between BRC and NDEP after the unusually heavy rainstorms of 2004 resulted in the decision to collect surface soil samples at three locations where the Alpha Ditch joins the City of Henderson. Mr. Todd Croft of NDEP visited the Site with a representative of BRC in order to determine the specific locations where the three surface soil samples should be collected. BRC conducted surface soil sampling at each of the locations on March 29, 2005. Data validation results are presented in the DVSR for dataset 32 (MWH 2006a), which was approved by NDEP on September 26, 2006.

- Waste characterization conducted in July and August 2006 (dataset 39). The soil investigation activities were performed in accordance with BRC's SAP submitted on June 29, 2006, and approved by NDEP in July 2006. The soil sampling results for the investigation activities were previously presented in the *Remedial Action Plan* (RAP; BRC 2007), which was approved by NDEP on September 24, 2007. Data validation results are presented in the DVSR for dataset 39 (MWH 2006b), which was approved by NDEP on November 3, 2006.

During these investigations, soil samples at various depths were collected and analyzed for alcohols, aldehydes, organic acids, dioxins/furans, VOCs, SVOCs, PAHs, OCPs, organophosphorus pesticides, herbicides, PCBs, metals, perchlorate, radionuclides, and/or asbestos.

2.8 CURRENT CHEMICAL DISTRIBUTION WITHIN SOILS

A summary of historic soil chemical data from surface to 10 feet bgs is presented in Table 1. Compound-specific historical sampling results collected from the Site are presented in Appendix B, Tables B-1 through B-11, and included electronically in Appendix B.¹² Sample locations are shown on Figure 2.

Figures showing the assumed current distribution of various representative chemicals at the Site are presented in Appendix C. SRCs were generally selected for graphical depictions if (1) a sufficient number of analyses for that constituent were performed; (2) multiple ~~recreational~~ RBSL exceedances were observed for that constituent at concentrations in excess of background concentrations; and/or (3) an appreciable number of ~~LBCLBCLs~~ exceedances were observed for that constituent at concentrations in excess of background concentrations. For OCPs and radionuclides, a single representative constituent was selected for graphical displays. Using these criteria, chemical occurrence figures were prepared for the following constituents, which are discussed in greater detail below along with all constituents reported at concentrations in excess of their ~~recreational~~ RBSL or ~~LBCLBCLs~~:

- Arsenic (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-1 and C-2, respectively);

¹² ¹²—In most cases, the sample nomenclature for samples collected within the Lower Ponds is consistent with the pond IDs – for example, a sample collected from Lower Pond row J, the first pond to the west, at 1 foot bgs was historically assigned a sample ID of “PLJ-01-1”. The pond rows and individual ponds within them are labeled on Figure 2. In cases where a location was outside the former Ponds or where this nomenclature convention was not followed (*i.e.*, PRNSNP-17); when such borings are noted in the text, the Pond locations or general location areas are provided for ease of reference. All boring locations are shown on Figure 2.

- Cadmium (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-3 and C-4, respectively);
- Chromium (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-5 and C-6, respectively);
- Perchlorate (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-7 and C-8, respectively);
- beta-BHC (0 to 2 feet bgs and 3 to 5 feet bgs - on Figures C-9 and C-10, respectively);
- TCDD TEQ (0 to 2 feet bgs - on Figure C-11); and
- Radium-226 (0 to 2 feet bgs - on Figure C-12).

These figures also include samples within 1,000 feet of the Site from the adjacent Galleria North and Western Hook-Development sub-areas, as well as the City of Henderson WRF, to provide information on the current upgradient, downgradient, and cross-gradient conditions.

Unless otherwise noted, to assess the potential threat to human health, chemical detections were compared to the Open Space land use scenario RBSLs (both the RBSL_{REC} and the RBSL_{MW}).¹³ ~~recreational RBSL~~. In addition, to assess the potential for impacts to groundwater quality, chemical detections at the Site were also compared to the LBCL~~BCL~~_{Ls} established for each chemical. However, it should be noted that the range of background concentrations for certain constituents are appreciably higher than their RBSLs and/or LBCL; therefore, comparison to background concentrations is more appropriate for these constituents than using the RBSLs or LBCL as a point of comparison. Chemical occurrence patterns for the chemicals detected at concentrations in excess of comparisonscreening levels, in samples collected from surface to 10 feet bgs, are provided below.¹⁴

Aluminum. Aluminum was detected in all 61 samples (47 surface and 14 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. These detections were all lower than the 100,000 mg/kg RBSL_{REC} and RBSL_{MW}, but exceeded the 75 mg/kg LBCL. All of the detections were lower than the maximum background concentration of 15,300 mg/kg.

¹³ Here and afterwards in this SAP, when the term “Open Space land use scenario RBSL” is used, it refers to both the RBSL_{REC} and the RBSL_{MW} comparison levels in general. If the subject text refers specifically to the RBSL determined for either the park user or maintenance worker receptor under the recreational land use scenario, the applicable RBSL is identified.

¹⁴ ⁴⁴ -For all inorganic constituents in this section, unless the number of comparisonscreening level exceedances was too large (i.e., more than 20, such as arsenic), samples locations associated with these exceedances are listed in the text. For metals other than arsenic with many comparisonscreening level exceedances, the lists within the body of this section focus on those exceedances that are higher than the range of background concentrations.

Antimony. Of the 55 samples (37 surface and 18 subsurface samples, Table B-1) reflecting current conditions in which antimony was analyzed, it was detected in only one sample (0.65 mg/kg in a surface soil sample from PLJ-02). This detection was lower than the 910 mg/kg RBSL_{REC} and 450 mg/kg RBSL_{MW}~~454 mg/kg recreational RBSL~~, but exceeded the 0.3 mg/kg ~~LBCL~~~~BCL_{LS}~~. In addition, this detection was higher than the range of background concentrations (maximum background concentration of 0.5 mg/kg). It should be noted that the standard reporting limits employed during the historical sampling events are higher than the ~~LBCL~~~~BCL_{LS}~~, and it is unknown whether antimony is also present in those samples at concentrations in excess of the ~~LBCL~~~~BCL_{LS}~~. The reporting limits were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs~~recreational RBSL~~, if present, would have been reported.

Arsenic. Of the 100 samples reflecting current conditions in which arsenic was analyzed (70 surface and 30 subsurface samples, Table B-1); arsenic was detected in approximately 94 percent. All but two of the detections were lower than the 36 mg/kg RBSL_{REC}; these two exceedances were associated with surface soils samples collected from former ponds PLH-03 (41 mg/kg) and PLJ-02 (37 mg/kg). The majority of the detections were higher than the 4.2 mg/kg ~~RBSL_{MW} (76 detections)~~~~recreational RBSL~~ and/or the 1 mg/kg ~~LBCL (92 detections)~~~~BCL_{LS}~~.

~~However, it should be noted that the range of background concentrations for arsenic are appreciably higher than the screening levels; therefore, comparison to background arsenic concentrations is more appropriate than using the recreational RBSL and BCL_{LS} as points of comparison.~~ Sixty-four samples had reported arsenic concentrations in excess of the maximum shallow soil background level¹⁵ (7.2 mg/kg; from BRC/TIMET 2007). These samples were associated with the former ponds and ditches, and with the non-pond areas in the northern portion of the Site (maximum detection 41 mg/kg, in pond PLH-03), and with surface and subsurface samples. Also, as noted in Section 2.3, the UMCf may be near or at the surface in some areas of the Site. Because background concentrations of arsenic in the UMCf are higher than in the Qal (e.g., the maximum arsenic concentration in the UMCf background dataset is 24.8 mg/kg versus a maximum arsenic concentration of 7.2 mg/kg in the shallow soil [Qal] background dataset), this may explain the higher arsenic concentrations found across the Site. Seven results were higher than the maximum arsenic concentration in the UMCf background dataset. These seven exceedances are associated with the following locations:

- Pond PLJ-01 at 1 feet bgs (28 mg/kg);

¹⁵ ~~45~~ -These exceedances are too numerous to list; the reader is referred to Table B-1.

- Pond PLJ-02 at 1 feet bgs (37 mg/kg);
- Pond PLH-04 (sample ID PRNSNP-21) at 0 feet bgs (33.7 mg/kg); and
- Pond PLH-03 (sample IDs PLH-03SCD, PLH-03SCOM, PLH--03PA-1, and PLH-03SED) at 1 feet bgs (41, 35, 28, and 27 mg/kg, respectively).

The distribution of arsenic for soil samples collected in the surface soils and the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-1 and C-2, respectively.

Barium. Barium was detected in all of the 80 samples reflecting current conditions in which barium was analyzed (50 surface and 30 subsurface samples, Table B-1). None of the detections were higher than the 100,000 mg/kg ~~RBSL_{REC} and RBSL_{MW}~~ ~~recreational RBSL~~, but 64 exceeded the 82 mg/kg ~~LBCLBCL_{LS}~~. However, all of the detections were within the range of background concentrations (maximum background concentration of 836 mg/kg).

Cadmium. Of the 96 samples reflecting current conditions in which cadmium was analyzed (67 surface and 29 subsurface samples, Table B-1); it was detected in approximately 45 percent. None of the detections were higher than the 1,100+28 mg/kg ~~RBSL_{REC} or the 560 mg/kg~~ ~~RBSL_{MW}~~ ~~recreational RBSL~~, but the following five results slightly exceeded the 0.4 mg/kg ~~LBCLBCL_{LS}~~:

- Alpha Ditch location ADB-11 at 1 and 5 feet bgs (0.41 mg/kg and 0.46 mg/kg, respectively);
- Alpha Ditch location ADB-12 at 1 and 5 feet bgs (0.57 mg/kg and 0.54 mg/kg, respectively); and
- Beta Ditch location BDB-21 at 5 feet bgs (0.54 mg/kg).

These five samples were also higher than the range of background concentrations (maximum background concentration of 0.16 mg/kg). It should be noted that the standard reporting limits employed during the historical sampling events are slightly higher than the ~~LBCLBCL_{LS}~~, and it is unknown whether cadmium is also present in those samples at concentrations in excess of the ~~LBCLBCL_{LS}~~. The reporting limits were sufficiently low such that concentrations in excess of the ~~Open Space land use scenario RBSLs~~ ~~recreational RBSL~~, if present, would have been reported. The distribution of cadmium for soil samples collected in the surface soils and the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-3 and C-4, respectively.

Chromium. Chromium was detected in all of the 82 samples reflecting current conditions in which it was analyzed (52 surface and 30 subsurface samples, Table B-1). None of the detections were higher than the 100,000~~498~~ mg/kg ~~RBSL_{REC} and 450 mg/kg RBSL_{MW}~~recreational-RBSL; however, all but three of the detections were higher than the 2 mg/kg ~~LBCL~~BCL_{LS}. The majority of these detections were within the range of background concentrations (16.7 mg/kg maximum background detection); however, 14 results were higher than background. These 14 exceedances are associated with the following locations:

- Pond PLG-01 at 5 feet bgs (20 mg/kg);
- Pond PLH-03 at 5 feet bgs (18 mg/kg);
- Pond PLH-04 (sample ID PRNSNP-21) at 0 feet bgs (17.4 mg/kg);
- Pond PLI-03, four samples at 0-1 foot bgs (17, 18, 23, and 20.1 mg/kg [sample ID PRNSNP-25]) and one sample at 4 feet bgs (sample ID PRNSNP-25; 17.5 mg/kg);
- Pond PLJ-02 at 1 foot bgs (19 mg/kg);
- The non-pond area in the northernmost portion of the Site – locations PRNBA-01 (0 feet bgs), PRNBA-03 (4 feet bgs), PRNBA-07 (4 feet bgs), and PRNU-02 (9 feet bgs) (detections of 18.2, 31.1, 17.9, and 19.6 mg/kg, respectively); and
- The non-pond area in the eastern half of the Site – location PREU-01 at 1 foot bgs (25 mg/kg).

As seen from the above bullets, these concentrations are relatively close to background concentrations (maximum reported detection of 31.1 mg/kg at PRNBA-03, and all but two detections less than 25 mg/kg). The distribution of chromium for soil samples collected in the surface soils and the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-5 and C-6, respectively.

Iron. Iron was detected in all of the 61 samples reflecting current conditions in which it was analyzed (47 surface and 14 subsurface samples, Table B-1). Of these detections, one (116,000 mg/kg from PLH-03 at 1 foot bgs) was higher than the 100,000 mg/kg ~~RBSL_{REC} and RBSL_{MW}~~. All of the detections were higher than the 7.6 mg/kg LBCL. However, only four detections were higher than the maximum background concentration of 19,700 mg/kg. These exceedances were associated with the following locations:

- A surface sample in PLH-01 (sample ID PRNBA-07; 20,900 mg/kg);
- PLH-03 at 1 foot bgs (116,000 mg/kg); and
- Surface soil samples collected from non-pond areas to the north and east of the former ponds (PRNBA-04 at 21,400 mg/kg and PREU-04 at 21,600 mg/kg).

Magnesium. Magnesium was detected in all 61 samples (47 surface and 14 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. Open Space land use scenario ~~RBSLs have~~recreational-RBSL; a BCL_{LS} has not been established for this constituent; all of the detections exceeded the 649 mg/kg LBCL. However, all but four of these detections were lower than the maximum background concentration of 17,500 mg/kg. The four background exceedances were associated with samples collected from the following locations:

- PLG-03 in surface soil (sample ID PRNBA-09) (18,500 mg/kg); and
- PLH-03 in surface soil (sample ID PRNBA-06; 19,000 mg/kg) and at 1 foot bgs (19,000 mg/kg and 23,000 mg/kg)

Manganese. Manganese was detected in all 77 samples (59 surface and 18 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. These detections were all lower than the 93,000 mg/kg RBSL_{REC} and the 34,000 mg/kg RBSL_{MW}. All but one detection exceeded the 3.3 mg/kg LBCL. However, the majority of these detections were lower than the maximum background concentration of 1,090 mg/kg. The six background exceedances were associated with samples collected from the following locations:

- PLG-04 in surface soil (PRNSNP-19) and at 1 foot bgs (5,320 mg/kg and 1,100 mg/kg, respectively);
- PLI-02 at 1 foot bgs (1,100 mg/kg);
- PLI-03 (sample ID PRNBA-05) (surface soil sample, 1,380 mg/kg);
- PLJ-02 at 1 foot bgs (7,200 mg/kg);
- The non-pond area immediately north of the former ponds (surface soil sample at location PRNBA-02 – 1,180 mg/kg). This detection was higher than the range of background concentrations (maximum background concentration of 19,700 mg/kg).

Mercury. Of the 80 samples reflecting current conditions in which mercury was analyzed (50 surface and 30 subsurface samples, Table B-1); it was detected in approximately 23 percent. None of these detections exceeded the ~~680 mg/kg RBSL_{REC} or the 340 mg/kg RBSL_{MW}~~³⁴¹ ~~mg/kg recreational RBSL~~; however, one detection (0.15 mg/kg in surface soil sample PLI-02PA-1) was slightly higher than the 0.1 mg/kg ~~LBCL~~^{BCL_{LS}}. This detection was also higher than the range of background concentrations (maximum background concentration of 0.11 mg/kg). The reporting limits were generally sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs or LBCL, if present, would have been reported.

Molybdenum. Molybdenum was detected in 67 percent of the 61 samples (47 surface and 14 subsurface samples, Table B-1) reflecting current conditions in which it was analyzed. These detections were all lower than the 11,000 mg/kg RBSL_{REC} and the 5,700 mg/kg RBSL_{MW}, and all but one of the detections were lower than the 3.6 mg/kg LBCL. That exceedance (5.1 mg/kg) was associated with a sample collected from immediately north of the former ponds (sample ID PRNBA-02). This detection was also higher than the maximum background concentration of 2 mg/kg. It should be noted that the standard reporting limits employed during the historical sampling events are slightly higher than the LBCL, and it is unknown whether molybdenum is also present in those samples at concentrations in excess of the LBCL. The reporting limits were sufficiently low such that concentrations in excess of the Open Space land use scenario ~~RBSLsrecreational RBSL or BCL_{LS}~~, if present, would have been reported.

Nickel. Nickel was detected in all 55 of the samples reflecting current conditions in which it was analyzed (37 surface and 18 subsurface samples, Table B-1). None of these detections exceeded the ~~45,000 mg/kg RBSL_{REC} or the 23,000 mg/kg RBSL_{MW}~~^{22,711} ~~mg/kg recreational RBSL~~; however, the majority were higher than the 7 mg/kg ~~LBCL~~^{BCL_{LS}} (maximum detection 23.1 mg/kg in sample PRMBA-03 [4 feet bgs]). All of these detections were lower than within the ~~range of background concentrations~~ (maximum background concentration of 30 mg/kg).

Selenium. Of the 100 samples reflecting current conditions in which it was analyzed (~~7050~~ surface and 30 subsurface samples, Table B-1); selenium was reported in approximately 35 percent. None of the detections were higher than the ~~11,000 mg/kg RBSL_{REC} or the 5,700 mg/kg RBSL_{REC}~~^{5,678} ~~mg/kg recreational RBSL~~; however, 23 of the detections were higher than the 0.3 mg/kg ~~LBCL~~^{BCL_{LS}}. The majority of the detections were within the range of background concentrations; however, seven results were higher than the ~~background range~~ (0.6 mg/kg maximum background ~~concentrationdetection~~). These seven exceedances are associated with the following locations:

- Pond PLH-04 at 1 foot bgs (0.76 mg/kg);
- Pond PLG-04 at 0 feet bgs (sample PRNSNP-19; 0.64 mg/kg);
- The non-pond area in the northernmost portion of the Site – locations PRNBA-08 at 0 feet bgs (0.63 mg/kg) and PREU-05 at depths of 0 feet bgs, 4 feet bgs, and 9 feet bgs (0.78, 0.77, and 0.61 mg/kg, respectively); and
- The Alpha Ditch – location ADB-11 at 5 feet bgs (1 mg/kg).

As seen from the above bullets, these concentrations are close to the range of background concentrations (maximum reported detection of 1 mg/kg at ADB-11 as compared to the 0.6 mg/kg maximum background concentration). It should be noted that the standard reporting limits employed during the historical sampling events are higher than the LBCLBCL_{LS} (and the background range in some cases), and it is unknown whether selenium is also present in those samples at concentrations in excess of the LBCLBCL_{LS} (or background, in some cases). The reporting limits were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs~~recreational RBSL~~, if present, would have been reported.

Perchlorate. Of the 76 samples reflecting current conditions in which it was analyzed (57 surface and 19 subsurface samples, Table B-1); perchlorate was reported in approximately 93 percent. ~~Only~~ one of the detections were higher than the 1,600 mg/kg RBSL_{REC}; however, one detection was higher than the 790 mg/kg RBSL_{MW}. ~~An LBCL795-mg/kg recreational RBSL; a BCL_{LS} has not been established for perchlorate. The RBSL_{MW}This recreational RBSL exceedance was is~~ associated with a surface soil sample collected from pond PLJ-02 (830 mg/kg). The distribution of perchlorate for soil samples collected in the surface soils and the intervals from 0 to 2 feet bgs and 3 to 5 feet bgs at the Site are shown on Figures C-7 and C--8, respectively.

Other Inorganics. As seen in Table 1 and Tables B-1 and B-6 in Appendix B, several inorganic constituents, in addition to those listed above, were routinely detected in soil samples reflecting current conditions. None of these additional inorganic constituents were detected at concentrations in excess of the Open Space land use scenario RBSLs (*i.e.*, either the RBSL_{REC}~~recreational RBSL~~ or the RBSL_{MW}) or the LBCLBCL_{LS}. With few exceptions, the standard reporting limits for these additional inorganic constituents were sufficiently low such that concentrations in excess of the Open Space land use scenario RBSLs or LBCL~~recreational RBSL or BCL_{LS}~~, if present, would have been reported; such exceptions included:

- Antimony – in many cases, the standard reporting limits were higher than the LBCL (also higher than background);
- Silver – in some cases, the standard reporting limits were higher than the LBCLBCL_{LS} (also higher than background); and
- Thallium - the standard reporting limits were higher than the LBCLBCL_{LS}, but were within the range of background.

Organochlorine Pesticides. One hundred and four soil samples reflecting current conditions were analyzed for OCPs (73 surface and 31 subsurface samples, Table B-2). Most of these analytes were detected in at least one sample; 2,4-DDD, 2,4-DDE, and beta-BHC were the most commonly detected. These three constituents were detected in at least 50 percent of the samples in which they were analyzed. None of the detections exceeded the Open Space land use scenario RBSLs (i.e., either the RBSL_{REC} or the RBSL_{MW})recreational-RBSL; the standard reporting limits were lower than the Open Space land use scenario RBSLsrecreational-RBSL, and concentrations in excess of the Open Space land use scenario RBSLsrecreational-RBSL, if present, would have been reported. However, the following OCP detections were higher than the LBCLBCL_{LS} (DAF 1):

- alpha-BHC (12 exceedances of the 0.00003 mg/kg LBCLBCL_{LS} in soil samples collected from across the site, maximum detection 0.058 mg/kg in a 1 foot bgs sample from PLJ-02);
- beta-BHC (51 exceedances of the 0.0001 mg/kg LBCLBCL_{LS} in soil samples collected from across the site, maximum detection 0.081 mg/kg in a 1 foot bgs sample from PLH-04); and
- Dieldrin (2 exceedances of the 0.0002 mg/kg LBCLBCL_{LS} in surface soil samples collected from the northern non-pond areas at the site [PRNBA-05 and PRNU-02; 0.002 and 0.0068 mg/kg, respectively]).

It should be noted that the standard reporting limits employed during the historical sampling events for these three OCPs and Lindane are higher than the LBCLBCL_{LS}; therefore, it is unknown whether these constituents are also present in those samples at concentrations in excess of the LBCLBCL_{LS}. Otherwise, the reporting limits for OCPs were sufficiently low such that concentrations in excess of the LBCLBCL_{LS}, if present, would be reported. The distribution of beta-BHC for soil samples collected in the surface soils and the interval from 5 to 10 feet bgs at the Site are shown on Figures C-9 and C-10, respectively. This OCP was selected for graphical displays because it was the most frequently detected of the OCPs in Site samples, has a relatively

low human health risk threshold compared to the other OCPs (Note: there are no Open Space land use scenario ~~recreational~~ RBSL exceedances of any OCPs), and the highest number of LBCLBCL_{LS} exceedances.)

Volatile Organic Compounds. Sixty-nine samples reflecting current conditions were analyzed for VOCs (43 surface and 26 subsurface samples, Table B-3). Sporadic low detections of VOCs were reported in the analyses performed on soils; all but the maximum detection [0.061 mg/kg of acetone] were less than 0.004 mg/kg. Acetone, a common laboratory contaminant that was reported as being present in eight (27 percent) of the samples in which it was analyzed, was the most commonly detected VOC. None of the detections were above the Open Space land use scenario RBSLs (*i.e.*, either the RBSL_{REC} or the RBSL_{MW}) ~~recreational~~ RBSL; the standard reporting limits were lower than the Open Space land use scenario RBSLs ~~recreational~~ RBSL, and concentrations in excess of the Open Space land use scenario RBSLs ~~recreational~~ RBSL, if present, would have been reported. However, in some cases the reporting limits employed during the historical sampling events are higher than the LBCLBCL_{LS}, and it is unknown whether these constituents are present in those samples at concentrations in excess of the LBCLBCL_{LS}. These analytes with reporting limits higher than the LBCLBCL_{LS} are as follows:

- | | |
|--|---|
| • 1,1,2,2-Tetrachloroethane | • <u>Benzene</u> Carbon tetrachloride |
| • 1,1,2-Trichloroethane | • <u>Carbon tetrachloride</u> Dichloromethane |
| • 1,2,4-Trichlorobenzene | • <u>Dichloromethane</u> Tetrachloroethylene |
| • 1,2-Dichloroethane | • <u>Tetrachloroethylene</u> Trichloroethylene |
| • 1,2-Dichloropropane | • <u>Trichloroethylene</u> Vinyl chloride |
| • <u>Cis- and trans-1,3-dichloropropylene</u> Benzene | • <u>Vinyl chloride</u> |

Otherwise, the reporting limits for VOCs were sufficiently low such that concentrations in excess of the LBCLBCL_{LS}, if present, would be reported.

Semi-Volatile Organic Compounds. Sixty-two samples reflecting current conditions were analyzed for SVOCs (43 surface and 19 subsurface samples, Table B-4). Only two SVOCs (bis(2-ethylhexyl)phthalate, a common laboratory contaminant, and dibutyl phthalate), were reported in the analyses performed on soils. Detections of these two constituents were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} or the RBSL_{MW}) ~~recreational~~ RBSL and the LBCLBCL_{LS}. For non-detects, the standard reporting limits were lower than the

Open Space land use scenario RBSLs~~recreational RBSL~~ in all cases except for n-nitrosodi-n-propylamine, which had reporting limits slightly higher than the RBSL_{MW}~~recreational RBSL~~. With the exception of this compound, concentrations in excess of the Open Space land use scenario RBSLs~~recreational RBSL~~, if present, would have been reported for SVOCs. For several SVOCs the reporting limits employed during the historical sampling events are higher than the LBCL~~BCL_{LS}~~, and it is unknown whether these constituents are present in those samples at concentrations in excess of the LBCL~~BCL_{LS}~~. These analytes with reporting limits higher than the LBCL~~BCL_{LS}~~ are as follows:

- | | |
|---|------------------------------------|
| • <u>2,2’-/4,4’-Dichlorobenzil</u> 2,4,6-Trichlorophenol | • Carbazole |
| • <u>2,4,6-Trichlorophenol</u> 2,4-Dichlorophenol | • Hexachloro-1,3-butadiene |
| • <u>2,4-Dichlorophenol</u> 2,4-Dimethylphenol | • Hexachlorobenzene |
| • <u>2,4-Dimethylphenol</u> 2,4-Dinitrophenol | • Hexachloroethane |
| • <u>2,4-Dinitrophenol</u> 2,4-Dinitrotoluene | • Isophorone |
| • <u>2,46-Dinitrotoluene</u> | • Nitrobenzene |
| • <u>2,6-Dinitrotoluene</u> | • <u>N-nitrosodi-n-propylamine</u> |
| • 2-Chlorophenol | • n-Nitrosodiphenylamine |
| • 3,3-Dichlorobenzidine | • p-Chloroaniline |
| • bis(2-Chloroethyl)ether | • Pentachlorophenol |

Dioxins and Furans. Eleven surface soil samples (Table B-5) reflecting current conditions were analyzed for dioxins and furans. All of the individual dioxins and furans congeners analyzed were reported as detections in each sample; comparison screening—levels have not been established for individual congeners. To assess the potential threat to human health, dioxins/furans toxic equivalency (TEQ) concentrations for each sample were compared to the Agency for Toxic Substances and Disease Registry (ATSDR) screening value of 50 parts per trillion (ppt) for the recreational user and 1,000 ppt for the outdoor maintenance worker under the Open Space land use scenario. One of the samples analyzed had a calculated TEQ value in excess of the recreational user comparison~~this screening~~ level (66.8 ppt, for a sample collected from the northern portion of PLG-04 [sample PRNSNP-19] from an area in which soil removal activities were not performed). LBCL~~BCL_{LS}~~ values have not been established for dioxin/furans;

thus the potential for impacts to groundwater quality due to their presence could not be assessed by comparisons to these comparison screening levels. The distribution of TCDD TEQ for samples collected in the surface soils at the Site is shown on Figure C-11.

Polychlorinated Biphenyls. Sixty-six samples reflecting current conditions were analyzed for PCBs (Aroclors only) (40 surface, 26 subsurface, Table B-8); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (i.e., both the RBSL_{REC} and the RBSL_{MW})recreational-RBSL; thus concentrations in excess of the Open Space land use scenario RBSLsrecreational-RBSL, if present, would have been reported. LBCLBCL_{LS} values have not been established for these compounds.

Organophosphorus Pesticides. Forty-four samples reflecting current conditions were analyzed for organophosphorus pesticides (30 surface, 14 subsurface, Table B-7); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (i.e., both the RBSL_{REC} and the RBSL_{MW})recreational-RBSL; thus concentrations in excess of the Open Space land use scenario RBSLsrecreational-RBSL, if present, would have been reported. LBCLBCL_{LS} values have not been established for these compounds.

Chlorinated Herbicides. Four surface soil samples reflecting current conditions were analyzed for chlorinated herbicides (Table B-10); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (i.e., both the RBSL_{REC} and the RBSL_{MW})recreational-RBSL; thus concentrations in excess of the Open Space land use scenario RBSLsrecreational-RBSL, if present, would have been reported. LBCLBCL_{LS} values have not been established for these compounds.

Polychlorinated Aromatic Hydrocarbons. Sixty-two samples reflecting current conditions were analyzed for PAHs (43 surface, 19 subsurface, Table B-11); there were no detections reported in these samples. The standard reporting limits were lower than the Open Space land use scenario RBSLs (i.e., both the RBSL_{REC} and the RBSL_{MW}) and the LBCLrecreational-RBSL in all cases except for benzo(a)pyrene and dibenzo(a,h)anthracene, which had reporting limits higher than the RBSL_{MW} and the LBCL, and benzo(a)anthracene, which had reporting limits higher than the LBCL. Thus; thus concentrations in excess of the Open Space land use scenario RBSLs and LBCLsrecreational-RBSL, if present, would have been reported for all of the PAHs except these compounds.

Aldehydes/Organic Acids/Glycol/Alcohols. The waste characterization sample was analyzed for aldehydes, organic acids, glycols, and alcohols (Table B-10); there were no detections reported in that sample. The standard reporting limits were lower than the Open Space land use scenario RBSLs (*i.e.*, both the RBSL_{REC} and the RBSL_{MW}); thus concentrations in excess of the Open Space land use scenario RBSLs, if present, would have been reported. The reporting limit for 4-chlorobenzene sulfonic acid (the only analyte in these analyses with an established LBCL) was higher than the LBCL. ~~In several cases, the reporting limits employed during the historical sampling events are higher than the BCL_{LS}, and it is unknown whether this constituent is present at a concentration in excess of the LBCL.~~

Radionuclides. Radionuclides were detected in all seven of the soil ~~these constituents are present in these~~ samples analyzed (surface soil samples, Table B-9). The following radionuclides were detected at concentrations in excess of the Open Space land use scenario RBSLs (*i.e.*, the RBSL_{REC} and/or the RBSL_{MW}) and/or LBCL ~~at concentrations in excess of the BCL_{LS}. These analytes with reporting limits higher than the BCL_{LS} are as follows:~~

- radium-226 (RBSL_{REC}, RBSL_{MW} and LBCL) Benzo(a)anthracene
- radium-228 (RBSL_{REC}, RBSL_{MW} and LBCL) Benzo(b)fluoranthene
- thorium-228 (RBSL_{REC}, RBSL_{MW} and LBCL)
- thorium-230 (LBCL)
- thorium-232 (LBCL) Dibenzo(a,h)anthracene
- uranium-233/234 (RBSL_{MW}) Indeno(1,2,3-c,d)pyrene
- uranium-238 (RBSL_{MW})

~~Aldehydes/Organic Acids/Glycol/Alcohols.~~ The waste characterization sample was analyzed for aldehydes, organic acids, glycols, and alcohols (Table B-10); there were no detections reported in that sample. The standard reporting limits were lower than the recreational RBSL; thus concentrations in excess of the recreational RBSL, if present, would have been reported. The reporting limit for 4-chlorobenzene sulfonic acid (the only analyte in these analyses with an established BCL_{LS}) was higher than the BCL_{LS}, and it is unknown whether this constituent is present at a concentration in excess of the BCL_{LS}.

~~Radionuclides.~~ Radionuclides were detected in all seven of the soil samples analyzed (surface soil samples, Table B-9). The following radionuclides were detected at concentrations in excess of the recreational RBSL and BCL_{LS}: radium-226; radium-228; thorium-228 (recreational RBSL exceedances only); thorium-230 (BCL_{LS} exceedances only); thorium-232 (BCL_{LS} exceedances

~~only); uranium-235/236 (BCL_{LS} exceedances only); and uranium-238.~~ It should be noted, however, that with limited exceptions, the reported activities in excess of the Open Space land use scenario RBSLs/LBCL~~recreational RBSL/BCL_{LS}~~ were within the range of background levels.

The three exceptions were:

- A detection of radium-226 of 2.51 picoCuries per gram (pCi/g; PRNU-02, in the northern non-pond portion of the Site),
- A detection of uranium-233/234 of 3.39 pCi/g (PLJ-02); and
- A detection of uranium-238 of 2.5 pCi/g (from pond PLJ-02).

As presented in NDEP guidance (NDEP 2009b), as part of the process used to evaluate radionuclide data for the Common Areas, BRC will assess whether secular equilibrium has been attained (as an indication that steady-state conditions have been reached). Given the limited amount of radionuclide data for this Site and the differences in sample collection procedures (i.e., a mix of composite and discrete) and historical analytical methods, and without conducting statistical equivalence testing, the data indicate that secular equilibrium has been broadly attained at the Site for the uranium-238 and thorium-232 decay chains. Specifically, the mean radioactivities range between 1.1 pCi/g and 1.7 pCi/g for the parents and key progeny of both decay chains included in the analytical program, as summarized below:

<u>Uranium-238 Decay Chain</u>		<u>Thorium-232 Decay Chain</u>	
<u>Isotope</u>	<u>Mean Activity</u>	<u>Isotope</u>	<u>Mean Activity</u>
<u>Uranium-238</u>	<u>1.5 pCi/g</u>	<u>Thorium-232</u>	<u>1.4 pCi/g</u>
<u>Uranium-234</u>	<u>1.7 pCi/g</u>	<u>Radium-228</u>	<u>1.1 pCi/g</u>
<u>Thorium-230</u>	<u>1.3 pCi/g</u>	<u>Thorium-228</u>	<u>1.4 pCi/g</u>
<u>Radium-226</u>	<u>1.4 pCi/g</u>		

Furthermore, these mean values are lower than the maximum background activities. A more thorough evaluation of secular equilibrium status will be performed after collecting radionuclide data in accordance with this SAP.

The distribution of radium-226, representative of radionuclides, for samples collected in the surface soils at the Site is shown on Figure C-12. This radionuclide was selected for graphical displays because it has a low human Open Space land use scenario RBSLs~~recreational RBSL and~~

~~BCL_{LS}~~ compared to the other radionuclides, and, unlike many of the radionuclides, has a reported detection higher than the background range.

Summary of Soil Exceedances. As summarized above and in the associated data tables, sampling of Site soils has been limited, and the analyte list is incomplete. Based on the limited historical data, the following ~~comparison screening~~ level exceedances were observed:

- The few ~~Open Space land use scenario~~~~recreational~~ RBSL exceedances were associated with TCDD TEQ (~~RBSL_{REC} only~~), arsenic (~~RBSL_{REC} and RBSL_{MW}~~), iron (~~RBSL_{REC} and RBSL_{MW}~~), and; perchlorate (~~RBSL_{MW} only~~), ~~arsenic, and iron~~. In addition, radionuclides were also routinely reported as detections greater than ~~one or both of the Open Space land use scenario RBSLs~~~~the recreational RBSL~~; however, all but three of the radionuclide results in excess of ~~Open Space land use scenario~~~~recreational~~ RBSL values are considered representative of background conditions.
- ~~LBCL~~~~BCL_{LS}~~ exceedances were also limited to selected metals, alpha- and beta-BHC, dieldrin, and radionuclides. Many of the ~~LBCL~~~~BCL_{LS}~~ exceedances for metals and radionuclides were within the range of background.

2.9 CHEMICAL DISTRIBUTION WITHIN GROUNDWATER

For evaluating Shallow Zone groundwater quality at the Site, the following wells in the immediate Site vicinity were used: PC-79, PC-80, PC-81, PC-88, PC-90, and PC-94 (Figure 2). These are the only Shallow Zone wells within the Site with recent groundwater results. The data associated with these wells from the most recent groundwater monitoring event (May through June 2008) are presented in Table 2. Data validation results are presented in the DVSR for dataset 51 (ERM 2008), which was approved by NDEP on November 1, 2008. Chemical occurrence patterns for the chemicals detected in groundwater from these wells are provided below. For data evaluation purposes, the detections were compared to the following where established:

- U.S. Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs);
- ~~Human health screening levels for indoor air intrusion (USEPA generic groundwater to indoor air screening level; “Vapor Intrusion Screening Level,” hereinafter “VI SL”); and~~

- The NDEP BCL for residential tap water (BCL_w).¹⁶~~BCL (BCL_{GW}).~~

Organic Compounds. The few organic compounds detected during the fifth groundwater monitoring event are as follows:

- alpha-BHC, beta-BHC, and delta-BHC were detected in samples collected from all of the wells in which they were analyzed at relatively low concentrations. The maximum detection was 0.86 micrograms per liter (µg/L) of delta-BHC (PC-88). MCLs have not been established for these constituents. ~~Of these three constituents, a VI SL has only been established for alpha-BHC; the detections (0.14 to 0.27 µg/L) were well below that screening level (3.1 µg/L).~~ A BCL_wBCL_{GW} has been established for alpha-BHC (0.011 µg/L) and beta-BHC (0.037 µg/L); all detections of these two chemicals were higher than their respective BCL_wBCL_{GW} levels.
- 1,1-Dichloroethane was detected in the samples from PC-80, PC-81, PC-88, and PC-90 at reported concentrations ranging from 0.41 to 2.1 µg/L (maximum detection associated with PC-88). An MCL has not been established for this compound. The detections were all well below the BCL_w (11.8VI SL (2,200 µg/L) and the BCL_{GW} (1,217 µg/L).
- 1,2,4-Trichlorobenzene was detected in the samples from PC-79, PC-81, and PC-88 at reported concentrations ranging from 1.2 to 1.4 µg/L (maximum detection associated with PC-79). The detections were all below the MCL and BCL_w (both (70 µg/L), VI SL (3,400 µg/L), and BCL_{GW} (8.2 µg/L).
- 1,3,5-Trichlorobenzene was detected in the samples from PC-79, PC-80, and PC-81 at reported concentrations ranging from 1.2 to 1.9 µg/L (maximum detection associated with PC-79). None of the comparison screening levels listed above have been established for this compound.
- 1,2-Dichlorobenzene (DCB), 1,3-DCB, and 1,4-DCB were detected in samples collected from wells PC-79 and PC-88) at relatively low concentrations. The maximum detection was 4.6 µg/L of 1,3-DCB (PC-79). MCLs have been established for 1,2-DCB and 1,4-DCB (600 µg/L and 75 µg/L, respectively), but not for 1,3-DCB. ~~BCL_w valuesVI SLs~~ have been established for all three compounds (~~2,600 µg/L, 110830 µg/L, and 758,200 µg/L for 1,2-~~

¹⁶ These comparison levels were developed assuming use of groundwater as a potable water source. As noted in Section 1.1, the NFAD for the Site will contain a deed restriction to prevent future users from utilizing groundwater beneath the Site.

~~DCB, 1,3-DCB, and 1,4-DCB, respectively). BCL_{GW} values have also been established for all three compounds (49.3 µg/L, 14.5 µg/L, and 0.47 µg/L for 1,2-DCB, 1,3-DCB, and 1,4-DCB, respectively. All of the detections were well below these comparisonscreening levels; with the exception of 1,4-DCB, which was detected at concentrations greater than the 0.47 µg/L BCL_{GW} in samples collected from two wells (3.8 µg/L at PC-79 and 0.75 µg/L at PC-88).~~

- Chloroform was detected in samples from PC-88, PC-90, and PC-94 at concentrations ranging from 0.26 µg/L to 5.2 µg/L (maximum detection associated with PC-94). The detections were all well below the MCL ~~and VI SL~~ (80 µg/L); however, the chloroform detections in the samples collected from PC-94 (4.7 µg/L and 5.2 µg/L) were ~~all~~ higher than the ~~1.60-17~~ µg/L BCL_wBCL_{GW}.
- Trichloroethene (TCE) was detected in samples from PC-79, PC-88, and PC-90 at reported concentrations ranging from 0.19 to 0.57 µg/L (maximum detection associated with PC-88). The detections were all well below the MCL and BCL_wVI SL (5 µg/L).
- ~~); however, the TCE detections were all higher than the 0.028 µg/L BCL_{GW}. The reporting limits for the other samples were elevated above the BCL_{GW}, and it is unknown whether TCE is also present at those locations at concentrations above the BCL_{GW}.~~

No other organic chemicals were detected in these monitoring wells. The reporting limits for most of the analytes in these samples were sufficiently low such that concentrations in excess of the comparisonscreening levels, if present, would be detected. The exceptions are as follows:

Constituent	Reporting Limit	<u>ComparisonScreening</u> Level of Concern ¹⁷
Formaldehyde <u>Acetaldehyde</u>	6030 µg/L	1.57 µg/L <u>BCL_wBCL_{GW}</u> adequately low for VI SL ; no MCL
Diieldrin <u>Formaldehyde</u>	0.005760 µg/L	0.00421.5 µg/L <u>BCL_wBCL_{GW}</u> no VI SL ; no MCL
1,2,3-Trichloropropane <u>Diieldrin</u>	0.220057 µg/L	0.0340042 µg/L <u>BCL_wBCL_{GW}</u> adequately low for VI SL ; no MCL
1,2-Dibromo-3-chloropropane <u>Heptachlor</u>	0.48034 µg/L	0.2015 µg/L <u>MCLBCL_{GW}</u> adequately low for VI SL and BCL_wMCL
2-Nitropropane <u>Toxaphene</u>	0.03459 µg/L	0.0012061 µg/L <u>BCL_w; BCL_{GW}</u>

¹⁷ ⁴⁷ -This table lists only those comparisonscreening levels that are lower than the standard reporting limit.

Constituent	Reporting Limit	<u>ComparisonScreening</u> Level of Concern ¹⁷
		no VI SL; adequately low for MCL
1,1,2,2-Tetrachloroethane	0.27 µg/L	0.055 µg/L BCL _{GW} adequately low for VI SL; no MCL
1,2,3-Trichloropropane	0.22 µg/L	0.034 µg/L BCL _{GW} adequately low for VI SL; no MCL
1,2-Dibromo-3-chloropropane	0.48 µg/L	0.2 µg/L MCL; 0.00064 µg/L BCL _{GW} adequately low for VI SL
1,2-Dichloroethane	0.18 µg/L	0.12 µg/L BCL _{GW} adequately low for VI SL and MCL
2-Nitropropane	0.034 µg/L	0.0012 µg/L BCL _{GW} adequately low for VI SL; no MCL
Chlorodibromomethane	0.17 µg/L	0.13 µg/L BCL _{GW} no VI SL; adequately low for MCL
Tetrachloroethene	0.14 µg/L	0.1 µg/L BCL _{GW} adequately low for VI SL and MCL
Tribromomethane	0.27 µg/L	0.0083 µg/L VI SL adequately low for BCL _{GW} and MCL
Vinyl chloride	0.13 µg/L	0.084 µg/L BCL _{GW} adequately low for VI SL and MCL

For these constituents it cannot be determined whether they are present in Site groundwater at concentrations greater than the comparisonscreening levels noted above.

Inorganic Compounds. Inorganic compounds were routinely detected in the groundwater samples. It should be noted that many of these constituents are naturally occurring in groundwater, and the extent to which the detections represent background conditions was not evaluated for this SAP. The following constituents were detected at concentrations above their respective MCLs or BCL_WBCL_{GW}, as summarized below:

- Ammonia was higher than the 730209 µg/L BCL_WBCL_{GW} in the samplesamples collected from PC-79 and PC-80 (the maximum reported concentration was 786 µg/L (PC-80)). An MCL has not been established for this constituent.
- Chloride, sulfate, and total dissolved solids (TDS) were substantially higher than the MCLs in all samples analyzed (250 milligrams per liter [mg/L] for chloride and sulfate, and 500 mg/L for TDS); maximum detections were 1,550 mg/L (PC-88), 2,130 mg/L (PC-94), and 4,810 mg/L (PC-90), respectively. BCL_WBCL_{GW} levels have not been established for these constituents.

- Chlorine was higher than the 3.7 mg/L ~~BCL_wBCL_{gw}~~ in all samples analyzed; the maximum reported concentration was 3,090 mg/L (PC-88). An MCL has not been established for this constituent.
- ~~Fluoride was slightly higher than the 2.2 mg/L BCL_{gw} in the sample collected from PC-81 (2.7 mg/L); this detection was lower than the MCL.~~
- Nitrate was higher than the ~~MCL and BCL_w (both 10 mg/L)~~ MCL in samples collected from PC-94; the maximum reported concentration was 15.3 mg/L; ~~this detection was lower than the BCL_{gw}.~~
- Perchlorate was higher than the USEPA Drinking Water Equivalent Level (24.5 µg/L) and the 18 µg/L ~~BCL_wBCL_{gw}~~ in samples collected from PC-88, PC-90, and PC-94; the maximum detection was 11,800 µg/L (PC-88).
- Aluminum was higher than the 50 µg/L MCL in samples collected from all of the wells except PC-90 (maximum detection 3,550 µg/L at PC-80). The 495.5 µg/L reporting limit for PC-90 was elevated above the MCL, and it is unknown whether aluminum is also present at this location at elevated concentrations. All of the aluminum detections were lower than the 36,500 µg/L ~~BCL_wBCL_{gw}~~.
- Arsenic was higher than the ~~MCL and BCL_w (both 10 µg/L)~~ MCL and the 0.045 µg/L ~~BCL_{gw}~~ in samples collected from wells PC-79, PC-80 and PC-90; the highest concentration is associated with PC-90 (102 µg/L). The 96.5 µg/L reporting limit for the remaining samples was elevated above the ~~comparison screening~~ levels, and it is unknown whether arsenic is also present at those locations at elevated concentrations.
- ~~Cobalt was higher than the 11 µg/L BCL_w in samples collected from wells PC-79 and PC-80; the highest concentration is associated with PC-79 (14.3 µg/L). The 12.2 µg/L reporting limit for the remaining samples was elevated above the BCL_w, and it is unknown whether cobalt is also present at those locations at elevated concentrations. An MCL has not been established for this constituent.~~
- Iron was higher than the 300 µg/L MCL in samples collected from wells PC-79, PC-80 and PC-88; the highest concentration is associated with PC-80 (2,700 µg/L). The 800 µg/L reporting limit for the remaining samples was elevated above the MCL, and it is unknown whether iron is also present at those locations at elevated concentrations. All of the iron detections were lower than the 25,600 µg/L ~~BCL_wBCL_{gw}~~.

- Lithium was higher than the 73 µg/L ~~BCL_wBCL_{gw}~~ in samples collected from wells PC-80, PC-81 and PC-88; the highest concentration is associated with PC-81 (177 µg/L). The reporting limits for the remaining samples were elevated above the ~~BCL_wBCL_{gw}~~, and it is unknown whether lithium is also present at those locations at elevated concentrations. An MCL has not been established for this constituent
- Manganese was higher than the 50 µg/L MCL in samples collected from all of the wells except PC-94; the highest concentration is associated with PC-79 (1,460 µg/L). With All of the exception of PC-90, these manganese detections were also higher~~lower~~ than the ~~5114,703~~ µg/L ~~BCL_wBCL_{gw}~~.
- Uranium was higher than the MCL and BCL_w (both 30 µg/L)~~MCL~~ in samples collected from wells PC-81 and PC-90; the highest concentration is associated with PC-90 (36.7 µg/L). ~~All of the uranium detections were lower than the 110 µg/L BCL_{gw}.~~
- Zinc was higher than the 500 µg/L MCL in the sample collected from well PC-88 (595 µg/L). All of the zinc detections were lower than the 10,950 µg/L ~~BCL_wBCL_{gw}~~.

It should be noted that reporting limits for several analytes, in addition to those noted above, were routinely higher than the MCLs and/or ~~BCL_wBCL_{gw}~~ (*i.e.*, antimony, beryllium, chromium, lead, phosphorus, and thallium), and it cannot be ascertained if these constituents are present in Site groundwater at concentrations greater than these comparisonscreening levels.

Chemical occurrence in both the shallow and deep water-bearing zones beneath the Eastside area is currently being characterized under a process separate from the Closure Plan process under which this SAP has been prepared, which focuses on site soils. A more detailed presentation of chemical occurrence patterns within these water-bearing zones (including comparisons to background conditions) and an assessment of the potential health risks will be provided upon completion of the on-going groundwater investigation, and the CSM for the Eastside area will be updated accordingly.

3.0 DATA QUALITY OBJECTIVES

The DQO process is a seven-step iterative planning approach used to prepare plans for environmental data collection activities. It provides a systematic approach for defining the criteria that a data collection design should satisfy, and covers: problem definition; when, where, and how to collect samples or measurements; determination of tolerable decision error rates; and the number of samples or measurements that should be collected. DQOs define the purpose of the data collection effort, clarify what the data should represent to satisfy this purpose, and specify the performance requirements for the quality of the data to be obtained. The DQO process, as defined by USEPA's *Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4* (USEPA 2006), consists of seven steps:

Step 1 - State the Problem;

Step 2 - Identify the Goal of the Study;

Step 3 - Identify Information Inputs;

Step 4 - Define the Boundaries of the Study;

Step 5 - Develop the Analytical Approach;

Step 6 - Specify Performance or Acceptance Criteria; and

Step 7 - Develop the Plan for Obtaining Data.

A general overview of USEPA and NDEP's seven-step DQO process is provided in the Closure Plan. The key decision inputs to the DQO process, namely the Step 2 Principal Study Questions (PSQs), are also provided in the Closure Plan. The PSQs are the central Eastside Area-wide questions that provide a basis for the overall closure effort. Per discussions with the NDEP, the other steps of the DQO process are to be addressed, on an Eastside Area sub-area basis (for soils), in the respective sub-area SAPs. Steps 1 through 5 of the DQO process are described below for this Site. Implementation of DQO Steps 6 and 7 is described in the Statistical Methodology Report, which presents the statistical approach to sample design for the Eastside Area sub-areas soils investigations.

3.1 STATE THE PROBLEM (STEP 1)

The first step in the DQO process is to define the problem that initiated the study in such a way that the focus of the study is unambiguous. This section provides the following information: a summarization of the problem being addressed; identification of the assessment team; identification of the key decision-makers and stakeholders; and a presentation of the schedule.

3.1.1 Problem Statement

As presented in the Closure Plan, the Site includes open land that has been modified to accept wastewater discharges from the BMI Complex through various trenches and evaporation ponds from 1942 through 1976. Currently, the approximately 151-acre Site includes former unlined disposal ponds (approximately 77 acres) and effluent conveyance ditches associated with historical BMI Complex operations, and unused vacant land (approximately 74 acres). The industrial activity on this Site may have resulted in concentrations of chemicals that drive unacceptable human health risk. Residual contamination remains at the Site as a consequence of these discharges. The goal of this work is to remediate the Site such that chemical concentrations in all relevant media do not pose an unacceptable risk to human health and the environment under current and future land use scenarios. The problem that needs to be addressed is one of returning at least the upper 10 feet of soils at the Site to conditions that pass a human health risk assessment, with restrictions on access to deeper soils and on the use of groundwater. Risk assessment at the Site includes exposure to soils, but also exposure to VOCs and radon, which might emanate from the vadose zone or from groundwater. A further consideration is the potential for leaching contaminants into groundwater.

The Site is currently vacant. The potential on-site and off-site receptors are currently trespassers/visitors, occasional on-site workers, and off-site residents. Risks to current receptors are being managed through Site access control. Under the current, prospective redevelopment plan, the Site will be used for public parks, with Site uses including trails, playfields, roads and parking areas. Consequently, receptors that are considered for this problem include construction workers, park users (adult and child), outdoor maintenance workers, and trespassers. The potentially exposed populations for the Site and their potential routes of exposure are presented on Figure 8 and are summarized in Section 9 of the Closure Plan.

As described in the Closure Plan and in the Statistical Methodology Report, remediation for all media will be to risk-based levels protective of human health and the environment under current and future land use scenarios. The problem will be addressed through iterative remediation until

sufficient remediation (removal of soil) has been performed such that acceptable human health risks have been attained. The final site conditions will include re-grading of on-site soils, so that the future surface will not consist of the same soil as the current surface. Imported fill material may or may not be needed, including fill from other sites. The grading plan for this Site is presented on Figure 4.

Although the primary focus is human health risk assessment for ~~an Open Spacea-recreational~~ land use scenario, secondary issues that will be addressed include contamination of deeper soils and groundwater beneath the Site. BRC will also discuss the issue of off-Site transport of contaminants with the NDEP should the NDEP determine that this is necessary, maintaining consistency with the AOC3. However, because remediation of the Site will be to on-site ~~Open Spacerecreational~~ land use standards, risks to off-site receptors are expected to be minimal. However, potential risks to off-site receptors will be considered in the risk assessment for the Site.

3.1.2 Proposed Assessment Team

A multi-disciplinary approach is being and will be followed with participation by qualified geologists, chemists, radiochemists, hydrogeologists, biologists, ecologists, engineers, remediation specialists, toxicologists, risk assessors (human health and ecological), statisticians, field sampling personnel, community relations personnel, risk communications specialists, project developers, and project managers. BRC maintains an active roster of key team members, which will be periodically updated as appropriate throughout the project term. Key team members are identified in Section 1.4 of the Closure Plan.

3.1.3 Key Decision Makers and Stakeholders

The NDEP is the primary and the ultimate decision-maker for the project. Stakeholders include BRC, the City of Henderson, Clark County, the State of Nevada, the United States Government, the local public, site developers, and other interested persons.

3.1.4 Schedule

BRC has established a phased schedule for the Eastside Area such that the various sub-areas are addressed sequentially. The timing of the phased closures is closely spaced to avoid potential complications associated with the presence of contaminated soils near areas that have been successfully remediated and closed and to mitigate potential impacts on adjacent future

residential housing developments (that is, the Western Hook Development and Galleria North sub-areas).

Surface and shallow soil data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) exposures and risks. Once these data have been collected and preliminary risk calculations have been completed, BRC will determine whether the acceptable chemical concentrations and/or risk levels defined for the Site have been attained and will discuss this determination with the NDEP. If it is determined that acceptable risk levels have not been attained, BRC will perform additional remediation activities consistent with the *Corrective Action Plan* (CAP; BRC 2006), and will repeat the assessment process until risk-based goals are achieved. Each iterative remediation and data collection process is expected to take place over a one to two month period, but may extend into a slightly longer period.

3.2 IDENTIFY THE GOAL OF THE STUDY (STEP 2)

The purpose of this step is to define the Site-specific PSQs that need to be resolved in order to address the problem identified in Step 1, and to identify alternative actions that may be taken, depending on the answers to the PSQs. As noted above, the project PSQs are presented in the Closure Plan. The primary PSQ associated with this SAP is: Are the current (post-remediation, pre-development) and future (post-development) incremental risks to human health or the environment from exposure to Site soil and soil vapor flux sufficiently low that they are acceptable? If the incremental risks are not sufficiently low, then reasonable further action will be taken; otherwise, no further action will be taken and a risk assessment report will be prepared. Secondary PSQs deal with groundwater quality in the context of the overall site, and on the impact of site contamination on off-site human receptors. Ecological risk assessment issues will be discussed with the NDEP should NDEP determine that an ecological risk assessment is warranted.

The following fundamental assumptions apply:

1. The PSQs will be assessed only after BRC has determined that achievement of Site cleanup goals is expected for Site soils.¹⁸ Cleanup goals for the project are defined in Sections 1.1 and 9.1.1 of the Closure Plan and in the Statistical Methodology Report. The data pool employed

¹⁸ ~~48~~ -The existing historical data suggest that some remediation may be needed to attain cleanup goals; however, the need for remediation will be properly evaluated on the basis of data collected under this SAP, in accordance with the approved risk assessment methodology in the *Closure Plan*.

in the risk assessment will comprise only those data collected in accordance with this SAP,¹⁹ after remediation activities have been performed during the closure process, if such remediation occurs.

2. The data used in PSQ assessment will undergo a rigorous Quality Assurance/Quality Control (QA/QC) review prior to that assessment, in accordance with the procedures described in the ~~project BRC Quality Assurance Project Plan (QAPP~~ (BRC and ERM 2009). Only those data determined as a result to be suitable for use will be included in the closure data pool. Furthermore, the adequacy of the data pool will be evaluated following the procedures provided in Section 9.3 of the Closure Plan. If found to be inadequate, additional sampling and analysis may be performed.

Stated another way, the decision is to determine whether or not Site conditions²⁰ result in acceptable human health risks and environmental risks for future land uses. This will be determined through human health risk assessment for potential future on-site receptors. Potential alternative actions (from the Closure Plan) that may be taken include: (1) No Action (in this context No Action means no additional action beyond removal of contaminated soils presently located on Site); (2) institutional controls/limited action; (3) importation and use of clean fill (on-site capping of soils); and (4) excavation of soils and on-site landfill disposal at the project CAMU.

How the study decisions will be determined for the Site, including how the risk assessment will be performed, is presented in the Closure Plan.

3.3 IDENTIFY INFORMATION INPUTS (STEP 3)

The purpose of this step is to identify the information needed to resolve the PSQs identified in Step 2. The data inputs for the primary PSQ are listed below. Risk assessment will be the primary means of answering the PSQs, and will incorporate the various data inputs listed below. These data inputs either 1) are already established, as presented in this SAP or the Closure Plan; 2) will be obtained during the soil and soil vapor flux sampling programs specified in this SAP;

¹⁹ ~~⁴⁹~~—Data collected prior to SAP approval that might also be representative of Site conditions will not be included in the risk assessment; however, a data usability evaluation will be conducted to determine whether any of the historical data can be used in Site risk assessment, or it will be explained why the new data supplants the old data. However, the historical data may be used to help develop the CSM for both this Site and the overall Eastside.

²⁰ ~~²⁰~~—“Site conditions” in the context of this sentence refers to those conditions assessed after performing any excavation of impacted soils and disposing of them outside the Site, if such actions are determined necessary during the Site characterization activities planned under this SAP.

or 3) currently exist as data gaps that will be resolved prior to performing risk assessment. A comprehensive list of the necessary data inputs for addressing the primary PSQ is provided below:

- Input parameters for human health risk assessment and assessment of impacts to groundwater, considering relevant exposure pathways associated with potential future land uses.
- Toxicity input parameters consistent with current NDEP guidance (BCLs; NDEP ~~2009a~~2008).
- Input parameters for all fate and transport models (see Closure Plan and data to be collected as determined by this SAP).
- Site soil and soil vapor flux characterization data²¹ collected according to this SAP.
- Identified locations/depth intervals, including elevations to adjust for use of fill material and re-grading.
- Characterization data for imported fill if such fill is considered for use at the Site. At this point, it is not definitively known whether imported fill materials will be used on Site.
- To address the secondary PSQs, soil data from depths greater than 10 feet bgs and groundwater data will be used to address issues related to further understanding of vadose zone and groundwater contamination beneath the Site.

3.4 DEFINE THE BOUNDARIES OF THE STUDY (STEP 4)

The purpose of this step is to define the aspects of the project that affect the decision-making process, including:

- The populations to be sampled;
- The geographical area applicable for decision making;
- Temporal boundaries for decision making;

²¹ ~~24~~—To be collected as determined by this SAP in accordance with the most recent NDEP-approved version of Standard Operating Procedure 16 (BRC, ERM and MWH 2008)

- Any practical constraints that may interfere with data collection; and
- The scale for decision-making purposes.

Each of these portions of this step is presented below.

3.4.1 Sample Populations

Several target populations will be sampled for this project, including surface and near-surface soils (*i.e.*, less than 10 feet bgs); subsurface soils (*i.e.*, greater than 10 feet bgs); groundwater; and soil vapor flux. These populations were segregated based on their differences in media type and pathways for potential human exposure following redevelopment. For this project, samples will be collected for surface and near-surface soils and soil vapor flux to address the primary PSQ via human health assessment, and for cumulative risk across these media types and associated pathways. Samples will be collected for subsurface soils and groundwater to address the secondary PSQs.

3.4.2 Spatial Boundaries

The spatial boundaries of interest for the risk assessment are the spatial extent of the Site boundary to a depth of 10 feet bgs or deeper if construction activities are below this level. However, impacts to receptors exposed to these soils can also occur from vapor intrusion from the deeper vadose zone and groundwater. Consequently, the vertical extent of the Site that encompasses vadose zone and groundwater is of interest. Based on expected land use, construction activities are not expected to occur at depths greater than 10 feet bgs.

Note that more than one set of surface spatial boundaries could ultimately be identified. For example, data may need to be grouped for sub-areas within the Site in order to appropriately address the decision units (*e.g.*, exposure areas). These spatial boundaries might be important if residual contamination varies across the Site either in the surface soils or by depth.

Because sub-areas within the Eastside are adjacent to each other, to assess or avoid potential impacts from other Site sources, risk assessment could be performed across Site boundaries, and/or adjacent Sites will be remediated in the same general time frame. To some extent, this will depend on the spatial homogeneity of concentrations once remediation has been performed. Future remediation at adjacent Sites will involve dust suppression and storm water pollution prevention activities, mitigating potential impacts from cross-contamination.

3.4.3 Temporal Boundaries

The temporal boundaries of interest for this project are defined by the time frame associated with decision making for each spatially distinct region of interest. Specifically, for each different land-use scenario, within each decision or exposure unit, both current and potential future risk needs to be considered and quantified. The time frame over which future risks will be evaluated can be regarded as indefinite, implying that future land uses must satisfy institutional constraints placed on the site now, or a new risk assessment will need to be performed. Specific issues for each medium are described below.

Surface Soil

The surface soil concentrations used in the risk assessment will be derived from existing soil conditions (that is, established during the characterization activities performed in accordance with this SAP). BRC assumes that these will reflect the concentration distribution for the project lifetime, and those data will be relied upon throughout the redevelopment process and for assessing risks under current and future land use scenarios. The timeframe for data collection, assessment, and decision-making will be from one to three months for surface soils. These soil data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) exposures and risks.

Subsurface Soil and Groundwater

As noted, BRC does not expect that subsurface soils (generally greater than 10 feet bgs) will be an issue from a human exposure standpoint. However, subsurface soils will be sampled in order to determine potential impacts to groundwater in accordance with the secondary PSQ relating to the deeper vadose zone and groundwater in the context of the entire Site. These subsurface soil data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) impacts to groundwater. Data to support the evaluation of potential impacts to groundwater will be collected. These data will be collected to support the migration to groundwater calculations included in the Closure Plan, as well as more refined modeling tools (such as, VLEACH, SESOIL, and PESTAN). Any indirect impacts from underlying groundwater will be addressed via the proposed surface flux measurements.

Soil Vapor Flux

The soil vapor fluxes used in the risk assessment will be derived from soil vapor flux data associated with existing soil and groundwater conditions (that is, data established during the

characterization activities performed in accordance with this SAP). BRC assumes that these will reflect the soil vapor flux distribution for the project lifetime, and those data will be relied upon throughout the redevelopment process and for assessing risks under current and future land-use scenarios. The timeframe for data collection, assessment, and decision-making will be from one to three months for soil vapor flux. These soil vapor flux data will be used to evaluate both current (post-remediation, pre-development) and future (post-development) exposures and risks.

3.4.4 Practical Constraints for Data Collection

Since the Site is currently unoccupied, there are no access constraints for collecting soil or soil vapor flux samples from BRC's property, as specified in this SAP. For groundwater (which is not part of this SAP), additional and/or routine sampling activities (such as groundwater sampling from monitoring wells) may be required following redevelopment. However, these constraints do not apply to the situation associated with this SAP and will be dealt with at a later time.

3.4.5 Scale of Decision Making

The scale for decision making regarding the primary PSQ varies based on the target sample population of interest. Redevelopment of the Site following remediation includes significant changes in land uses, including recreational uses, but not residential housing. However, the final redevelopment plans for the Site have not been completed and may change depending upon the results of post-remediation sampling. To facilitate the redevelopment of the Site with the fewest practical constraints due to residual contamination, the nominal scale for decision making for the proposed recreational exposure scenario will be equal to one-half acre, consistent with the Statistical Methodology Report. However, if, as expected, the concentration distribution across the Site is statistically homogeneous representing a single population of concentrations for each chemical, then the decision unit will be the entire Site. Smaller decision units will only be defined if the spatial distribution of concentrations suggests the need to break the Site into smaller areas for risk-based decision making. The same approach will be used for soil vapor flux, subsurface soils, and groundwater as they feed into the human health risk assessment.

3.5 DEVELOP THE ANALYTICAL APPROACH (STEP 5)

The purpose of this DQO step, as described in USEPA guidance, is to define the population parameter (*e.g.*, mean risk) of interest for each population (surface soil, etc.); identify the appropriate action level (target risk level) for each population; and select measurement and

analysis methods that can be used to properly evaluate the parameters against the action levels (*i.e.*, ensure detection limits do not exceed action levels, etc.). Once these actions are completed, decision rules (if-then statements) are developed for each population that state the alternative actions that would be taken depending upon the true value of the parameter relative to the specified action levels.

The PSQ-specific decision rules for the Site are presented below:

- If, after confirmation sampling conducted per the Closure Plan and this SAP, and subsequent risk assessment following procedures per the Closure Plan, it is deemed that the risk goals for the project (as discussed in Section 1 of the Closure Plan) are not met, then remediation per Alternative (4) (excavation of soils and on-site landfill disposal at the project CAMU) listed in Section 3.2 will be conducted to satisfy the risk goals. The risk assessment methodology for the project is presented in Section 9 of the Closure Plan.
- If, after implementation of the Decision Rule above it is determined that there are specific locations at the Site for which additional and continued remediation will not be practical or effective, then other alternatives such as Alternative (2) and Alternative (3) (institutional controls/limited action, and importation and use of clean fill) identified in Section 3.2 will be evaluated considering overall protection, effectiveness, permanence, implementability, cost, regulatory acceptance, and community acceptance.
- If, after implementation of the Decision rule above it is determined that no further action needs to be taken in the top 10 feet of soils, a proposal for NFAD will be made. This proposal will be made only after consultation with NDEP.

Data for the secondary PSQs (deeper soils and groundwater) will be evaluated for obvious issues that might require immediate action, and will be included in analysis of objectives related to the groundwater program for the entire Site.

4.0 SCOPE OF WORK

Other than the removal of debris found on the Site, no remediation is proposed prior to the sampling activities specified in this SAP. Decisions regarding the need for remediation will be based on the initial data to be collected in accordance with this SAP as discussed in this section.

The risks posed to human health and the environment by chemicals remaining in Site soils will be assessed in accordance with the Risk Assessment Methodology provided in the Closure Plan. If this assessment indicates that risk-based cleanup goals established for the Site have not been met, additional phases of remediation, sampling/analysis, and assessment will be performed as discussed in the CAP and the Closure Plan. Development may only proceed after attainment of acceptable risk levels under the future planned land uses – *i.e.*, after obtaining the NFAD from the NDEP.

The following is the proposed scope of work for investigating the Site and meeting the SAP objectives. This scope includes soil sampling, soil vapor flux sampling, and laboratory analyses of those samples. Much of the discussion below regarding confirmation soil sampling is taken from the Statistical Methodology Report.

4.1 INITIAL CONFIRMATION SOIL SAMPLING

As per the Statistical Methodology Report, the initial confirmation sampling within the Site will be conducted on the basis of combined random and biased (judgmental) sampling, as follows:

- **Stratified Random Locations:** For this purpose, the Site is covered by a 3-acre cell grid network.²² Within each 3-acre cell, a sampling location is randomly selected. Sampling locations are randomly selected within both full and partial grid cells if they are greater than 50 percent of the total grid cell area (based on the project-wide grid cell network and the Site boundaries; those partial grid cells that contain less than 50 percent of their area within the Site will be included in the adjacent sub-area SAPs). The main objective of this stratified random sampling is to provide uniform coverage of the Site.
- **Biased Locations:** Additional sampling locations are selected within or near small-scale contamination points of interests, including, but not limited to, previous debris locations,

²² ²²—Although the 3-acre grid network was originally intended for a residential land use scenario, it is also the preferred default for a recreational land use scenario to match the concepts behind the statistical methodology report.

ponds, and ditches. For this purpose, the randomly selected location within a corresponding 3-acre cell may also be adjusted in order to cover a nearby point of interest.

A reconnaissance of the Site was performed in December 2008 to check the Site for environmentally significant features such as debris piles or stained soil. Results of this Site reconnaissance are shown in Table 3. Certain biased sampling locations for the Site were based on the outcome of this reconnaissance. Five debris piles were observed during the Site reconnaissance. Biased sampling locations were located at three of the five observed debris piles/soil staining. The other two debris piles contained materials that did not warrant the collection of samples from these locations. A final reconnaissance will be performed prior to sampling to check for any additional environmentally significant features since the initial reconnaissance. If found, these additional features will also be sampled. Biased sampling will also be conducted along the lengths of the former conveyance ditches on the Site, at an approximate 200-foot linear spacing. Additional biased sampling locations were placed so that each pond had at least one sample located within it, and that the pond berms also had an adequate number of samples. In all, the proposed sampling locations address each of the current land uses as follows:

<u>Land Use</u>	<u>Number of Sample Locations</u>
Former Pond	30
Pond Berm	9
Conveyance Ditch	36
Debris/Other/Unused Land	37

Forty-two of these sample locations ~~are will be collected from~~ within the historical groundwater seep areas. Five sample locations (OSC1-JS01 through OSC1-JS05) ~~are will be collected from~~ within the unknown linear feature north of the ponds. Figure 9 and accompanying Table 4 show the random and biased discrete sampling locations ~~from which samples will that are proposed to~~ be collected within the Site.

At each selected location, multi-depth soil samples will be collected and analyzed for the SRC list as follows. Proposed sample depths are 0 (surface) and 10 ft bgs at each sampling location. However, because groundwater at the northern portion of this Site is less than 10 ft bgs, samples for locations within the three northernmost grid cell rows will be collected at 0 (surface) and 5 feet bgs.

Sample locations with grading greater than 2 feet bgs will also be sampled at the anticipated post-grading soil surface. Additionally, at two sample locations, one within a remediated pond and one within an unremediated pond, soil physical parameter data will be collected at 20 feet and every subsequent 10 feet within unsaturated soils above the capillary fringe until groundwater is reached or 50 feet deep, whichever is shallower.

Samples will be collected at:

1. Existing surface (0 feet bgs) and 10 feet bgs (or 5 feet bgs) for sample locations in relatively flat (ungraded) locations;
2. Existing surface (0 feet bgs), post-grading surface, and post-grade 10 feet bgs (or 5 feet bgs) for sample locations with substantial grading (that is, cut depths greater than 2 feet²³) and the uppermost sampled soil is expected to be used as surface fill;
3. Existing surface (0 feet bgs) and 10 feet bgs (or 5 feet bgs) for sample locations with minimal grading (that is, cut depths less than 2 feet) and the uppermost sampled soil is expected to be used as surface fill; and
4. Existing surface (0 feet bgs) and 10 feet bgs (or 5 feet bgs) for sample locations in an area expected to be covered by fill material.

The analytical sample results will then be divided into surface (0 to 2 feet depth), subsurface (2 to 10 feet depth), and deep (>10 feet depth) layers, according to the following rules:

- **Rule 1:** IF the sample is collected in a relatively flat (ungraded) part of the Site (*i.e.*, an area not targeted for substantial grading), **THEN** the depth of the collected soil sample will be used to designate its soil layer grouping.
- **Rule 2:** IF the sample is collected in a part of the Site targeted for substantial grading, **AND** the sampled soil is located in an area expected to be covered by fill material (*e.g.*, exposed excavated surfaces of ponds), **THEN** the current surface soil sample will be classified as a surface (0 to 2 feet depth) sample, and the soil layer grouping of the remaining deeper sampled soil will be determined based on the difference between its elevation and the final (post-graded) surface elevation in that part of the Site.

²³ ~~23~~ —Because sample collection will be over a 2- to 3-feet depth interval, sample locations with an anticipated cut depth less than 3 feet will only be sampled at the surface and one post-grade subsurface depth.

- **Rule 3: IF** the sample is collected in a part of the Site targeted for substantial grading, **AND** the sampled soil is expected to be used as surface fill (*e.g.*, soil within a berm) **AND** the cut depth is expected to be greater than 2 feet, **THEN** the current surface soil sample will be classified as a fill material sample, a final (post-graded) surface sample will be classified as a surface (0 to 2 feet depth) sample, and the soil layer grouping of the remaining deeper sampled soil will be determined based on the difference between its elevation and the final (post-graded) surface elevation in that part of the Site.
- **Rule 4: IF** the sample is collected in a part of the Site targeted for substantial grading, **AND** the sampled soil is expected to be used as surface fill (*e.g.*, soil within a berm) **AND** the cut depth is expected to be less than 2 feet, **THEN** the current surface soil sample will be classified as both a fill material sample and as a surface (0 to 2 feet depth) sample, and the soil layer grouping of the remaining deeper sampled soil will be determined based on the difference between its elevation and the final (post-graded) surface elevation in that part of the Site.

A schematic example of these rules is shown on Figure 10. The current site grading plan is shown on Figure 4. It should be noted that this is the most current plan available, but not necessarily the final grading plan. The sample-specific collection depths are presented in Table 4.

All soil samples will be tagged in the database with numeric designations of their corresponding assigned soil layer grouping based on these rules. Initially, 233 soil samples will be collected from 112 soil boring locations (not including deep samples to be collected for soil physical parameter data). This includes 56 random and 56 biased sample locations; with the following number of samples representing each post-grade type of soil:

<u>Post-Grade Sample Type</u>	<u>Number of Samples²⁴</u>
Fill material	31
Surface soil	121
Subsurface soil	112

²⁴ ²⁴—Note that in some cases, a soil sample may be considered both a fill sample and a surface sample (as indicated in Table 4). Therefore, the sum of the number of samples indicated for each post-grade sample type does not necessarily equal the total number of samples collected.

It should be noted that, as discussed with NDEP, once a particular sub-area receives an NFAD from the NDEP, the cut material that is slated to be used as fill material elsewhere would not require additional testing. However, the chemical data for this fill material may be useful for evaluating sub-areas to receive fill (for example, if there is deeper contamination).

4.2 INTERMEDIATE SAMPLING AND CLEANUP

Upon layer-designation of confirmation soil samples, a series of tests will be conducted to determine whether sampled locations within a given layer include “exceeding” samples. An exceeding sample is one that warrants further investigation, which may include localized soil removal. Exceeding samples will be defined consistent with the following rules:

- **Chemicals without background concentrations:** For chemicals without corresponding background distributions, the distribution of its reported concentrations in each layer will be constructed. The 95 percent upper confidence limit (UCL) of these distributions will also be computed. **IF** the constructed distribution indicates the presence of anomalous concentrations (*e.g.*, high values at the end of an elongated tail of a uni-modal distribution, or values forming an elevated sub-population of a multi-modal distribution), **AND** the inclusion of these anomalous values causes the computed UCL to exceed one-tenth of the risk-based screening level of the chemical, **THEN** samples associated with anomalous values will be considered as potential exceeding samples. **IF** the constructed distribution indicates no presence of anomalous concentrations and the computed UCL exceeds one-tenth of the risk-based screening level of the chemical, **THEN** all samples associated with the layer will be considered as potential exceeding samples.
- **Chemicals with background concentrations:** For chemicals with corresponding background distributions, the distribution of its reported concentrations in each layer will be constructed. These concentration distributions will then be statistically compared to the appropriate background concentration distributions.²⁵ Appropriate two-sample tests, including Quantile test, Slippage test, *t*-Test, and the Wilcoxon rank sum test with Gehan modification, will be used to identify exceeding samples through comparison of Site and background distributions. **IF** inclusion of elevated measured values in a given layer causes the rejection of the appropriate two-sample test, **THEN** samples associated with such elevated values will be considered as potential exceeding samples.

²⁵ ~~25~~ -The specific background dataset that will be used for this purpose will be determined upon consultation with NDEP prior to the data evaluation procedures noted in this section.

Areas with potential exceeding samples may be subjected to re-sampling prior to the confirmation of the location as an exceeding sample. After any such re-sampling, the above process will be repeated to confirm the exceeding status of the targeted sample location. It should be noted that if the data indicate a more widespread or Site-wide contamination, then it might be important to look at the effect on a sub-area basis rather than a sample basis. That is, additional alternatives, such as changing the future land use, further division into smaller sub-areas, or more extensive remediation, would need to be considered and evaluated.

Upon confirmation of an exceeding sample, additional neighboring delineation sampling will be conducted based on a “step-out” approach. Step sizes and directions will be dependent on the location of the exceeding sample and perhaps the magnitude of the exceedance. Additional biased step-out or step-in sampling may be conducted to further refine the extent of the required removal. Each removal will be followed by confirmatory sampling. More detail on this approach is provided in the Statistical Methodology Report.

After the above intermediate removals, results associated with removed exceeding samples will be marked as excluded from the dataset, while non-exceeding delineation and confirmation data will be included in the dataset. The revised dataset will then be subjected to the above exceeding sample determination process, which will be repeated until all exceeding samples are adequately addressed.

4.3 FINAL CONFIRMATION DATASET

At this stage, the final confirmation soil dataset for the Site, consisting of: 1) the original non-exceeding confirmation data collected in accordance with this SAP²⁶ for the Site, 2) the non-exceeding data generated after intermediate sampling and cleanup, and 3) additional biased and random samples collected for confirmation; will be subjected to a series of statistical analyses in order to determine representative exposure concentrations for that sub-area, as described in the Statistical Methodology Report.

4.4 SOIL VAPOR FLUX SAMPLING

Concurrent with the confirmation soil sampling, BRC will implement soil vapor flux sampling across the Site. This SAP refers to and relies on the most recent NDEP-approved version of

²⁶ ~~26~~ –As distinguished from the historical “confirmation” sampling data collected as part of or immediately after the IRM, which will not be included in the risk assessment dataset.

Standard Operating Procedure (SOP) 16 for technical description of sampling and analytical methodology, QA/QC protocols, and project procedural description. The sampling procedure for the effort includes the USEPA surface emission isolation flux chamber (flux chamber) and static chamber sampling to perform an air pathway analysis (APA) for the Site. A description of the history, background, and operation of the USEPA-recommended flux chamber and radon flux approach is provided in SOP-16.

The flux chamber sample collection rationale is based on the project goal of obtaining a representative dataset of air emissions per sub-area. Flux chamber samples will be collected from each of the 3-acre grid cells. Soil vapor flux sampling locations will coincide with a biased sampling location, if any, in a given cell; if none are present, the soil vapor flux sampling will be performed at the grid-specific random sampling location. This approach results in 56 soil vapor flux sampling locations, indicated on Figure 9, providing full spatial coverage of the Site. All of the flux chamber samples will be tested for both VOC flux and radon flux, and this density of sample collection should be adequate for sub-area characterization given: the random nature of the sample locations, the size of the sub-area, and the number of sample locations suggested by the USEPA (1986) in the flux chamber User's Guide for assessing zones of homogeneous site properties. A higher density of sample collection for VOCs is not warranted given the general lack of VOC detections in soils and groundwater.

4.5 CHEMICALS SELECTED FOR ANALYSIS

The proposed analyte list for soil samples is comprised of the BRC project SRC list, as presented in the Closure Plan²⁷ and Table 5, with the following exceptions for this Site:

- Asbestos, dioxins/furans, and PCBs will only be analyzed for in surface soil samples.
- Only acetaldehyde and formaldehyde will be analyzed for by USEPA Method 8315A (chloroacetaldehyde, dichloroacetaldehyde, and trichloroacetaldehyde removed based on the *Revisions to the Analyte List Technical Memorandum* approved by NDEP on October 16, 2008).
- The following metals will not be analyzed for: niobium, palladium, platinum, silicon, sulfur, and zirconium (removed based on the *Revisions to the Analyte List Technical Memorandum* approved by NDEP on October 16, 2008).

²⁷ ~~27~~—Specific analytes and analyte-specific reporting limits for each analysis are listed in Table 4 of the QAPP.

- Aroclors will be analyzed by USEPA Method 8082 only if the results of the analysis of total PCB congeners are greater than 33 parts per billion, which coincides with the standard reporting limit for this analysis.
- USEPA Method 8141A for organophosphorous pesticides will not be conducted. There have been only 47 detections of these compounds in over 10,000 soil sample records (<0.5 percent) from throughout the Eastside, and no detections in any of the soil samples collected within the Site.
- USEPA Method 8151A for chlorinated herbicides will not be conducted. There have been no detections of these compounds in over 1,400 soil sample records from throughout the Eastside, including those associated with one soil sample collected within the Site. Detection limits are below comparisonscreening levels.
- HPLC Method for organic acids will not be conducted. There have been only three detections of these compounds in 567 soil sample records (<0.5 percent) from throughout the Eastside, including those associated with one soil sample collected within the Site (all non-detects). Detection limits are below comparisonscreening levels.
- USEPA Method 8015B for nonhalogenated organics will not be conducted. There have been only five detections of these compounds in 420 soil sample records (1 percent) from throughout the Eastside, including those associated with one soil sample collected within the Site (all non-detects). Detection limits and the few detections have been well below comparisonscreening levels.
- USEPA Method 8015 for total petroleum hydrocarbons (TPH) will not be conducted. There have been only three detections of these compounds in over 299 soil sample records (1 percent) from throughout the Eastside. The few detections have been below 100 mg/kg, which is the typical low-end aesthetic threshold used for these compounds. While TPH is not proposed for analysis, its components are via other methods. In addition, TPH cannot be included in a risk assessment while its components can.
- Consistent with the current project analyte list, the following radionuclides will be analyzed for: radium-226, radium-228, thorium-228, thorium-230, thorium-232, uranium-233/234, uranium-235/236, and uranium-238. Activities for other radionuclides on the SRC list may be back-quantitated; however, the main radionuclides will likely carry sufficient information to perform a risk assessment. In addition, if the radionuclides are similar to background, then back-quantitation will be unnecessary and will not be performed.

The analyte list, as proposed in this SAP for the Site, consists of 307 of the 418 compounds (including water only parameters) on the project SRC list, as well as physical parameters (Section 5.2.3) to support the evaluation of potential impacts to groundwater from migration of chemicals from soil. The analytical and preparatory methods used in accordance with this SAP adhere to the most recent version of the project QAPP (BRC and ERM 2009), which has been revised to ensure appropriate comparisons to the background dataset. The proposed analyte list for soil vapor flux samples is comprised of the list provided in the most recent NDEP-approved version of SOP-16 (see the *BRC Field Sampling and Standard Operating Procedures* [FSSOP]; BRC, ERM, and MWH 2008), including radon. This analyte list is provided in Table 6.

5.0 FIELD AND LABORATORY METHODS

5.1 FIELD METHODS

All Site work will be performed under the responsible control and direction of a Nevada State Certified Environmental Manager. All sampling and sample handling procedures will be consistent with the NDEP-approved BRC FSSOP (BRC, ERM, and MWH 2008). In accordance with applicable federal regulation (Title 29, Code of Federal Regulations, Section 1910.120) all field activities will be performed in compliance with the *BRC Health and Safety Plan* (BRC and MWH 2005).

Pre-field and field activities will be conducted in accordance with the most recent NDEP-approved versions of applicable SOPs (BRC, ERM, and MWH 2008). These SOPs include SOP-1 (Drilling Methods), SOP-6 (Sample Management and Shipping), SOP-7 (Soil Sampling), SOP-10 (Surveying), SOP-12 (Asbestos Soil Sampling), SOP-13 (Field Equipment Calibration Procedures), SOP-14 (Field Documentation), SOP-15 (Field Logbook), SOP-16 (Flux Chamber Source Testing), SOP-17, (Soil Logging), SOP-23 (Split Spoon Sampling), SOP-26 (Soil Grab Sampling), and SOP-39 (Photoionization Detector Screening).

The BRC QAPP (BRC and ERM 2009) and Health and Safety Plan (BRC and MWH 2005) prepared for the BMI Common Areas will be used for this proposed scope of work. The selected driller will notify the Underground Services Alert one-call notification system at least 48 hours before implementing any subsurface activities. BRC will also notify the NDEP at least one week prior to commencing field activities. Once the data are collected, BRC will subject the data to validation per procedures agreed to previously with the NDEP and consistent with the project ~~BRC~~-QAPP (BRC and ERM 2009) and SOP-40.

Soil cuttings generated during soil sampling and Hollow Stem Auger drilling activities will be collected and stored with the other remediation waste and sent to the CAMU.

5.2 LABORATORY METHODS

Samples submitted for laboratory analysis will be analyzed in accordance with approved methodologies by a State of Nevada-certified analytical laboratory. Samples not specified for analysis will be placed on hold pending the results of the initial analysis.

5.2.1 Soil Chemical Analyses

BRC's complete SRC list as approved by the NDEP is presented in Table 4 of the QAPP. Table 5 of this SAP identifies the complete list of analytes proposed for analysis of soil samples, along with the appropriate analytical methods. An explanation for the exclusion of a chemical for analysis is provided in Table 5 of this SAP.

5.2.2 Soil Vapor Flux Analyses

As indicated in Table 6, all flux chamber samples will be analyzed by USEPA Method TO-15 full scan, and selective ion mode analyses on a sub-set of VOCs to achieve the lowest attainable method detection limits for the target list of study compounds (see most recent version of SOP-16). All samples will be analyzed for the target list with optimum method detection limits so that these data can be used to satisfy the sensitivity requirements of the human health risk assessment.

5.2.3 Soil Physical Parameters

In addition to chemical data, to support the evaluation of the potential impacts to groundwater, soil physical properties will also be measured. These parameters will be collected to support the migration to groundwater calculations included in the Closure Plan, consistent with the USEPA Soil Screening Guidance (1996; 2000; 2002), as well as more refined modeling tools (such as, VLEACH, SESOIL, and PESTAN). Site-specific soil physical parameters to be measured include pH (USEPA Method 9045C), cation exchange capacity, dry bulk density, soil permeability/saturated hydraulic conductivity, specific gravity, total porosity, volumetric water content, grain-size analysis by sieve and hydrometer, and fractional organic carbon content (Table 5). These soil physical parameters will be measured from each of the subsurface samples collected from the two deep sample locations at the Site (Figure 9). This will ensure that soil physical parameters will be measured at various depths from across the Site so that all sample depths are represented. One of the deep sample locations will be within the historical groundwater seep area in the southern portion of the Site and one will be within one of the remediated ponds. In addition, samples will be collected from two subsurface sample locations (Figure 9 and Table 4) for conducting the synthetic precipitation leaching procedure (SPLP; USEPA Method 1312) with the extract analyzed for metals, OCPs, SVOCs, radium-226, radium-228, and perchlorate. These analytes are considered those of greatest concern for potential migration and impacts to groundwater. Both SPLP sample locations will be within the historical groundwater seep area and within the ponds.

6.0 REPORTING AND SCHEDULING

After approval of the SAP by NDEP, BRC is prepared to promptly initiate field activities. BRC will be directly in charge of sampling with oversight conducted by NDEP. As discussed in Section 3.4.3, sampling activities are anticipated to be completed over a one to three month period, and laboratory analyses to be completed within a five to six-week period following field work completion. Once the data are collected, BRC will subject the data to validation per procedures agreed to previously with the NDEP and consistent with the project BRC-QAPP (BRC and ERM 2009) and SOP-40 (BRC, ERM, and MWH 2008). Only those data determined by the QA/QC review to be suitable for use will be considered for the site dataset. A separate DVSR will be prepared and submitted to NDEP.

Upon receipt of laboratory analytical results and following data validation, a risk assessment will be conducted by BRC (in consultation with NDEP) to evaluate the risks posed to human health and the environment by chemicals remaining in Site soils. The risk assessment will be conducted in accordance with the Risk Assessment Methodology provided in the Closure Plan. As stated in the Closure Plan:

...risk assessment will not be initiated unless proper data sufficiency, representativeness, and adequacy analysis is first achieved. If necessary, additional data will be gathered or analyzed to meet the goals of data quality required for risk assessment. The risk assessment will, in turn, help to assure that these data characteristics are properly evaluated. Once risk assessment is completed, the assessment will be made as to whether the remediation conducted meets cleanup goals. If cleanup goals are not achieved, additional remediation, associated confirmation sampling, and assessment cycles will be conducted until a decision end point is reached – namely that the cleanup goals are either met (and the NFAD is issued or Site Closure is achieved, as the case may be) or proven infeasible because it is technically impractical or too costly, in which case changes in land use or institutional controls may be considered.

BRC will perform risk assessment calculations to justify additional remediation or sampling; however, these interim risk assessments will not be submitted to the NDEP. It is expected that the interim decisions (to support additional sampling or remediation) will be discussed with the NDEP on an informal, but regular basis. Any additional sampling and remediation will be addressed as an addendum to this SAP.

The risk assessment report will be an inclusive report that will also contain the following items:

- A summary of the sampling procedures conducted;
- Sampling location map;
- Soil boring logs;
- An evaluation and summary of the collected data;
- Tables(s) summarizing soil results; and
- If appropriate, plan view maps indicating the locations of detected constituents in soil.

As noted above, completion of the risk assessment will be an iterative process. Once the risk assessment passes internal BRC review, with NDEP consultation, and meets the risk goals stated in the Closure Plan, the risk assessment report will be submitted to the NDEP, along with an NFAD request for the Site, in accordance with AOC3. That is, the risk assessment report will be prepared and submitted to the NDEP only when BRC is comfortable that acceptable human health risks have been attained.

7.0 REFERENCES

- Basic Remediation Company (BRC). 2006. Corrective Action Plan for the Basic Remediation Company (BRC) Common Areas Remediation Project.
- Basic Remediation Company (BRC). 2007. Remedial Action Plan, BMI Common Areas, Clark County, Nevada. March.
- Basic Remediation Company (BRC) and Environmental Resources Management (ERM). 2009. BRC Quality Assurance Project Plan. BMI Common Areas, Clark County, Nevada. April.
- Basic Remediation Company (BRC), Environmental Resources Management (ERM), and Daniel B. Stephens & Associates, Inc. 2007. BRC Closure Plan, BMI Common Areas, Clark County, Nevada. May.
- Basic Remediation Company (BRC), Environmental Resources Management (ERM) and MWH. 2008. BRC Field Sampling and Standard Operating Procedures, BMI Common Areas, Clark County, Nevada. December.
- Basic Remediation Company (BRC) and MWH. 2008. Fifth Round Groundwater Monitoring Report (April - July 2008). BMI Common Areas (Eastside), Clark County, Nevada. December.
- Basic Remediation Company (BRC) and MWH. 2005. BRC Health and Safety Plan. BMI Common Areas, Clark County, Nevada. October.
- Basic Remediation Company (BRC) and Titanium Metals Corporation (TIMET). 2007. Background Shallow Soil Summary Report, BMI Complex and Common Areas Vicinity. March.
- Carlsen, C.L., R.C. Lunnis, and D.E. Prudie. 1991. Changes in water levels and water quality in shallow groundwater, Pittman-Henderson Area, Clark County, Nevada, Resulting from diversion of industrial cooling water from ditch to pipeline in 1985. U.S. Geological Survey Water-Resources Investigation Report 89-4093. Carson City, Nevada.
- Environmental Resources Management (ERM). 1996a. Environmental Conditions Investigation Workplan, BMI Common Areas, Henderson, Nevada. February.
- Environmental Resources Management (ERM). 1996b. Draft Environmental Conditions Investigation Report, BMI Common Areas, Henderson, Nevada. August.

Environmental Resources Management (ERM). 1999. Sunset North Area Interim Remedial Measures Workplan. August.

Environmental Resources Management (ERM). 2000. Sunset North Area Interim Remedial Measure Completion Report, BMI Common Areas, Henderson, Nevada. August.

Environmental Resources Management (ERM). 2006a. Data Validation Summary Report Common Areas Sampling Event #1a - 1996 Environmental Conditions Investigation. August.

Environmental Resources Management (ERM). 2006b. Data Validation Summary Report Common Areas Sampling Event #6c - May/July 1999 Soil Sampling. July.

Environmental Resources Management (ERM). 2006c. Data Validation Summary Report Common Areas Sampling Event #7b – Upper and Lower Ponds IRM Sampling, Sunset North. September.

Environmental Resources Management (ERM). 2006d. Data Validation Summary Report Common Areas Sampling Event #8a – July 2000 Discrete/Composite Sampling Event. October.

Environmental Resources Management (ERM). 2006e. Data Validation Summary Report Common Areas Sampling Event #8b – February/March 2000 Sunset North Area, Former Pond Sampling. September.

Environmental Resources Management (ERM). 2006f. Data Validation Summary Report Common Areas Sampling Event #8c – October 2000 Sunset North Area, Former Pond Sampling. October.

Environmental Resources Management (ERM). 2007. Data Validation Summary Report Common Areas Sampling Event #20c – May/June 2001 Sunset North Supplemental Investigation. February.

Environmental Resources Management (ERM). 2008. Data Validation Summary Report – Fifth Groundwater Monitoring Event, April-July 2008 (Dataset 51), BMI Common Areas (Eastside), Clark County, Nevada. October.

MWH. 2006a. Data Validation Summary Report, 2005 Alpha Ditch Investigation (Dataset 32), BMI Common Areas (Eastside), Clark County, Nevada. September.

MWH. 2006b. Data Validation Summary Report – 2006 Waste Characterization Investigation (Dataset 39), BMI Common Areas (Eastside), Clark County, Nevada. October.

NewFields Companies, LLC (NewFields). 2006. Statistical Methodology Report, BMI Common Areas (Eastside), Henderson, Nevada. August.

Nevada Division of Environmental Protection (NDEP). ~~2009a, 2008~~. BMI Plant Sites and Common Areas Projects, Henderson, Nevada; Basic Comparison Levels Updated User's Guide and Tables. ~~June~~December.

Nevada Division of Environmental Protection (NDEP). 2009b. Guidance for Evaluating Secular Equilibrium at the BMI Complex and Common Areas. February.

Nevada Division of Environmental Protection (NDEP). 2006. Settlement Agreement and Administrative Order on Consent: BMI Common Areas, Phase 3 (AOC3).

U.S. Environmental Protection Agency (USEPA). 1986. Measurement of Gaseous Emission Rates From Land Surfaces Using an Emission Isolation Flux Chamber, Users Guide. EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA Contract No. 68-02-3889, Radian Corporation, February.

U.S. Environmental Protection Agency (USEPA). 1996. Soil Screening Guidance: Technical Background Document. Office of Emergency and Remedial Response, Washington, DC. USEPA/540/R-96/018. May.

U.S. Environmental Protection Agency (USEPA). 2000. Soil Screening Guidance for Radionuclides. Office of Radiation and Indoor Air, Washington, DC. USEPA/540-R-00-007 and USEPA/540-R-00-006.

U.S. Environmental Protection Agency (USEPA). 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Solid Waste and Emergency Response, Washington, DC. OSWER 9355.4-24. December.

U.S. Environmental Protection Agency (USEPA). 2006. Guidance on Systematic Planning Using the Data Quality Objectives Process. EPA QA/G-4. Office of Environmental Information Washington, DC. EPA/240/B-06/001. February.

Weston. 1993. Site Conceptual Model, Stauffer/Pioneer/Montrose Site, Henderson, Nevada, September.

APPENDIX B

ALL HISTORICAL SAMPLING RESULTS COLLECTED
FROM THE WESTERN HOOK-OPEN SPACE SUB-AREA

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium (Total)	Chromium (VI)
ADB-11	1a	1	N	3/21/1996	--	--	3.4	260	--	--	0.41	--	12 J	--
ADB-11	1a	5	N	3/21/1996	--	--	3.8	300	--	--	0.46	--	16 J	--
ADB-12	1a	1	N	3/22/1996	--	--	3.6	180	--	--	0.57	--	13	--
ADB-12	1a	5	N	3/22/1996	--	--	4.2	280	--	--	0.54	--	13	--
ADB-13	1a	1	N	4/11/1996	--	--	< 22 U	210	--	--	< 11 U	--	13	--
ADB-13	1a	5	N	4/11/1996	--	--	13	170	--	--	< 11 U	--	14	--
BDB-21	1a	1	N	4/9/1996	--	--	3.4 J-	268 J	--	--	0.36	--	10.4 J	--
BDB-21	1a	5	N	4/9/1996	--	--	5.5 J-	292 J	--	--	0.54	--	14.1 J	--
BDB-24	1a	1	N	4/17/1996	--	--	7.9	390	--	--	< 10 U	--	12	--
BDB-24	1a	5	N	4/17/1996	--	--	16	150	--	--	< 11 U	--	13	--
BDB-25	1a	1	N	4/11/1996	--	--	< 22 U	290	--	--	< 11 U	--	14	--
BDB-25	1a	5	N	4/11/1996	--	--	< 22 U	260	--	--	< 11 U	--	8.9	--
BDB-26	1a	1	N	4/11/1996	--	--	< 22 U	120	--	--	< 11 U	--	14	--
BDB-26	1a	5	N	4/11/1996	--	--	8.6	140	--	--	< 11 U	--	7.2	--
DS-02	32	0	N	3/29/2005	11200	< 0.2 UJ-	4.2	303	0.6	< 0.524 U	< 0.022 U	20300	10.2 J-	< 0.27 U
PLG-01	1a	1	N	4/10/1996	--	--	12	180	--	--	< 11 U	--	16	--
PLG-01	6c	1	N	5/13/1999	--	< 0.5 U	--	--	--	--	--	--	--	--
PLG-01	1a	5	N	4/10/1996	--	--	< 25 U	160	--	--	< 13 U	--	20	--
PLG-01PA-1	7b	1	N	2/28/2000	--	< 0.5 U	4.1	140 J+	0.86	--	< 0.5 U	--	10	--
PLG-01PA-5	7b	1	N	2/28/2000	--	< 0.0005 U	0.012	0.22 J+	0.00079	--	< 0.0005 U	--	0.0096	--
PLG-02PA-1	8b	1	N	2/24/2000	--	< 0.5 U	13	150	1.1	--	< 0.5 U	--	14	--
PLG-02PA-5	8b	5	N	2/24/2000	--	< 0.5 U	12	120	1	--	< 0.5 U	--	15	--
PLG-04NCD	8a	1	N	7/20/2000	7600	--	9.1	--	--	--	< 0.54 U	--	--	--
PLG-04NCOM	8a	1	N	7/20/2000	9900	--	14	--	--	--	< 0.54 U	--	--	--
PLG-04NED	8a	1	N	7/20/2000	12000	--	14	--	--	--	< 0.52 U	--	--	--
PLG-04NWD	8a	1	N	7/20/2000	10000	--	15	--	--	--	< 0.54 U	--	--	--
PLG-04SCD	8a	1	N	7/20/2000	9500	--	6.7	--	--	--	< 0.51 U	--	--	--
PLG-04SCOM	8a	1	N	7/20/2000	9600	--	21	--	--	--	< 0.6 U	--	--	--
PLG-04SED	8a	1	N	7/20/2000	8700	--	5	--	--	--	< 0.51 U	--	--	--
PLG-04SWD	8a	1	N	7/20/2000	6900	--	72	--	--	--	< 0.54 U	--	--	--
PLG-05	1a	1	N	4/16/1996	--	--	5	11	--	--	0.24	--	1.5	--
PLG-05	6c	1	N	5/13/1999	--	< 0.5 U	--	--	--	--	--	--	--	--
PLG-05	1a	5	N	4/16/1996	--	--	2.8	11	--	--	0.23	--	1.2	--
PLG-05CED	8a	1	N	7/20/2000	7100	--	19	--	--	--	< 0.52 U	--	--	--
PLG-05CWD	8a	1	N	7/20/2000	9400	--	31	--	--	--	< 0.54 U	--	--	--
PLG-05ECOM	8a	1	N	7/20/2000	8200	--	22	--	--	--	< 0.52 U	--	--	--
PLG-05NED	8a	1	N	7/20/2000	8000	--	16	--	--	--	< 0.53 U	--	--	--
PLG-05PA-1	7b	1	N	2/29/2000	--	< 0.5 U	33	110 J+	0.64	--	< 0.5 U	--	11	--
PLG-05PA-3	7b	3	N	2/29/2000	--	0.55	16	130 J+	0.57	--	< 0.5 U	--	13	--
PLG-05SED	8a	1	N	7/20/2000	5700	--	39	--	--	--	< 0.53 U	--	--	--
PLG-05SWD	8a	1	N	7/20/2000	7200	--	38	--	--	--	< 0.59 U	--	--	--
PLG-05WCOM	8a	1	N	7/20/2000	8200	--	29	--	--	--	< 555 U	--	--	--

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium (Total)	Chromium (VI)
PLH-01	1a	1	N	4/10/1996	--	--	11	180	--	--	< 12 U	--	12	--
PLH-01	1a	5	N	4/10/1996	--	--	< 22 U	130	--	--	< 11 U	--	8.7	--
PLH--02PA-1	8b	1	N	2/24/2000	--	< 0.5 U	14	110	0.79	--	< 0.5 U	--	13	--
PLH--02PA-5	8b	5	N	2/24/2000	--	< 0.5 U	9.2	110	0.82	--	< 0.5 U	--	14	--
PLH-03NCD	8a	1	N	7/20/2000	9900	--	18	--	--	--	< 0.53 U	--	--	--
PLH-03NCOM	8a	1	N	7/20/2000	9100	--	16	--	--	--	< 0.54 U	--	--	--
PLH-03NED	8a	1	N	7/20/2000	9000	--	19	--	--	--	< 0.51 U	--	--	--
PLH-03NWD	8a	1	N	7/20/2000	7100	--	8.8	--	--	--	< 0.52 U	--	--	--
PLH--03PA-1	8b	1	N	2/24/2000	--	< 0.5 U	28	82	0.62	--	< 0.5 U	--	15	--
PLH--03PA-5	8b	5	N	2/24/2000	--	< 0.5 U	8.2	170	0.81	--	< 0.5 U	--	18	--
PLH-03SCD	8a	1	N	7/20/2000	9600	--	41	--	--	--	< 0.52 U	--	--	--
PLH-03SCOM	8a	1	N	7/20/2000	12000	--	35	--	--	--	< 0.55 U	--	--	--
PLH-03SED	8a	1	N	7/20/2000	14000	--	27	--	--	--	< 0.52 U	--	--	--
PLH-03SWD	8a	1	N	7/20/2000	9600	--	17	--	--	--	< 0.52 U	--	--	--
PLH-04	1a	1	N	4/16/1996	--	--	5.2	13	--	--	0.28	--	1.5	--
PLH-04	1a	5	N	4/16/1996	--	--	0.65	9.4	--	--	0.24	--	2.9	--
PLI-01PA-1	7b	1	N	2/28/2000	--	< 0.5 U	4.5	180 J+	0.92	--	< 0.5 U	--	12	--
PLI-01PA-2.5	7b	3	N	2/28/2000	--	< 0.5 U	4.1	240 J+	0.83	--	< 0.5 U	--	7.9	--
PLI-02CWD	8a	1	N	7/20/2000	7100	--	10	--	--	--	< 0.54 U	--	--	--
PLI-02ECD	8a	1	N	7/20/2000	8100	--	6.8	--	--	--	< 0.52 U	--	--	--
PLI-02ECOM	8a	1	N	7/20/2000	8700	--	14	--	--	--	< 0.54 U	--	--	--
PLI-02ESD	8a	1	N	7/20/2000	8600	--	14	--	--	--	< 0.54 U	--	--	--
PLI-02NED	8a	1	N	7/20/2000	8300	--	12	--	--	--	< 0.56 U	--	--	--
PLI-02NWD	8a	1	N	7/20/2000	8200	--	17	--	--	--	< 0.54 U	--	--	--
PLI-02PA-1	8b	1	N	3/1/2000	--	< 0.5 U	6.7	54	0.61	--	< 0.5 U	--	16	--
PLI-02SWD	8a	1	N	7/20/2000	8400	--	15	--	--	--	< 0.53 U	--	--	--
PLI-02WCOM	8a	1	N	7/20/2000	7600	--	13	--	--	--	< 0.53 U	--	--	--
PLI-03	1a	1	N	4/18/1996	--	--	19 J-	130	--	--	--	--	17	--
PLI-03	1a	5	N	4/18/1996	--	--	11 J-	260	--	--	--	--	11	--
PLI-03PA-1	8b	1	N	3/1/2000	--	< 0.5 U	8.3	47	0.75	--	< 0.5 U	--	18	--
PLI-03PA-5	7b	1	N	2/28/2000	--	< 0.5 U	7.9	170 J+	0.65	--	< 0.5 U	--	11	--
PLJ-01	1a	1	N	4/18/1996	--	--	28 J-	170	--	--	--	--	13	--
PLJ-02	1a	1	N	4/18/1996	--	--	37 J-	74	--	--	--	--	11	--
PLJ-02	6c	1	N	5/13/1999	--	0.65	--	--	--	--	--	--	--	--
PLJ--02PA-1	8b	1	N	3/1/2000	--	< 0.5 U	8.5	51	0.6	--	< 0.5 U	--	19	--
PRAD-11	20c	0	N	6/29/2001	8510 J-	< 1.1 U	1.7	125	0.29	--	0.09	--	5.9	< 0.04 U
PREU-01	8c	1	N	10/3/2000	--	--	--	--	--	--	--	--	25	< 0.4 U
PREU-02	20c	0	N	5/23/2001	11100 J	< 1 UJ	1.7	263	0.48	--	0.16	--	6.5	--
PREU-02	20c	4	N	5/23/2001	--	--	--	--	--	--	--	--	--	< 0.04 U
PREU-02	20c	4	N	6/21/2001	10500 J-	< 1 UJ	1.4	225	0.46	--	0.13	--	6.2 J-	--
PREU-04	20c	0	N	5/15/2001	11100 J	< 1 UJ	1.9	243	0.49	--	0.16	--	9.7	--
PREU-05	20c	0	N	5/23/2001	11600 J	< 1.1 UJ	2.9	207	0.44	--	0.15	--	7.4	< 0.04 U

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 3 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium (Total)	Chromium (VI)
PREU-05	20c	4	N	5/23/2001	11200 J	< 1.1 UJ	4.6	261	0.51	--	0.21	--	10.8	< 0.04 U
PREU-05	20c	9	N	5/23/2001	12400 J	< 1.1 UJ	6.2	248	0.55	--	0.18	--	13.2	< 0.04 U
PRNBA-01	20c	0	N	6/1/2001	7840	< 1.1 U	6.6	97.7	0.31	--	< 0.56 U	--	18.2	< 0.04 U
PRNBA-01	20c	4	N	6/1/2001	8260	< 1.2 U	7.9	91.7	0.37	--	< 0.58 U	--	14.2	< 0.04 U
PRNBA-02	20c	0	N	6/4/2001	4770 J-/J+	< 1.2 UJ	11.7	97.5	0.33	--	0.12	--	6.7	< 0.04 U
PRNBA-03	20c	0	N	5/31/2001	10400 J-	< 1.2 UJ	7.4	127	0.4	--	0.09	--	6.7	< 0.04 U
PRNBA-03	20c	4	N	5/31/2001	12500 J-	< 1.3 UJ	21.1	442	0.88	--	0.12	--	31.1	< 0.04 U
PRNBA-04	20c	0	N	5/31/2001	12200	< 1.1 U	4	200	0.46	--	0.11	--	8.4	< 0.04 U
PRNBA-04	20c	4	N	5/31/2001	10600	< 1.2 U	8.2	105	0.46	--	< 0.61 U	--	10.4	< 0.04 U
PRNBA-05	20c	0	N	6/4/2001	5920 J-/J+	< 1.1 UJ	15.6	95	0.28	--	0.09	--	5.4	< 0.04 U
PRNBA-06	20c	0	N	6/1/2001	11800	< 1.1 U	16.1	86.3	0.34	--	0.09	--	10.6	< 0.04 U
PRNBA-06	20c	4	N	6/1/2001	8070	< 1.1 U	9.4	96.7	0.39	--	< 0.57 U	--	11.8	< 0.04 U
PRNBA-07	20c	0	N	5/31/2001	10500 J-	< 1.1 UJ	18.7	67	0.41	--	0.09	--	15.2	< 0.04 U
PRNBA-07	20c	4	N	5/31/2001	11000 J-	< 1.2 UJ	17.6	107	0.54	--	< 0.62 U	--	17.9	< 0.04 U
PRNBA-08	20c	0	N	6/4/2001	6500 J-/J+	< 1.1 UJ	21.5	100	0.39	--	0.09	--	11	--
PRNBA-09	20c	0	N	6/4/2001	8720 J-/J+	< 1.1 UJ	13.5	107	0.41	--	0.11	--	6.3	< 0.04 U
PRNBA-10	20c	0	N	6/4/2001	9170 J-/J+	< 1.1 UJ	9.8	144	0.51	--	0.12	--	8	< 0.04 U
PRNSNP-17	20c	0	N	6/4/2001	5160 J-/J+	< 1 UJ	3.1	165	0.34	--	0.07	--	5.1	< 0.04 U
PRNSNP-18	20c	0	N	6/1/2001	8220 J-	< 1.1 U	13.1	158	0.35	--	0.1	--	9.3	< 0.04 U
PRNSNP-18	20c	4	N	6/1/2001	10200	< 1.2 U	9.7	137	0.41	--	< 0.59 U	--	11.4	< 0.04 U
PRNSNP-19	20c	0	N	5/17/2001	4060 J-/J	< 1 UJ	17.4	107 J-	0.37	--	0.14	--	6.4	--
PRNSNP-20	20c	0	N	6/1/2001	6070 J-/J+	< 1.1 UJ	7	96.2	0.35	--	0.07	--	6	< 0.04 U
PRNSNP-20	20c	4	N	6/1/2001	5220	< 1.1 U	6.8	63.4	0.43	--	0.08	--	5.1	< 0.04 U
PRNSNP-21	20c	0	N	5/16/2001	6810 J-	< 1.1 UJ	33.7 J-	120 J-/J+	0.43 J-	--	0.06 J-	--	17.4 J-	< 0.04 U
PRNSNP-22	20c	0	N	5/17/2001	5460 J-/J	< 1.2 UJ	19.4	55 J-	0.28	--	0.05	--	11.6	< 0.04 U
PRNSNP-23	20c	0	N	5/21/2001	5840 J-	< 1 UJ	11.2 J-	76.3 J-	0.34 J-	--	0.07 J-	--	10.4 J-	< 0.04 U
PRNSNP-23	20c	4	N	5/21/2001	6770 J-	< 1.2 UJ	9.6 J-	173 J-	0.28 J-	--	0.08 J-	--	6.7 J-	< 0.04 U
PRNSNP-24	20c	0	N	6/4/2001	5400 J-	< 1 U	8.1	117	0.26	--	0.06	--	6.3	< 0.04 U
PRNSNP-25	20c	0	N	5/21/2001	11500 J-	< 1.3 UJ	11.7 J-	63.5 J-	0.66 J-	--	0.08 J-	--	20.1 J-	< 0.04 U
PRNSNP-25	20c	4	N	5/21/2001	10200 J-	< 1.3 UJ	10 J-	145 J-	0.59 J-	--	0.11 J-	--	17.5 J-	< 0.04 U
PRNSNP-29C	20c	0	N	7/23/2001	9810	--	19.1	88.7 J-	0.4	--	0.09	--	9.7	< 0.04 U
PRNSNP-30C	20c	0	N	7/23/2001	5630	--	20.4	49.5 J-	0.21	--	0.09	--	5.2	< 0.04 U
PRNU-02	20c	0	N	5/22/2001	7490	< 1.1 U	11.6	81.2	0.31	--	0.06	--	7.5	< 0.04 U
PRNU-02	20c	4	N	5/22/2001	10800	< 1.2 U	14.8	89.6	0.53	--	0.18	--	14.8	< 0.04 U
PRNU-02	20c	9	N	5/22/2001	12500	< 1.2 U	9.4	169	0.76	--	0.12	--	19.6	< 0.04 U
PRPLI-03	8c	1	N	10/2/2000	--	--	--	--	--	--	--	--	23	0.52

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
ADB-11	1a	1	N	3/21/1996	--	--	--	10 J	--	--	--	< 0.098 U	--	--
ADB-11	1a	5	N	3/21/1996	--	--	--	11 J	--	--	--	< 0.1 U	--	--
ADB-12	1a	1	N	3/22/1996	--	--	--	9.8	--	--	--	< 0.095 U	--	--
ADB-12	1a	5	N	3/22/1996	--	--	--	9.2	--	--	--	< 0.1 U	--	--
ADB-13	1a	1	N	4/11/1996	--	--	--	9.8	--	--	--	< 0.1 U	--	--
ADB-13	1a	5	N	4/11/1996	--	--	--	8.7	--	--	--	< 0.12 U	--	--
BDB-21	1a	1	N	4/9/1996	--	--	--	10.1 J	--	--	--	< 0.11 U	--	--
BDB-21	1a	5	N	4/9/1996	--	--	--	13.5 J	--	--	--	< 0.12 U	--	--
BDB-24	1a	1	N	4/17/1996	--	--	--	11	--	--	--	< 0.08 U	--	--
BDB-24	1a	5	N	4/17/1996	--	--	--	5.6	--	--	--	< 0.09 U	--	--
BDB-25	1a	1	N	4/11/1996	--	--	--	14	--	--	--	< 0.09 U	--	--
BDB-25	1a	5	N	4/11/1996	--	--	--	7.8	--	--	--	< 0.11 U	--	--
BDB-26	1a	1	N	4/11/1996	--	--	--	11	--	--	--	< 0.09 U	--	--
BDB-26	1a	5	N	4/11/1996	--	--	--	7.2	--	--	--	< 0.09 U	--	--
DS-02	32	0	N	3/29/2005	22.3	17.1	16100	14.8	14.8	10700	566 J-	< 0.0072 U	0.88 J+	19.9
PLG-01	1a	1	N	4/10/1996	--	--	--	16	--	--	--	< 0.1 U	--	--
PLG-01	6c	1	N	5/13/1999	--	--	--	--	--	--	620	--	--	--
PLG-01	1a	5	N	4/10/1996	--	--	--	12	--	--	--	< 0.12 U	--	--
PLG-01PA-1	7b	1	N	2/28/2000	--	15	--	11	--	--	500	< 0.1 U	--	13
PLG-01PA-5	7b	1	N	2/28/2000	--	0.012	--	0.0063	--	--	0.27	< 0.0001 U	--	0.011
PLG-02PA-1	8b	1	N	2/24/2000	--	20	--	7.1	--	--	570	< 0.1 U	--	16
PLG-02PA-5	8b	5	N	2/24/2000	--	17	--	3.8	--	--	400	< 0.1 U	--	16
PLG-04NCD	8a	1	N	7/20/2000	11.3	--	12000	7.3	--	11000	1100	--	0.73	--
PLG-04NCOM	8a	1	N	7/20/2000	11	--	13000	7.2	--	14000	1300	--	0.72	--
PLG-04NED	8a	1	N	7/20/2000	10	--	14000	6.8	--	17000	890	--	0.62	--
PLG-04NWD	8a	1	N	7/20/2000	10	--	14000	8.4	--	16000	530	--	0.52	--
PLG-04SCD	8a	1	N	7/20/2000	8.4	--	15000	10	--	8800	240	--	< 0.51 U	--
PLG-04SCOM	8a	1	N	7/20/2000	9.1	--	15000	11	--	11000	390	--	< 0.6 U	--
PLG-04SED	8a	1	N	7/20/2000	9.3	--	14000	12	--	8000	240	--	< 0.51 U	--
PLG-04SWD	8a	1	N	7/20/2000	6.8	--	11000	27	--	16000	570	--	< 0.54 U	--
PLG-05	1a	1	N	4/16/1996	--	--	--	2.5	--	--	--	< 0.12 U	--	--
PLG-05	6c	1	N	5/13/1999	--	--	--	--	--	--	1700	--	--	--
PLG-05	1a	5	N	4/16/1996	--	--	--	0.65	--	--	--	< 0.11 U	--	--
PLG-05CED	8a	1	N	7/20/2000	9.2	--	16000	7.7	--	9800	470	--	0.95	--
PLG-05CWD	8a	1	N	7/20/2000	7.5	--	11000	12	--	11000	230	--	0.6	--
PLG-05ECOM	8a	1	N	7/20/2000	10	--	16000	8.6	--	10000	770	--	2	--
PLG-05NED	8a	1	N	7/20/2000	9.1	--	16000	8.1	--	9600	550	--	0.95	--
PLG-05PA-1	7b	1	N	2/29/2000	--	13	--	4.6	--	--	190	< 0.1 U	--	9.4
PLG-05PA-3	7b	3	N	2/29/2000	--	11	--	10	--	--	130	< 0.1 U	--	8.5
PLG-05SED	8a	1	N	7/20/2000	9.2	--	12000	12	--	11000	1300	--	5	--
PLG-05SWD	8a	1	N	7/20/2000	5.2	--	8100	6.2	--	23000	510	--	< 0.59 U	--
PLG-05WCOM	8a	1	N	7/20/2000	6.9	--	11000	6.2	--	14000	300	--	0.68	--

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 5 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
PLH-01	1a	1	N	4/10/1996	--	--	--	16	--	--	--	< 0.12 U	--	--
PLH-01	1a	5	N	4/10/1996	--	--	--	7.4	--	--	--	< 0.11 U	--	--
PLH--02PA-1	8b	1	N	2/24/2000	--	14	--	4.6	--	--	410	< 0.1 U	--	12
PLH--02PA-5	8b	5	N	2/24/2000	--	13	--	6.1	--	--	290	< 0.1 U	--	11
PLH-03NCD	8a	1	N	7/20/2000	9.7	--	14000	16	--	13000	550	--	1.2	--
PLH-03NCOM	8a	1	N	7/20/2000	8.8	--	15000	10	--	13000	420	--	0.82	--
PLH-03NED	8a	1	N	7/20/2000	6.5	--	12000	6.2	--	15000	390	--	0.66	--
PLH-03NWD	8a	1	N	7/20/2000	7.2	--	14000	9.3	--	7300	280	--	0.71	--
PLH--03PA-1	8b	1	N	2/24/2000	--	14	--	3.3	--	--	770	< 0.1 U	--	13
PLH--03PA-5	8b	5	N	2/24/2000	--	12	--	3.5	--	--	220	< 0.1 U	--	13
PLH-03SCD	8a	1	N	7/20/2000	6.7	--	12000	8.3	--	16000	230	--	< 0.52 U	--
PLH-03SCOM	8a	1	N	7/20/2000	9.6	--	14000	11	--	19000	910	--	1.5	--
PLH-03SED	8a	1	N	7/20/2000	10	--	116000	7.5	--	23000	900	--	1.6	--
PLH-03SWD	8a	1	N	7/20/2000	9.5	--	14000	11	--	11000	540	--	< 0.53 U	--
PLH-04	1a	1	N	4/16/1996	--	--	--	1.6	--	--	--	< 0.12 U	--	--
PLH-04	1a	5	N	4/16/1996	--	--	--	0.76	--	--	--	< 0.09 U	--	--
PLI-01PA-1	7b	1	N	2/28/2000	--	13	--	4.9	--	--	260	< 0.1 U	--	12
PLI-01PA-2.5	7b	3	N	2/28/2000	--	12	--	5	--	--	300	< 0.1 U	--	11
PLI-02CWD	8a	1	N	7/20/2000	7.5	--	13000	8.1	--	7700	330	--	0.56	--
PLI-02ECD	8a	1	N	7/20/2000	8.1	--	13000	10	--	9100	300	--	0.69	--
PLI-02ECOM	8a	1	N	7/20/2000	11	--	14000	11	--	11000	1000	--	0.93	--
PLI-02ESD	8a	1	N	7/20/2000	9.7	--	13000	7.7	--	9900	440	--	0.6	--
PLI-02NED	8a	1	N	7/20/2000	11	--	12000	10	--	10000	920	--	0.76	--
PLI-02NWD	8a	1	N	7/20/2000	11	--	11000	12	--	11000	1100	--	1.1	--
PLI-02PA-1	8b	1	N	3/1/2000	--	9.9	--	4.2	--	--	160	0.15	--	9.4
PLI-02SWD	8a	1	N	7/20/2000	16	--	13000	13	--	11000	970	--	1.3	--
PLI-02WCOM	8a	1	N	7/20/2000	11	--	12000	11	--	9800	770	--	1.1	--
PLI-03	1a	1	N	4/18/1996	--	--	--	27	--	--	--	< 0.11 U	--	--
PLI-03	1a	5	N	4/18/1996	--	--	--	19	--	--	--	< 0.12 U	--	--
PLI-03PA-1	8b	1	N	3/1/2000	--	13	--	5.7	--	--	290	< 0.1 U	--	14
PLI-03PA-5	7b	1	N	2/28/2000	--	10	--	4.1	--	--	270	< 0.1 U	--	11
PLJ-01	1a	1	N	4/18/1996	--	--	--	86	--	--	--	< 0.12 U	--	--
PLJ-02	1a	1	N	4/18/1996	--	--	--	110	--	--	--	< 0.21 U	--	--
PLJ-02	6c	1	N	5/13/1999	--	--	--	--	--	--	7200	--	--	--
PLJ--02PA-1	8b	1	N	3/1/2000	--	9.8	--	4.8	--	--	190	< 0.1 U	--	9.5
PRAD-11	20c	0	N	6/29/2001	< 5.3 U	< 2.6 U	11400	15.2	--	10100	329	0.02	0.42	8.9
PREU-01	8c	1	N	10/3/2000	--	--	--	--	--	--	--	--	--	--
PREU-02	20c	0	N	5/23/2001	7.5	13	17700 J-	11.7	--	10300	542 J+	< 0.03 U	0.24 J+	13
PREU-02	20c	4	N	5/23/2001	--	--	--	--	--	--	--	--	--	--
PREU-02	20c	4	N	6/21/2001	8.3	12.2	13200 J-	10.1	--	10300	543 J	< 0.03 U	1.8	12.3
PREU-04	20c	0	N	5/15/2001	6.3	15	21600 J-	16.5	--	10300	451	< 0.03 U	0.32	11.7
PREU-05	20c	0	N	5/23/2001	7.8	18.2	17400 J-	19.6	--	11300	472 J+	< 0.03 U	1.5 J+	13.6

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
PREU-05	20c	4	N	5/23/2001	7.3	26.7	16000 J-	22.4	--	12700	520 J+	0.029 J+	2.4 J+	14.4
PREU-05	20c	9	N	5/23/2001	7.2	24	16300 J-	17.2	--	14000	451 J+	0.046 J+	2.1 J+	16.6
PRNBA-01	20c	0	N	6/1/2001	3.4	9.8	12800	5.7	--	10500	142	< 0.03 U	< 4.5 U	8.4
PRNBA-01	20c	4	N	6/1/2001	3.9	9.6	14200	6.2	--	11100	220	< 0.03 U	< 4.6 U	9.6
PRNBA-02	20c	0	N	6/4/2001	4.6	11.6 J-	7380 J-	20.1	--	6410	1180 J-	0.05	5.1	11.1
PRNBA-03	20c	0	N	5/31/2001	5.5	12.2	19100 J	8.5	--	9860	550 J+	0.06	< 4.6 U	10.1
PRNBA-03	20c	4	N	5/31/2001	9.2	19.7	14800	9	--	11100	358 J+	0.06	< 5.2 U	23.1
PRNBA-04	20c	0	N	5/31/2001	7.2	13.2	21400	10.2	--	13200	610	0.03	3	13.5
PRNBA-04	20c	4	N	5/31/2001	5.8	11.3	15900	7.5	--	11100	353	< 0.04 U	1.2	11.4
PRNBA-05	20c	0	N	6/4/2001	7.8	10.4 J-	9160 J-	21.5	--	8860	1380 J-	0.05	< 4.2 U	11.9
PRNBA-06	20c	0	N	6/1/2001	5.5	9.8	15700	7.3	--	19000	439	< 0.03 U	< 4.6 U	11
PRNBA-06	20c	4	N	6/1/2001	4.8	11.2	15300	8	--	8760	318	0.05	< 4.6 U	9.6
PRNBA-07	20c	0	N	5/31/2001	5.8	9.9	20900	7.9	--	12200	327 J+	0.05	1.4	10.5
PRNBA-07	20c	4	N	5/31/2001	5.5	12.6	14700	7.8	--	12000	338 J+	0.05	< 5 U	13
PRNBA-08	20c	0	N	6/4/2001	5.9	13.5 J-	9070 J-	23	--	10700	315 J-	0.04	1.1 J+	11.4
PRNBA-09	20c	0	N	6/4/2001	6.2	12.2 J-	11000 J-	7.3	--	18500	381 J-	0.05	< 4.3 U	13.6
PRNBA-10	20c	0	N	6/4/2001	6.3	13 J-	10500 J-	14.2	--	14600	396 J-	0.05	< 4.2 U	13
PRNSNP-17	20c	0	N	6/4/2001	4.6	9.8 J-	8580 J-	9.9	--	6370	205 J-	0.04	< 4.1 U	10.1
PRNSNP-18	20c	0	N	6/1/2001	4.9	10.9	12600	8.6	--	9500	252	0.036 J	< 4.3 U	10.4
PRNSNP-18	20c	4	N	6/1/2001	4.6	10.1	14600	5.7	--	9510	210	< 0.03 U	< 4.7 U	10.8
PRNSNP-19	20c	0	N	5/17/2001	16.8	7.9 J-	5030 J-/J	9.8	--	8370 J-	5320 J-	< 0.03 U	0.63 J+	19.8
PRNSNP-20	20c	0	N	6/1/2001	3.9	11.8 J-	17000 J-	6.1	--	7150	116 J-	< 0.03 U	< 4.2 U	10.9
PRNSNP-20	20c	4	N	6/1/2001	3.5	13.7	13300	5.5	--	5460	110	< 0.03 U	< 4.4 U	11.8
PRNSNP-21	20c	0	N	5/16/2001	5.2 J-	9.1 J-	10900 J-	10.4 J-	--	11100 J-	645 J-	< 0.03 UJ	1.7 J-	11.4 J-
PRNSNP-22	20c	0	N	5/17/2001	3.5	10.8 J-	8060 J-/J	12.5	--	8730 J-	263 J-	< 0.03 U	0.91 J+	7.9
PRNSNP-23	20c	0	N	5/21/2001	< 5.2 UJ	11.1 J-	8420 J-	7.2 J-	--	8330 J-	244 J-	< 0.03 UJ	0.35 J-/J+	9.5 J-
PRNSNP-23	20c	4	N	5/21/2001	< 5.8 UJ	9.6 J-	9120 J-	5.6 J-	--	11700 J-	227 J-	< 0.03 UJ	0.48 J-/J+	7.3 J-
PRNSNP-24	20c	0	N	6/4/2001	5.1	9.7	8780	10.7	--	8330	415	0.05	< 4.1 U	10.2
PRNSNP-25	20c	0	N	5/21/2001	< 6.7 UJ	12 J-	13600 J-	6.4 J-	--	16100 J-	350 J-	< 0.04 UJ	1.2 J-/J+	13 J-
PRNSNP-25	20c	4	N	5/21/2001	< 6.3 UJ	11.6 J-	12300 J-	7.6 J-	--	14200 J-	327 J-	< 0.04 UJ	0.52 J-/J+	12.8 J-
PRNSNP-29C	20c	0	N	7/23/2001	4	10 J+	13400	6.6	--	16800	181 J-	< 0.03 U	0.3	9.7
PRNSNP-30C	20c	0	N	7/23/2001	6.1	8.4 J+	7870	7.6	--	14100	554 J-	< 0.03 U	1.9	20.9
PRNU-02	20c	0	N	5/22/2001	3.7	10.6	13000	11.6	--	8460	279	< 0.03 U	1.4 J+	7
PRNU-02	20c	4	N	5/22/2001	4.7	10.4	14000	7.4	--	12200	181	< 0.03 U	0.64 J+	11.6
PRNU-02	20c	9	N	5/22/2001	6.6	13.9	15700	7.8	--	12500	176	< 0.04 U	0.29 J+	15.2
PRPLI-03	8c	1	N	10/2/2000	--	--	--	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 7 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Niobium	Palladium	Phosphorus (as P)	Platinum	Potassium	Selenium	Silicon	Silver	Sodium	Strontium
ADB-11	1a	1	N	3/21/1996	--	--	--	--	--	< 0.94 U	--	< 2 U	--	--
ADB-11	1a	5	N	3/21/1996	--	--	--	--	--	1	--	< 2.1 U	--	--
ADB-12	1a	1	N	3/22/1996	--	--	--	--	--	< 1 U	--	< 2.1 U	--	--
ADB-12	1a	5	N	3/22/1996	--	--	--	--	--	< 1.1 U	--	< 2.2 U	--	--
ADB-13	1a	1	N	4/11/1996	--	--	--	--	--	< 11 U	--	< 22 U	--	--
ADB-13	1a	5	N	4/11/1996	--	--	--	--	--	< 11 U	--	< 23 U	--	--
BDB-21	1a	1	N	4/9/1996	--	--	--	--	--	< 1.06 UJ	--	< 2.13 U	--	--
BDB-21	1a	5	N	4/9/1996	--	--	--	--	--	< 1.13 U	--	< 2.13 U	--	--
BDB-24	1a	1	N	4/17/1996	--	--	--	--	--	< 10 U	--	< 20 U	--	--
BDB-24	1a	5	N	4/17/1996	--	--	--	--	--	< 11 U	--	< 22 U	--	--
BDB-25	1a	1	N	4/11/1996	--	--	--	--	--	< 11 U	--	< 22 U	--	--
BDB-25	1a	5	N	4/11/1996	--	--	--	--	--	< 11 U	--	< 22 U	--	--
BDB-26	1a	1	N	4/11/1996	--	--	--	--	--	< 11 U	--	< 22 U	--	--
BDB-26	1a	5	N	4/11/1996	--	--	--	--	--	< 11 U	--	< 23 U	--	--
DS-02	32	0	N	3/29/2005	< 0.224 UJ-	0.61	1310	< 0.0108 U	2420	< 0.301 U	819	< 0.581 U	608	294
PLG-01	1a	1	N	4/10/1996	--	--	--	--	--	< 11 U	--	< 21 U	--	--
PLG-01	6c	1	N	5/13/1999	--	--	--	--	--	--	--	--	--	--
PLG-01	1a	5	N	4/10/1996	--	--	--	--	--	< 25 U	--	< 25 U	--	--
PLG-01PA-1	7b	1	N	2/28/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLG-01PA-5	7b	1	N	2/28/2000	--	--	--	--	--	< 0.005 U	--	< 0.001 U	--	--
PLG-02PA-1	8b	1	N	2/24/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLG-02PA-5	8b	5	N	2/24/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLG-04NCD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLG-04NCOM	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLG-04NED	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLG-04NWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLG-04SCD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.51 U	--	--	--	--
PLG-04SCOM	8a	1	N	7/20/2000	--	--	--	--	--	< 0.6 U	--	--	--	--
PLG-04SED	8a	1	N	7/20/2000	--	--	--	--	--	< 0.51 U	--	--	--	--
PLG-04SWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLG-05	1a	1	N	4/16/1996	--	--	--	--	--	< 1.2 U	--	< 2.4 U	--	--
PLG-05	6c	1	N	5/13/1999	--	--	--	--	--	--	--	--	--	--
PLG-05	1a	5	N	4/16/1996	--	--	--	--	--	< 1.2 U	--	< 2.3 U	--	--
PLG-05CED	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLG-05CWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLG-05ECOM	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLG-05NED	8a	1	N	7/20/2000	--	--	--	--	--	< 0.53 U	--	--	--	--
PLG-05PA-1	7b	1	N	2/29/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLG-05PA-3	7b	3	N	2/29/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLG-05SED	8a	1	N	7/20/2000	--	--	--	--	--	0.65	--	--	--	--
PLG-05SWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.59 U	--	--	--	--
PLG-05WCOM	8a	1	N	7/20/2000	--	--	--	--	--	< 555 U	--	--	--	--

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 8 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Niobium	Palladium	Phosphorus (as P)	Platinum	Potassium	Selenium	Silicon	Silver	Sodium	Strontium
PLH-01	1a	1	N	4/10/1996	--	--	--	--	--	< 12 U	--	< 25 U	--	--
PLH-01	1a	5	N	4/10/1996	--	--	--	--	--	< 11 U	--	< 22 U	--	--
PLH--02PA-1	8b	1	N	2/24/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLH--02PA-5	8b	5	N	2/24/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLH-03NCD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.53 U	--	--	--	--
PLH-03NCOM	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLH-03NED	8a	1	N	7/20/2000	--	--	--	--	--	< 0.51 U	--	--	--	--
PLH-03NWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLH--03PA-1	8b	1	N	2/24/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLH--03PA-5	8b	5	N	2/24/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLH-03SCD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLH-03SCOM	8a	1	N	7/20/2000	--	--	--	--	--	< 0.55 U	--	--	--	--
PLH-03SED	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLH-03SWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLH-04	1a	1	N	4/16/1996	--	--	--	--	--	0.76	--	< 2.4 U	--	--
PLH-04	1a	5	N	4/16/1996	--	--	--	--	--	< 1.1 U	--	< 2.2 U	--	--
PLI-01PA-1	7b	1	N	2/28/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLI-01PA-2.5	7b	3	N	2/28/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLI-02CWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLI-02ECD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.52 U	--	--	--	--
PLI-02ECOM	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLI-02ESD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLI-02NED	8a	1	N	7/20/2000	--	--	--	--	--	< 0.56 U	--	--	--	--
PLI-02NWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.54 U	--	--	--	--
PLI-02PA-1	8b	1	N	3/1/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLI-02SWD	8a	1	N	7/20/2000	--	--	--	--	--	< 0.53 U	--	--	--	--
PLI-02WCOM	8a	1	N	7/20/2000	--	--	--	--	--	< 0.53 U	--	--	--	--
PLI-03	1a	1	N	4/18/1996	--	--	--	--	--	< 13 U	--	< 25 U	--	--
PLI-03	1a	5	N	4/18/1996	--	--	--	--	--	< 11 U	--	< 22 U	--	--
PLI-03PA-1	8b	1	N	3/1/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLI-03PA-5	7b	1	N	2/28/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PLJ-01	1a	1	N	4/18/1996	--	--	--	--	--	< 12 U	--	< 24 U	--	--
PLJ-02	1a	1	N	4/18/1996	--	--	--	--	--	< 21 U	--	< 42 U	--	--
PLJ-02	6c	1	N	5/13/1999	--	--	--	--	--	--	--	--	--	--
PLJ--02PA-1	8b	1	N	3/1/2000	--	--	--	--	--	< 5 U	--	< 1 U	--	--
PRAD-11	20c	0	N	6/29/2001	--	--	0	--	--	< 0.53 U	--	< 1.1 U	--	--
PREU-01	8c	1	N	10/3/2000	--	--	--	--	--	--	--	--	--	--
PREU-02	20c	0	N	5/23/2001	--	--	--	--	--	0.37	--	0.13 J-	--	--
PREU-02	20c	4	N	5/23/2001	--	--	--	--	--	--	--	--	--	--
PREU-02	20c	4	N	6/21/2001	--	--	--	--	--	0.58	--	< 1 UJ	--	--
PREU-04	20c	0	N	5/15/2001	--	--	--	--	--	0.48	--	0.14 J-	--	--
PREU-05	20c	0	N	5/23/2001	--	--	--	--	--	0.78	--	0.14 J-	--	--

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 9 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals									
					Niobium	Palladium	Phosphorus (as P)	Platinum	Potassium	Selenium	Silicon	Silver	Sodium	Strontium
PREU-05	20c	4	N	5/23/2001	--	--	--	--	--	0.77	--	0.21 J-	--	--
PREU-05	20c	9	N	5/23/2001	--	--	--	--	--	0.61	--	0.21 J-	--	--
PRNBA-01	20c	0	N	6/1/2001	--	--	--	--	--	< 0.56 U	--	< 1.1 UJ	--	--
PRNBA-01	20c	4	N	6/1/2001	--	--	--	--	--	< 0.58 U	--	< 1.2 UJ	--	--
PRNBA-02	20c	0	N	6/4/2001	--	--	--	--	--	0.3	--	0.04 J-	--	--
PRNBA-03	20c	0	N	5/31/2001	--	--	--	--	--	0.45	--	< 1.2 UJ	--	--
PRNBA-03	20c	4	N	5/31/2001	--	--	--	--	--	0.38	--	< 1.3 UJ	--	--
PRNBA-04	20c	0	N	5/31/2001	--	--	--	--	--	0.55	--	< 1.1 UJ	--	--
PRNBA-04	20c	4	N	5/31/2001	--	--	--	--	--	0.47	--	< 1.2 UJ	--	--
PRNBA-05	20c	0	N	6/4/2001	--	--	--	--	--	0.37	--	0.05 J-	--	--
PRNBA-06	20c	0	N	6/1/2001	--	--	--	--	--	0.44	--	< 1.1 UJ	--	--
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	--	0.32	--	< 1.1 UJ	--	--
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	--	0.43	--	< 1.1 UJ	--	--
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	--	0.29	--	< 1.2 UJ	--	--
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	--	0.63	--	0.09 J-	--	--
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	--	0.19	--	0.11 J-	--	--
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	--	0.54	--	0.18 J-	--	--
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	--	< 0.51 U	--	0.07	--	--
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	--	< 0.54 U	--	< 1.1 UJ	--	--
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	--	0.27	--	< 1.2 UJ	--	--
PRNSNP-19	20c	0	N	5/17/2001	--	--	--	--	--	0.64	--	0.1	--	--
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	--	0.53	--	< 1.1 UJ	--	--
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	--	0.42	--	< 1.1 UJ	--	--
PRNSNP-21	20c	0	N	5/16/2001	--	--	--	--	--	0.44 J-	--	0.1 J-	--	--
PRNSNP-22	20c	0	N	5/17/2001	--	--	--	--	--	0.27	--	0.09	--	--
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	--	0.27 J-	--	< 1 UJ	--	--
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	--	0.24 J-	--	< 1.2 UJ	--	--
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	--	< 0.51 U	--	0.06 J-	--	--
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	--	0.14 J-	--	< 1.3 UJ	--	--
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	--	< 0.63 UJ	--	< 1.3 UJ	--	--
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	--	0.12	--	< 1.1 UJ	--	--
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	--	0.37	--	< 1.2 UJ	--	--
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	--	0.29	--	0.12 J-	--	--
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	--	0.19	--	0.15 J-	--	--
PRNU-02	20c	9	N	5/22/2001	--	--	--	--	--	0.16	--	0.23 J-	--	--
PRPLI-03	8c	1	N	10/2/2000	--	--	--	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 10 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc	Zirconium
ADB-11	1a	1	N	3/21/1996	--	--	--	--	--	44	--	--
ADB-11	1a	5	N	3/21/1996	--	--	--	--	--	45	--	--
ADB-12	1a	1	N	3/22/1996	--	--	--	--	--	43	--	--
ADB-12	1a	5	N	3/22/1996	--	--	--	--	--	38	--	--
ADB-13	1a	1	N	4/11/1996	--	--	--	--	--	35	--	--
ADB-13	1a	5	N	4/11/1996	--	--	--	--	--	28	--	--
BDB-21	1a	1	N	4/9/1996	--	--	--	--	--	33.7 J	--	--
BDB-21	1a	5	N	4/9/1996	--	--	--	--	--	42.5 J	--	--
BDB-24	1a	1	N	4/17/1996	--	--	--	--	--	48	--	--
BDB-24	1a	5	N	4/17/1996	--	--	--	--	--	34	--	--
BDB-25	1a	1	N	4/11/1996	--	--	--	--	--	43	--	--
BDB-25	1a	5	N	4/11/1996	--	--	--	--	--	29	--	--
BDB-26	1a	1	N	4/11/1996	--	--	--	--	--	32	--	--
BDB-26	1a	5	N	4/11/1996	--	--	--	--	--	30	--	--
DS-02	32	0	N	3/29/2005	< 0.317 U	0.51 J+	604 J+	< 0.0175 U	0.95 J	41.6 J+	42.9	162 J+
PLG-01	1a	1	N	4/10/1996	--	--	--	--	--	45	--	--
PLG-01	6c	1	N	5/13/1999	< 0.5 U	--	--	--	--	--	--	--
PLG-01	1a	5	N	4/10/1996	--	--	--	--	--	39	--	--
PLG-01PA-1	7b	1	N	2/28/2000	< 0.5 U	--	--	--	--	37	36	--
PLG-01PA-5	7b	1	N	2/28/2000	< 0.0005 U	--	--	--	--	0.035	0.03	--
PLG-02PA-1	8b	1	N	2/24/2000	< 0.5 U	--	--	--	--	55	44	--
PLG-02PA-5	8b	5	N	2/24/2000	< 0.5 U	--	--	--	--	51	37	--
PLG-04NCD	8a	1	N	7/20/2000	--	--	660	--	--	--	--	--
PLG-04NCOM	8a	1	N	7/20/2000	--	--	690	--	--	--	--	--
PLG-04NED	8a	1	N	7/20/2000	--	--	700	--	--	--	--	--
PLG-04NWD	8a	1	N	7/20/2000	--	--	740	--	--	--	--	--
PLG-04SCD	8a	1	N	7/20/2000	--	--	1000	--	--	--	--	--
PLG-04SCOM	8a	1	N	7/20/2000	--	--	1100	--	--	--	--	--
PLG-04SED	8a	1	N	7/20/2000	--	--	1000	--	--	--	--	--
PLG-04SWD	8a	1	N	7/20/2000	--	--	700	--	--	--	--	--
PLG-05	1a	1	N	4/16/1996	--	--	--	--	--	6.7	--	--
PLG-05	6c	1	N	5/13/1999	< 0.5 U	--	--	--	--	--	--	--
PLG-05	1a	5	N	4/16/1996	--	--	--	--	--	3.2	--	--
PLG-05CED	8a	1	N	7/20/2000	--	--	800	--	--	--	--	--
PLG-05CWD	8a	1	N	7/20/2000	--	--	780	--	--	--	--	--
PLG-05ECOM	8a	1	N	7/20/2000	--	--	1100	--	--	--	--	--
PLG-05NED	8a	1	N	7/20/2000	--	--	1100	--	--	--	--	--
PLG-05PA-1	7b	1	N	2/29/2000	< 0.5 U	--	--	--	--	45	23	--
PLG-05PA-3	7b	3	N	2/29/2000	< 0.5 U	--	--	--	--	37	20	--
PLG-05SED	8a	1	N	7/20/2000	--	--	540	--	--	--	--	--
PLG-05SWD	8a	1	N	7/20/2000	--	--	600	--	--	--	--	--
PLG-05WCOM	8a	1	N	7/20/2000	--	--	680	--	--	--	--	--

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 11 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc	Zirconium
PLH-01	1a	1	N	4/10/1996	--	--	--	--	--	44	--	--
PLH-01	1a	5	N	4/10/1996	--	--	--	--	--	37	--	--
PLH--02PA-1	8b	1	N	2/24/2000	< 0.5 U	--	--	--	--	42	29	--
PLH--02PA-5	8b	5	N	2/24/2000	< 0.5 U	--	--	--	--	42	27	--
PLH-03NCD	8a	1	N	7/20/2000	--	--	670	--	--	--	--	--
PLH-03NCOM	8a	1	N	7/20/2000	--	--	810	--	--	--	--	--
PLH-03NED	8a	1	N	7/20/2000	--	--	610	--	--	--	--	--
PLH-03NWD	8a	1	N	7/20/2000	--	--	710	--	--	--	--	--
PLH--03PA-1	8b	1	N	2/24/2000	< 0.5 U	--	--	--	--	48	23	--
PLH--03PA-5	8b	5	N	2/24/2000	< 0.5 U	--	--	--	--	32	27	--
PLH-03SCD	8a	1	N	7/20/2000	--	--	860	--	--	--	--	--
PLH-03SCOM	8a	1	N	7/20/2000	--	--	960	--	--	--	--	--
PLH-03SED	8a	1	N	7/20/2000	--	--	1000	--	--	--	--	--
PLH-03SWD	8a	1	N	7/20/2000	--	--	950	--	--	--	--	--
PLH-04	1a	1	N	4/16/1996	--	--	--	--	--	5.3	--	--
PLH-04	1a	5	N	4/16/1996	--	--	--	--	--	3.1	--	--
PLI-01PA-1	7b	1	N	2/28/2000	< 0.5 U	--	--	--	--	38	35	--
PLI-01PA-2.5	7b	3	N	2/28/2000	< 0.5 U	--	--	--	--	32	32	--
PLI-02CWD	8a	1	N	7/20/2000	--	--	560	--	--	--	--	--
PLI-02ECD	8a	1	N	7/20/2000	--	--	440	--	--	--	--	--
PLI-02ECOM	8a	1	N	7/20/2000	--	--	600	--	--	--	--	--
PLI-02ESD	8a	1	N	7/20/2000	--	--	610	--	--	--	--	--
PLI-02NED	8a	1	N	7/20/2000	--	--	310	--	--	--	--	--
PLI-02NWD	8a	1	N	7/20/2000	--	--	340	--	--	--	--	--
PLI-02PA-1	8b	1	N	3/1/2000	< 0.5 U	--	--	--	--	30	24	--
PLI-02SWD	8a	1	N	7/20/2000	--	--	570	--	--	--	--	--
PLI-02WCOM	8a	1	N	7/20/2000	--	--	480	--	--	--	--	--
PLI-03	1a	1	N	4/18/1996	--	--	--	--	--	65	--	--
PLI-03	1a	5	N	4/18/1996	--	--	--	--	--	38	--	--
PLI-03PA-1	8b	1	N	3/1/2000	< 0.5 U	--	--	--	--	39	25	--
PLI-03PA-5	7b	1	N	2/28/2000	< 0.5 U	--	--	--	--	22	27	--
PLJ-01	1a	1	N	4/18/1996	--	--	--	--	--	69	--	--
PLJ-02	1a	1	N	4/18/1996	--	--	--	--	--	57	--	--
PLJ-02	6c	1	N	5/13/1999	< 0.5 U	--	--	--	--	--	--	--
PLJ--02PA-1	8b	1	N	3/1/2000	< 0.5 U	--	--	--	--	33	22	--
PRAD-11	20c	0	N	6/29/2001	< 5.3 UJ	--	515	--	--	15.4	38.7	--
PREU-01	8c	1	N	10/3/2000	--	--	--	--	--	--	--	--
PREU-02	20c	0	N	5/23/2001	0.08	--	513 J+	--	--	21.9	43.2	--
PREU-02	20c	4	N	5/23/2001	--	--	--	--	--	--	--	--
PREU-02	20c	4	N	6/21/2001	< 5.1 U	--	< 5.1 U	--	--	21.6	40.5	--
PREU-04	20c	0	N	5/15/2001	0.11	--	557	--	--	25.5	52	--
PREU-05	20c	0	N	5/23/2001	0.08	--	473 J+	--	--	22.6	47.1	--

TABLE B-1
SOIL METALS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 12 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Thallium	Tin	Titanium	Tungsten	Uranium	Vanadium	Zinc	Zirconium
PREU-05	20c	4	N	5/23/2001	0.13	--	619 J+	--	--	26.3	53.9	--
PREU-05	20c	9	N	5/23/2001	0.16	--	630 J+	--	--	27.8	49.5	--
PRNBA-01	20c	0	N	6/1/2001	< 5.6 U	--	521 J+	--	--	21.4	26.6	--
PRNBA-01	20c	4	N	6/1/2001	< 5.8 U	--	488 J+	--	--	21.8	29.9	--
PRNBA-02	20c	0	N	6/4/2001	0.07	--	360	--	--	16.6	20	--
PRNBA-03	20c	0	N	5/31/2001	< 5.8 U	--	524 J+	--	--	22.3	41.1	--
PRNBA-03	20c	4	N	5/31/2001	< 6.5 U	--	803 J+	--	--	42.5	37.1	--
PRNBA-04	20c	0	N	5/31/2001	< 5.5 U	--	695 J+	--	--	27.4	45.9	--
PRNBA-04	20c	4	N	5/31/2001	< 6.1 U	--	582 J+	--	--	25.6	34.2	--
PRNBA-05	20c	0	N	6/4/2001	0.07	--	341	--	--	19.1	27.8	--
PRNBA-06	20c	0	N	6/1/2001	< 5.7 U	--	346 J+	--	--	20.8	38.9	--
PRNBA-06	20c	4	N	6/1/2001	< 5.7 U	--	457 J+	--	--	25.5	32.5	--
PRNBA-07	20c	0	N	5/31/2001	< 5.6 U	--	511 J+	--	--	27.8	37.7	--
PRNBA-07	20c	4	N	5/31/2001	< 6.2 U	--	609 J+	--	--	29.3	32.6	--
PRNBA-08	20c	0	N	6/4/2001	0.05	--	398	--	--	29.7	28.7	--
PRNBA-09	20c	0	N	6/4/2001	0.08	--	414	--	--	26.9	33.5	--
PRNBA-10	20c	0	N	6/4/2001	0.07	--	495	--	--	24.8	34.8	--
PRNSNP-17	20c	0	N	6/4/2001	0.07	--	411	--	--	16.4	23.7	--
PRNSNP-18	20c	0	N	6/1/2001	< 5.4 U	--	553 J+	--	--	19.7	28.9	--
PRNSNP-18	20c	4	N	6/1/2001	< 5.9 U	--	461 J+	--	--	21.2	31.5	--
PRNSNP-19	20c	0	N	5/17/2001	0.08	--	309 J-/J+	--	--	15.9	15.2 J-	--
PRNSNP-20	20c	0	N	6/1/2001	< 5.3 U	--	640 J+	--	--	26.1	30.6	--
PRNSNP-20	20c	4	N	6/1/2001	< 5.5 U	--	694 J+	--	--	24.9	24.3	--
PRNSNP-21	20c	0	N	5/16/2001	< 5.6 UJ	--	393 J-	--	--	74.4 J-	25.4 J-	--
PRNSNP-22	20c	0	N	5/17/2001	0.06	--	381 J-/J+	--	--	22.4	19.6 J-	--
PRNSNP-23	20c	0	N	5/21/2001	< 5.2 UJ	--	304 J-/J+	--	--	19 J-/J+	20.3 J-	--
PRNSNP-23	20c	4	N	5/21/2001	< 5.8 UJ	--	408 J-/J+	--	--	21.3 J-/J+	24 J-	--
PRNSNP-24	20c	0	N	6/4/2001	0.08	--	400	--	--	15.9	23.3	--
PRNSNP-25	20c	0	N	5/21/2001	< 6.7 UJ	--	588 J-/J+	--	--	26.8 J-/J+	34.5 J-	--
PRNSNP-25	20c	4	N	5/21/2001	< 6.3 UJ	--	586 J-/J+	--	--	27.2 J-/J+	31.4 J-	--
PRNSNP-29C	20c	0	N	7/23/2001	< 5.7 U	--	444	--	--	35.6	32.9	--
PRNSNP-30C	20c	0	N	7/23/2001	< 5.8 U	--	281	--	--	33.4	21	--
PRNU-02	20c	0	N	5/22/2001	0.06	--	342 J+	--	--	20.9	29	--
PRNU-02	20c	4	N	5/22/2001	0.12	--	469 J+	--	--	24	32.2	--
PRNU-02	20c	9	N	5/22/2001	0.17	--	592 J+	--	--	33.9	35.7	--
PRPLI-03	8c	1	N	10/2/2000	--	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 1 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides											
					2,4-DDD	2,4-DDE	4,4-DDD	4,4-DDE	4,4-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	delta-BHC	Dieldrin
ADB-11	1a	1	N	3/21/1996	--	--	< 0.0036 U	< 0.0033 U	< 0.0033 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.04 U	< 0.0017 U	< 0.0033 U
ADB-11	1a	5	N	3/21/1996	--	--	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.044 U	< 0.0019 U	< 0.0036 U
ADB-12	1a	1	N	3/22/1996	--	--	< 0.0033 U	< 0.0033 U	< 0.0033 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.04 U	< 0.0017 U	< 0.0033 U
ADB-12	1a	5	N	3/22/1996	--	--	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.044 U	< 0.0019 U	< 0.0036 U
ADB-13	1a	1	N	4/11/1996	--	--	0.0031	0.0012	0.007	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.044 U	< 0.0019 U	< 0.0036 U
ADB-13	1a	5	N	4/11/1996	--	--	< 0.0038 U	0.0031	< 0.0038 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.046 U	0.0022	< 0.0038 U
BDB-21	1a	1	N	4/9/1996	--	--	< 0.0038 U	0.001	0.0012	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.046 U	< 0.002 U	< 0.0038 U
BDB-21	1a	5	N	4/9/1996	--	--	< 0.0038 U	0.00091	0.0045	< 0.0018 U	< 0.002 U	< 0.0018 U	< 0.002 U	< 0.046 U	< 0.0018 U	< 0.0036 U
BDB-24	1a	1	N	4/17/1996	--	--	< 0.0034 U	< 0.0034 U	< 0.0034 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.041 U	< 0.0018 U	< 0.0034 U
BDB-24	1a	5	N	4/17/1996	--	--	< 0.0038 U	< 0.0038 U	< 0.0038 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.046 U	< 0.002 U	< 0.0038 U
BDB-25	1a	1	N	4/11/1996	--	--	< 0.0037 U	0.0023	0.0097	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0074	< 0.044 U	< 0.0019 U	< 0.0037 U
BDB-25	1a	5	N	4/11/1996	--	--	< 0.0036 U	0.0034	0.0025	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.044 U	< 0.0019 U	< 0.0036 U
BDB-26	1a	1	N	4/11/1996	--	--	< 0.0037 U	0.0011 J+	0.01 J+	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.004 J+	< 0.045 U	0.0032 J+	< 0.0037 U
BDB-26	1a	5	N	4/11/1996	--	--	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0019 U	0.00069	< 0.0019 U	0.00083	< 0.045 U	0.0016	< 0.0037 U
DS-02	32	0	N	3/29/2005	--	< 0.021 UJ-	< 0.0002 UJ-	< 0.00029 UJ-	< 0.00046 UJ-	< 0.00013 UJ-	< 0.00012 UJ-	< 0.00035 UJ-	< 0.00015 UJ-	< 0.0018 UJ-	< 0.00012 UJ-	< 0.00016 UJ-
PLG-01	1a	1	N	4/10/1996	--	--	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0019 U	0.0024	< 0.0019 U	0.023	< 0.044 U	0.013	< 0.0036 U
PLG-01	1a	5	N	4/10/1996	--	--	< 0.0043 U	0.0057	< 0.0043 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	0.0047	< 0.052 U	0.0032	< 0.0043 U
PLG-01PA-1	7b	1	N	2/28/2000	--	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	0.012 J-	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLG-01PA-5	7b	1	N	2/28/2000	--	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLG-02PA-1	8b	1	N	2/24/2000	--	--	< 0.005 U	0.008	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PLG-02PA-5	8b	5	N	2/24/2000	--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PLG-04NCD	8a	1	N	7/20/2000	--	--	0.0061	0.016	0.0058	< 0.00541 U	< 0.00541 U	< 0.00541 U	0.005	< 0.02 U	< 0.00541 U	< 0.00541 U
PLG-04NCOM	8a	1	N	7/20/2000	--	--	< 0.00543 U	0.0069	< 0.00543 U	< 0.00543 U	< 0.00543 U	< 0.00543 U	0.0062	< 0.02 U	< 0.00543 U	< 0.00543 U
PLG-04NED	8a	1	N	7/20/2000	--	--	< 0.00523 U	< 0.00523 U	< 0.00523 U	< 0.00523 U	< 0.00523 U	< 0.00523 U	< 0.00523 U	< 0.02 U	< 0.00523 U	< 0.00523 U
PLG-04NWD	8a	1	N	7/20/2000	--	--	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	0.0083	< 0.02 U	< 0.00542 U	< 0.00542 U
PLG-04SCD	8a	1	N	7/20/2000	--	--	< 0.005 U	0.0096	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PLG-04SCOM	8a	1	N	7/20/2000	--	--	0.0068	0.023	0.0056	< 0.00599 U	< 0.00599 U	< 0.00599 U	0.0076	< 0.02 U	< 0.00599 U	< 0.00599 U
PLG-04SED	8a	1	N	7/20/2000	--	--	< 0.00511 U	< 0.00511 U	< 0.00511 U	< 0.00511 U	< 0.00511 U	< 0.00511 U	< 0.00511 U	< 0.02 U	< 0.00511 U	< 0.00511 U
PLG-04SWD	8a	1	N	7/20/2000	--	--	0.0094	0.04	0.008	< 0.005 U	< 0.005 U	< 0.005 U	0.018	< 0.02 U	< 0.005 U	< 0.005 U
PLG-05	1a	1	N	4/16/1996	--	--	0.015 J+	0.47 J+	0.52 J+	< 0.002 U	0.011 J+	< 0.002 U	0.06 J+	< 0.048 U	0.019 J+	< 0.0039 U
PLG-05	1a	5	N	4/16/1996	--	--	< 0.0038 U	< 0.0038 U	< 0.0038 U	< 0.002 U	< 0.002 U	< 0.002 U	0.019	< 0.02 U	0.0026	< 0.0038 U
PLG-05CED	8a	1	N	7/20/2000	--	--	0.017	0.12	0.0081	< 0.00526 U	< 0.00526 U	< 0.00526 U	0.013	< 0.02 U	< 0.00526 U	< 0.00526 U
PLG-05CWD	8a	1	N	7/20/2000	--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0055	< 0.02 U	< 0.005 U	< 0.005 U
PLG-05ECOM	8a	1	N	7/20/2000	--	--	< 0.005 U	0.021	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0066	< 0.02 U	< 0.005 U	< 0.005 U
PLG-05NED	8a	1	N	7/20/2000	--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PLG-05PA-1	7b	1	N	2/29/2000	--	--	< 0.005 UJ	0.007 J-	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLG-05PA-3	7b	3	N	2/29/2000	--	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	0.01 J-	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLG-05SED	8a	1	N	7/20/2000	--	--	0.0085	0.078	0.013	< 0.0053 U	< 0.0053 U	< 0.0053 U	0.012	< 0.02 U	< 0.0053 U	< 0.0053 U
PLG-05SWD	8a	1	N	7/20/2000	--	--	< 0.005 U	0.0071	0.0055	< 0.005 U	< 0.005 U	< 0.005 U	0.016	< 0.02 U	< 0.005 U	< 0.005 U
PLG-05WCOM	8a	1	N	7/20/2000	--	--	< 0.00554 U	< 0.00554 U	< 0.00554 U	< 0.00554 U	< 0.00554 U	< 0.00554 U	0.0052	< 0.02 U	< 0.00554 U	< 0.00554 U
PLH-01	1a	1	N	4/10/1996	--	--	< 0.0043 U	< 0.0043 U	< 0.0043 U	< 0.0022 U	0.0045	< 0.0022 U	0.035	< 0.052 U	0.018	< 0.0043 U

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 2 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides											
					2,4-DDD	2,4-DDE	4,4-DDD	4,4-DDE	4,4-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	delta-BHC	Dieldrin
PLH-01	1a	5	N	4/10/1996	--	--	< 0.0035 U	0.002	< 0.0035 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.043 U	< 0.0018 U	< 0.0035 U
PLH--02PA-1	8b	1	N	2/24/2000	--	--	< 0.005 U	0.007	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	0.014	< 0.02 U	< 0.005 U	< 0.005 U
PLH--02PA-5	8b	5	N	2/24/2000	--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PLH-03NCD	8a	1	N	7/20/2000	--	--	< 0.00534 U	0.0068	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	0.0071	< 0.02 U	< 0.00534 U	< 0.00534 U
PLH-03NCOM	8a	1	N	7/20/2000	--	--	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.02 U	< 0.00541 U	< 0.00541 U
PLH-03NED	8a	1	N	7/20/2000	--	--	< 0.00517 U	< 0.00517 U	< 0.00517 U	< 0.00517 U	< 0.00517 U	< 0.00517 U	0.0059	< 0.02 U	0.0062	< 0.00517 U
PLH-03NWD	8a	1	N	7/20/2000	--	--	< 0.00527 U	0.006	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.02 U	< 0.00527 U	< 0.00527 U
PLH--03PA-1	8b	1	N	2/24/2000	--	--	< 0.005 U	< 0.005 U	0.0083	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	0.017	< 0.005 U
PLH--03PA-5	8b	5	N	2/24/2000	--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PLH-03SCD	8a	1	N	7/20/2000	--	--	< 0.00528 U	0.0091	0.0063	< 0.00528 U	< 0.00528 U	< 0.00528 U	0.0056	< 0.02 U	< 0.00528 U	< 0.00528 U
PLH-03SCOM	8a	1	N	7/20/2000	--	--	< 0.00551 U	0.016	0.0088	< 0.00551 U	< 0.00551 U	< 0.00551 U	0.014	< 0.02 U	< 0.00551 U	< 0.00551 U
PLH-03SED	8a	1	N	7/20/2000	--	--	< 0.00526 U	0.006	< 0.00526 U	< 0.00526 U	< 0.00526 U	< 0.00526 U	0.012	< 0.02 U	< 0.00526 U	< 0.00526 U
PLH-03SWD	8a	1	N	7/20/2000	--	--	< 0.00534 U	0.011	0.0068	< 0.00534 U	< 0.00534 U	< 0.00534 U	0.01	< 0.02 U	< 0.00534 U	< 0.00534 U
PLH-04	1a	1	N	4/16/1996	--	--	< 0.0038 U	0.23 J+	< 0.0038 U	< 0.002 U	0.0096 J+	< 0.002 U	0.081 J+	< 0.047 U	0.031 J+	< 0.0038 U
PLH-04	1a	5	N	4/16/1996	--	--	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0049	< 0.044 U	< 0.0019 U	< 0.0037 U
PLI-01PA-1	7b	1	N	2/28/2000	--	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLI-01PA-2.5	7b	3	N	2/28/2000	--	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLI-02CWD	8a	1	N	7/20/2000	--	--	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.02 U	< 0.00542 U	< 0.00542 U
PLI-02ECD	8a	1	N	7/20/2000	--	--	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.02 U	< 0.00527 U	< 0.00527 U
PLI-02ECOM	8a	1	N	7/20/2000	--	--	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.02 U	0.0058	< 0.00547 U
PLI-02ESD	8a	1	N	7/20/2000	--	--	< 0.00547 U	0.0066	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.02 U	0.0066	< 0.00547 U
PLI-02NED	8a	1	N	7/20/2000	--	--	< 0.0056 U	0.006	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.02 U	< 0.0056 U	< 0.0056 U
PLI-02NWD	8a	1	N	7/20/2000	--	--	< 0.00543 U	0.009	< 0.00543 U	< 0.00543 U	< 0.00543 U	< 0.00543 U	0.0054	< 0.02 U	0.006	< 0.00543 U
PLI-02PA-1	8b	1	N	3/1/2000	--	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLI-02SWD	8a	1	N	7/20/2000	--	--	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	0.0061	< 0.02 U	0.0054	< 0.00534 U
PLI-02WCOM	8a	1	N	7/20/2000	--	--	< 0.00535 U	0.0061	< 0.00535 U	< 0.00535 U	< 0.00535 U	< 0.00535 U	< 0.00535 U	< 0.02 U	< 0.00535 U	< 0.00535 U
PLI-03	1a	1	N	4/18/1996	--	--	< 0.0042 U	0.035	< 0.0042 U	< 0.0021 U	0.01	0.0036	< 0.0021 U	< 0.051 U	0.059	< 0.0042 U
PLI-03	1a	5	N	4/18/1996	--	--	< 0.0036 U	0.0041	< 0.0036 U	< 0.0019 U	0.0015	< 0.0019 U	< 0.0019 U	< 0.044 U	0.0019	< 0.0036 U
PLI-03PA-1	8b	1	N	3/1/2000	--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PLI-03PA-5	7b	1	N	2/28/2000	--	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.005 UJ	< 0.005 UJ
PLI-03PA-5	7b	5	N	2/28/2000	--	--	--	--	--	--	--	--	--	--	--	--
PLJ-01	1a	1	N	4/18/1996	--	--	< 0.004 U	0.03 J+	< 0.004 U	< 0.0021 U	0.011 J+	< 0.0021 U	0.027 J+	< 0.049 U	0.058 J+	< 0.004 U
PLJ-02	1a	1	N	4/18/1996	--	--	< 0.0069 U	0.047 J+	< 0.0069 U	< 0.0036 U	0.058 J+	< 0.0036 U	0.07 J+	< 0.084 U	0.51 J+	< 0.0069 U
PLJ--02PA-1	8b	1	N	3/1/2000	--	--	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
PRAD-11	20c	0	N	6/29/2001	--	--	< 0.0018 U	< 0.0018 U	0.0022 J+	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.0061 J+	--	< 0.0018 U	< 0.0018 U
PREU-02	20c	0	N	5/23/2001	--	--	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	--	< 0.0017 U	< 0.0017 U
PREU-02	20c	4	N	6/21/2001	--	--	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	--	< 0.0017 U	< 0.0017 U
PREU-04	20c	0	N	5/17/2001	--	--	< 0.0017 U	0.0019	0.0036	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	--	< 0.0017 U	< 0.0017 U
PREU-05	20c	0	N	5/23/2001	--	--	< 0.0037 U	0.046 J+	0.034 J+	< 0.0037 U	< 0.0037 U	0.0067 J+	< 0.0037 U	--	< 0.0037 U	< 0.0037 U
PREU-05	20c	4	N	5/23/2001	--	--	< 0.0074 U	0.047 J+	0.034 J+	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	--	< 0.0074 U	< 0.0074 U
PREU-05	20c	9	N	5/23/2001	--	--	< 0.0096 U	0.064 J+	0.049 J+	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	--	< 0.0096 U	< 0.0096 U

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 3 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides											
					2,4-DDD	2,4-DDE	4,4-DDD	4,4-DDE	4,4-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	delta-BHC	Dieldrin
PRNBA-01	20c	0	N	6/1/2001	--	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0061	--	< 0.0019 U	< 0.0019 U
PRNBA-01	20c	4	N	6/1/2001	--	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	0.0066	--	< 0.002 U	< 0.002 U
PRNBA-02	20c	0	N	6/4/2001	--	--	< 0.002 U	0.0028	< 0.002 U	< 0.002 U	0.0027	< 0.002 U	0.0078	--	0.009	< 0.002 U
PRNBA-03	20c	0	N	5/31/2001	--	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	--	< 0.002 U	< 0.002 U
PRNBA-03	20c	4	N	5/31/2001	--	--	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	--	< 0.0022 U	< 0.0022 U
PRNBA-04	20c	0	N	5/31/2001	--	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	--	< 0.0019 U	< 0.0019 U
PRNBA-04	20c	4	N	5/31/2001	--	--	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	0.0026	--	< 0.0021 U	< 0.0021 U
PRNBA-05	20c	0	N	6/4/2001	--	--	< 0.0018 U	0.0053	< 0.0018 U	< 0.0018 U	0.0049	< 0.0018 U	0.0086	--	0.021	0.002
PRNBA-06	20c	0	N	6/1/2001	--	--	< 0.002 U	0.014	0.007	< 0.002 U	< 0.002 U	< 0.002 U	0.013	--	< 0.002 U	< 0.002 U
PRNBA-06	20c	4	N	6/1/2001	--	--	< 0.0019 U	0.009	0.0026	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0031	--	< 0.0019 U	< 0.0019 U
PRNBA-07	20c	0	N	5/31/2001	--	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0058	--	< 0.0019 U	< 0.0019 U
PRNBA-07	20c	4	N	5/31/2001	--	--	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	0.0032	--	< 0.0021 U	< 0.0021 U
PRNBA-08	20c	0	N	6/4/2001	--	--	< 0.0019 U	0.0041 J+	0.0038 J+	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0073 J+	--	< 0.0019 U	< 0.0019 U
PRNBA-09	20c	0	N	6/4/2001	--	--	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.011 J+	--	< 0.0018 U	< 0.0018 U
PRNBA-10	20c	0	N	6/4/2001	--	--	< 0.0018 U	0.0022 J+	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.0076 J+	--	< 0.0018 U	< 0.0018 U
PRNSNP-17	20c	0	N	6/4/2001	--	--	< 0.0017 U	0.0031	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	0.0061	--	< 0.0017 U	< 0.0017 U
PRNSNP-18	20c	0	N	6/1/2001	--	--	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.0065	--	< 0.0018 U	< 0.0018 U
PRNSNP-18	20c	4	N	6/1/2001	--	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	0.0026	--	< 0.002 U	< 0.002 U
PRNSNP-19	20c	0	N	5/17/2001	--	--	0.002	0.013	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	0.0073	--	< 0.0017 U	< 0.0017 U
PRNSNP-20	20c	0	N	6/1/2001	--	--	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.0033	--	< 0.0018 U	< 0.0018 U
PRNSNP-20	20c	4	N	6/1/2001	--	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	--	< 0.0019 U	< 0.0019 U
PRNSNP-21	20c	0	N	5/18/2001	--	--	< 0.0019 U	0.0033	0.0064	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0079	--	0.0067	< 0.0019 U
PRNSNP-22	20c	0	N	5/17/2001	--	--	< 0.002 U	0.0028	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	0.0025	--	< 0.002 U	< 0.002 U
PRNSNP-23	20c	0	N	5/21/2001	--	--	< 0.0018 UJ	0.002 J-	< 0.0018 UJ	< 0.0018 UJ	0.0033 J-	< 0.0018 UJ	0.017 J-	--	0.0038 J-	< 0.0018 UJ
PRNSNP-23	20c	4	N	5/21/2001	--	--	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	0.0097 J	--	0.0028 J	< 0.002 UJ
PRNSNP-24	20c	0	N	6/4/2001	--	--	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	0.0018	< 0.0017 U	0.01	--	0.005	< 0.0017 U
PRNSNP-25	20c	0	N	5/21/2001	--	--	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	0.0035 J-	--	0.0032 J-	< 0.0023 UJ
PRNSNP-25	20c	4	N	5/21/2001	--	--	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	--	< 0.0021 UJ	< 0.0021 UJ
PRNSNP-29C	20c	0	N	7/23/2001	--	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	--	0.0058	< 0.002 U
PRNSNP-30C	20c	0	N	7/23/2001	--	--	< 0.002 U	0.015 J+	0.0029 J+	< 0.002 U	< 0.002 U	< 0.002 U	0.012 J+	--	< 0.002 U	< 0.002 U
PRNU-02	20c	0	N	5/22/2001	--	--	< 0.0018 U	0.012	0.013	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.0032	--	< 0.0018 U	0.0068
PRNU-02	20c	4	N	5/22/2001	--	--	< 0.002 U	0.0037	0.0043	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	--	< 0.002 U	< 0.002 U
PRNU-02	20c	9	N	5/22/2001	--	--	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	--	< 0.0021 U	< 0.0021 U
WC-NB01	39	0	N	7/27/2006	< 0.00072 U	< 0.0001 U	< 0.000096 U	0.0032 J	< 0.0002 U	< 0.0001 U	< 0.00062 U	< 0.00012 U	0.012	--	< 0.00011 U	< 0.00028 U
WC-NB02	39	0	N	7/27/2006	0.0031 J	0.012	0.01 J	0.0041	0.0032 J	< 0.0001 U	< 0.00062 U	< 0.00012 U	0.022	--	0.0074	< 0.00028 U
WC-NB03	39	0	N	7/26/2006	0.0023	0.0077	0.0039	0.033	0.0065	< 0.0001 U	< 0.00062 U	< 0.00012 U	0.0084	--	< 0.00011 U	< 0.00028 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses

reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 4 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides											
					Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
ADB-11	1a	1	N	3/21/1996	< 0.0017 U	< 0.0033 U	< 0.0033 U	< 0.0033 U	< 0.0033 U	--	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.017 U	< 0.016 U
ADB-11	1a	5	N	3/21/1996	< 0.0019 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
ADB-12	1a	1	N	3/22/1996	< 0.0017 U	< 0.0033 U	< 0.0033 U	< 0.0033 U	< 0.0033 U	--	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.017 U	< 0.016 U
ADB-12	1a	5	N	3/22/1996	< 0.0019 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
ADB-13	1a	1	N	4/11/1996	0.0031	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
ADB-13	1a	5	N	4/11/1996	0.0042	< 0.0038 U	< 0.0038 U	< 0.0038 U	< 0.0038 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
BDB-21	1a	1	N	4/9/1996	0.00075	< 0.0038 U	< 0.0038 U	< 0.0038 U	< 0.0038 U	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.02 U	< 0.016 U
BDB-21	1a	5	N	4/9/1996	0.00075	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	--	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.018 U	--
BDB-24	1a	1	N	4/17/1996	< 0.0018 U	< 0.0034 U	< 0.0034 U	< 0.0034 U	< 0.0034 U	--	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.018 U	< 0.016 U
BDB-24	1a	5	N	4/17/1996	< 0.002 U	< 0.0038 U	< 0.0038 U	< 0.0038 U	< 0.0038 U	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.02 U	< 0.016 U
BDB-25	1a	1	N	4/11/1996	0.0041	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
BDB-25	1a	5	N	4/11/1996	0.0046	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
BDB-26	1a	1	N	4/11/1996	< 0.0019 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
BDB-26	1a	5	N	4/11/1996	< 0.0019 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
DS-02	32	0	N	3/29/2005	0.00013 UJ	0.00017 UJ	0.00014 UJ	0.00019 UJ	< 0.0002 UJ	0.00033 UJ	0.00013 UJ	0.00022 UJ	0.00025 UJ	0.00011 UJ	0.00035 UJ	< 0.015 UJ
PLG-01	1a	1	N	4/10/1996	< 0.0019 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
PLG-01	1a	5	N	4/10/1996	< 0.0022 U	< 0.0043 U	< 0.0043 U	< 0.0043 U	< 0.0043 U	--	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.022 U	< 0.016 U
PLG-01PA-1	7b	1	N	2/28/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLG-01PA-5	7b	1	N	2/28/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLG-02PA-1	8b	1	N	2/24/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-02PA-5	8b	5	N	2/24/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-04NCD	8a	1	N	7/20/2000	< 0.00541 U	< 0.00541 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.02164 U	< 0.06492 U
PLG-04NCOM	8a	1	N	7/20/2000	< 0.00543 U	< 0.00543 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00543 U	< 0.00543 U	< 0.00543 U	< 0.00543 U	< 0.02172 U	< 0.06516 U
PLG-04NED	8a	1	N	7/20/2000	< 0.00523 U	< 0.00523 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00523 U	< 0.00523 U	< 0.00523 U	< 0.00523 U	< 0.02092 U	< 0.06276 U
PLG-04NWD	8a	1	N	7/20/2000	< 0.00542 U	< 0.00542 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.0217 U	< 0.0651 U
PLG-04SCD	8a	1	N	7/20/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-04SCOM	8a	1	N	7/20/2000	< 0.00599 U	< 0.00599 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00599 U	< 0.00599 U	< 0.00599 U	< 0.00599 U	< 0.02 U	< 0.06 U
PLG-04SED	8a	1	N	7/20/2000	< 0.00511 U	< 0.00511 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00511 U	< 0.00511 U	< 0.00511 U	< 0.00511 U	< 0.02448 U	< 0.06134 U
PLG-04SWD	8a	1	N	7/20/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-05	1a	1	N	4/16/1996	0.065 J+	< 0.0039 U	< 0.0039 U	< 0.0039 U	< 0.0039 U	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.02 U	< 0.016 U
PLG-05	1a	5	N	4/16/1996	< 0.002 U	< 0.0038 U	< 0.0038 U	< 0.0038 U	< 0.0038 U	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.02 U	< 0.016 U
PLG-05CED	8a	1	N	7/20/2000	< 0.00526 U	< 0.00526 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00526 U	< 0.00526 U	< 0.00526 U	< 0.00526 U	< 0.02107 U	< 0.06322 U
PLG-05CWD	8a	1	N	7/20/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-05ECOM	8a	1	N	7/20/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-05NED	8a	1	N	7/20/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-05PA-1	7b	1	N	2/29/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLG-05PA-3	7b	3	N	2/29/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLG-05SED	8a	1	N	7/20/2000	< 0.0053 U	< 0.0053 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.02123 U	< 0.06369 U
PLG-05SWD	8a	1	N	7/20/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLG-05WCOM	8a	1	N	7/20/2000	< 0.00554 U	< 0.00554 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00554 U	< 0.00554 U	< 0.00554 U	< 0.00554 U	< 0.02216 U	< 0.06648 U
PLH-01	1a	1	N	4/10/1996	0.0051	0.0071	< 0.0043 U	< 0.0043 U	< 0.0043 U	--	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.022 U	< 0.016 U

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 5 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides											
					Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
PLH-01	1a	5	N	4/10/1996	0.0015	< 0.0035 U	< 0.0035 U	< 0.0035 U	< 0.0035 U	--	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.018 U	< 0.016 U
PLH--02PA-1	8b	1	N	2/24/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLH--02PA-5	8b	5	N	2/24/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLH-03NCD	8a	1	N	7/20/2000	< 0.00534 U	< 0.00534 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.02136 U	< 0.06408 U
PLH-03NCOM	8a	1	N	7/20/2000	< 0.00541 U	< 0.00541 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.00541 U	< 0.02166 U	< 0.06498 U
PLH-03NED	8a	1	N	7/20/2000	< 0.00517 U	< 0.00517 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00517 U	< 0.00517 U	< 0.00517 U	< 0.00517 U	< 0.0207 U	< 0.0621 U
PLH-03NWD	8a	1	N	7/20/2000	< 0.00527 U	< 0.00527 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.02111 U	< 0.06335 U
PLH--03PA-1	8b	1	N	2/24/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLH--03PA-5	8b	5	N	2/24/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLH-03SCD	8a	1	N	7/20/2000	< 0.00528 U	< 0.00528 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00528 U	< 0.00528 U	< 0.00528 U	< 0.00528 U	< 0.02114 U	< 0.06342 U
PLH-03SCOM	8a	1	N	7/20/2000	< 0.00551 U	< 0.00551 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00551 U	< 0.00551 U	< 0.00551 U	< 0.00551 U	< 0.02206 U	< 0.06618 U
PLH-03SED	8a	1	N	7/20/2000	< 0.00526 U	< 0.00526 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00526 U	< 0.00526 U	< 0.00526 U	< 0.00526 U	< 0.02105 U	< 0.06315 U
PLH-03SWD	8a	1	N	7/20/2000	< 0.00534 U	< 0.00534 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.02138 U	< 0.06414 U
PLH-04	1a	1	N	4/16/1996	0.029 J+	0.024 J+	< 0.0038 U	< 0.0038 U	< 0.0038 U	--	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.02 U	< 0.016 U
PLH-04	1a	5	N	4/16/1996	< 0.0019 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
PLI-01PA-1	7b	1	N	2/28/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLI-01PA-2.5	7b	3	N	2/28/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLI-02CWD	8a	1	N	7/20/2000	< 0.00542 U	< 0.00542 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.00542 U	< 0.02168 U	< 0.06504 U
PLI-02ECD	8a	1	N	7/20/2000	< 0.00527 U	< 0.00527 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.00527 U	< 0.02111 U	< 0.06335 U
PLI-02ECOM	8a	1	N	7/20/2000	< 0.00547 U	< 0.00547 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.02188 U	< 0.06564 U
PLI-02ESD	8a	1	N	7/20/2000	< 0.00547 U	< 0.00547 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.00547 U	< 0.02188 U	< 0.06564 U
PLI-02NED	8a	1	N	7/20/2000	< 0.0056 U	< 0.0056 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0224 U	< 0.0672 U
PLI-02NWD	8a	1	N	7/20/2000	< 0.00543 U	< 0.00543 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00543 U	< 0.00543 U	< 0.00543 U	< 0.00543 U	< 0.02172 U	< 0.06516 U
PLI-02PA-1	8b	1	N	3/1/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLI-02SWD	8a	1	N	7/20/2000	< 0.00534 U	< 0.00534 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.00534 U	< 0.02138 U	< 0.06414 U
PLI-02WCOM	8a	1	N	7/20/2000	< 0.00535 U	< 0.00535 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.00535 U	< 0.00535 U	< 0.00535 U	< 0.00535 U	< 0.02143 U	< 0.0643 U
PLI-03	1a	1	N	4/18/1996	0.01	< 0.0042 U	< 0.0042 U	< 0.0042 U	< 0.0042 U	--	0.0023	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.021 U	< 0.016 U
PLI-03	1a	5	N	4/18/1996	0.0077	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	--	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.019 U	< 0.016 U
PLI-03PA-1	8b	1	N	3/1/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PLI-03PA-5	7b	1	N	2/28/2000	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	--	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.02 UJ	< 0.06 UJ
PLI-03PA-5	7b	5	N	2/28/2000	--	--	--	--	--	< 0.005 UJ	--	--	--	--	< 0.005 UJ	--
PLJ-01	1a	1	N	4/18/1996	0.0062 J+	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.021 U	< 0.016 U
PLJ-02	1a	1	N	4/18/1996	< 0.0036 U	< 0.0069 U	< 0.0069 U	< 0.0069 U	< 0.0069 U	--	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.036 U	< 0.016 U
PLJ--02PA-1	8b	1	N	3/1/2000	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
PRAD-11	20c	0	N	6/29/2001	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0035 U	< 0.071 U
PREU-02	20c	0	N	5/23/2001	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0034 U	< 0.069 U
PREU-02	20c	4	N	6/21/2001	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0034 U	< 0.069 U
PREU-04	20c	0	N	5/17/2001	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0033 U	< 0.068 U
PREU-05	20c	0	N	5/23/2001	< 0.0037 U	< 0.0037 U	< 0.0037 U	0.006 J+	0.0054 J+	< 0.0037 U	0.0054 J+	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0072 U	< 0.15 U
PREU-05	20c	4	N	5/23/2001	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.0074 U	< 0.014 U	< 0.29 U
PREU-05	20c	9	N	5/23/2001	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.0096 U	< 0.019 U	< 0.38 U

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organochlorine Pesticides											
					Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
PRNBA-01	20c	0	N	6/1/2001	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0037 U	< 0.075 U
PRNBA-01	20c	4	N	6/1/2001	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.077 U
PRNBA-02	20c	0	N	6/4/2001	< 0.002 U	< 0.002 U	0.0025	< 0.002 U	0.0021	0.0036	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.078 U
PRNBA-03	20c	0	N	5/31/2001	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.077 U
PRNBA-03	20c	4	N	5/31/2001	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.0043 U	< 0.087 U
PRNBA-04	20c	0	N	5/31/2001	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0036 U	< 0.074 U
PRNBA-04	20c	4	N	5/31/2001	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.004 U	< 0.081 U
PRNBA-05	20c	0	N	6/4/2001	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.0019	< 0.0018 U	0.0037	< 0.0018 U	< 0.0018 U	< 0.0035 U	< 0.071 U
PRNBA-06	20c	0	N	6/1/2001	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	0.002	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.077 U
PRNBA-06	20c	4	N	6/1/2001	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	0.0054	< 0.076 U
PRNBA-07	20c	0	N	5/31/2001	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0037 U	< 0.075 U
PRNBA-07	20c	4	N	5/31/2001	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0041 U	< 0.084 U
PRNBA-08	20c	0	N	6/4/2001	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0036 U	< 0.074 U
PRNBA-09	20c	0	N	6/4/2001	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.011 J+	< 0.071 U
PRNBA-10	20c	0	N	6/4/2001	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0035 U	< 0.071 U
PRNSNP-17	20c	0	N	6/4/2001	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	0.0023	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0034 U	< 0.068 U
PRNSNP-18	20c	0	N	6/1/2001	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0036 U	< 0.073 U
PRNSNP-18	20c	4	N	6/1/2001	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0039 U	< 0.079 U
PRNSNP-19	20c	0	N	5/17/2001	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0033 U	< 0.068 U
PRNSNP-20	20c	0	N	6/1/2001	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0035 U	< 0.071 U
PRNSNP-20	20c	4	N	6/1/2001	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0036 U	< 0.073 U
PRNSNP-21	20c	0	N	5/18/2001	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0038 U	< 0.076 U
PRNSNP-22	20c	0	N	5/17/2001	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.077 U
PRNSNP-23	20c	0	N	5/21/2001	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0035 UJ	< 0.07 UJ
PRNSNP-23	20c	4	N	5/21/2001	< 0.002 UJ	0.0022 J	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.0038 UJ	< 0.077 UJ
PRNSNP-24	20c	0	N	6/4/2001	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	0.0028	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0034 U	< 0.069 U
PRNSNP-25	20c	0	N	5/21/2001	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0023 UJ	< 0.0044 UJ	< 0.089 UJ
PRNSNP-25	20c	4	N	5/21/2001	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0021 UJ	< 0.0042 UJ	< 0.084 UJ
PRNSNP-29C	20c	0	N	7/23/2001	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	0.002	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.077 U
PRNSNP-30C	20c	0	N	7/23/2001	< 0.002 U	< 0.002 U	0.002 J+	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.077 U
PRNU-02	20c	0	N	5/22/2001	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0036 U	< 0.073 U
PRNU-02	20c	4	N	5/22/2001	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 U	< 0.0038 U	< 0.077 U
PRNU-02	20c	9	N	5/22/2001	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.0021 U	< 0.004 U	< 0.082 U
WC-NB01	39	0	N	7/27/2006	< 0.00013 U	< 0.000097 U	< 0.00024 U	< 0.0002 U	< 0.00017 U	--	< 0.00009 U	< 0.0001 U	< 0.00014 U	< 0.00026 U	< 0.00018 U	< 0.0067 U
WC-NB02	39	0	N	7/27/2006	< 0.00013 U	< 0.000097 U	< 0.00024 U	< 0.0002 U	0.0021 J	--	< 0.00009 U	< 0.0001 U	< 0.00014 U	< 0.00026 U	< 0.00018 U	< 0.0067 U
WC-NB03	39	0	N	7/26/2006	< 0.00013 U	< 0.000096 U	< 0.00024 U	< 0.0002 U	< 0.00017 U	--	< 0.00009 U	< 0.0001 U	< 0.00014 U	< 0.00026 U	< 0.00018 U	< 0.0067 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses

reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs											
					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane (DBCP)
ADB-11	1a	1	N	3/21/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.67 U	--	--
ADB-11	1a	5	N	3/21/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	--	--	--
ADB-12	1a	1	N	3/22/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.69 U	--	--
ADB-12	1a	5	N	3/22/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	--	--	--
ADB-13	1a	1	N	4/11/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.71 U	--	--
ADB-13	1a	5	N	4/11/1996	--	< 0.00099 U	< 0.00099 U	< 0.002 U	< 0.00099 U	< 0.00099 U	--	--	--	--	--	--
BDB-21	1a	1	N	4/9/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.71 U	--	--
BDB-21	1a	5	N	4/9/1996	--	< 0.0011 U	< 0.0011 U	< 0.0023 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.76 U	--	--
BDB-24	1a	1	N	4/17/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.68 U	--	--
BDB-24	1a	5	N	4/17/1996	--	< 0.0012 U	< 0.0012 U	< 0.0024 U	< 0.0012 U	< 0.0012 U	--	--	--	< 0.74 U	--	--
BDB-25	1a	1	N	4/11/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.73 U	--	--
BDB-25	1a	5	N	4/11/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	--	--	--
BDB-26	1a	1	N	4/11/1996	--	< 0.0011 U	< 0.0011 U	< 0.0023 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.73 U	--	--
BDB-26	1a	5	N	4/11/1996	--	--	--	--	--	--	--	--	--	< 0.74 U	--	--
DS-02	32	0	N	3/29/2005	< 0.00016 U	< 0.00018 U	< 0.00032 U	< 0.00052 U	< 0.0002 U	< 0.00072 U	< 0.00015 U	< 0.00051 U	< 0.00095 U	< 0.00044 U	< 0.00022 U	< 0.001 U
PLG-01	1a	1	N	4/10/1996	--	< 0.0013 U	< 0.0013 U	< 0.0026 U	< 0.0013 U	< 0.0013 U	--	--	--	< 0.71 U	--	--
PLG-01	1a	5	N	4/10/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	--	--	--
PLG-05	1a	1	N	4/16/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.79 U	--	--
PLG-05	1a	5	N	4/16/1996	--	< 0.0012 U	< 0.0012 U	< 0.0024 U	< 0.0012 U	< 0.0012 U	--	--	--	< 0.77 U	--	--
PLH-01	1a	1	N	4/10/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.83 U	--	--
PLH-01	1a	5	N	4/10/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	--	--	--
PLH-04	1a	1	N	4/16/1996	--	< 0.0014 U	< 0.0014 U	< 0.0027 U	< 0.0014 U	< 0.0014 U	--	--	--	< 0.78 U	--	--
PLH-04	1a	5	N	4/16/1996	--	< 0.0013 U	< 0.0013 U	< 0.0025 U	< 0.0013 U	< 0.0013 U	--	--	--	< 0.74 U	--	--
PLI-03	1a	1	N	4/18/1996	--	< 0.0012 U	< 0.0012 U	< 0.0023 U	< 0.0012 U	< 0.0012 U	--	--	--	< 0.84 U	--	--
PLI-03	1a	5	N	4/18/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	--	--	--
PLJ-01	1a	1	N	4/18/1996	--	< 0.0011 U	< 0.0011 U	< 0.0023 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.77 U	--	--
PLJ-02	1a	1	N	4/18/1996	--	< 0.0019 U	< 0.0019 U	< 0.0038 U	< 0.0019 U	< 0.0019 U	--	--	--	< 1.3 U	--	--
PRAD-11	20c	0	N	6/29/2001	--	--	--	--	--	--	--	--	--	< 0.35 U	--	--
PREU-02	20c	0	N	5/23/2001	--	--	--	--	--	--	--	--	--	< 0.34 U	--	--
PREU-02	20c	4	N	6/21/2001	--	--	--	--	--	--	--	--	--	< 0.34 U	--	--
PREU-04	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	< 0.33 U	--	--
PREU-05	20c	0	N	5/23/2001	--	--	--	--	--	--	--	--	--	< 0.36 U	--	--
PREU-05	20c	4	N	5/23/2001	--	--	--	--	--	--	--	--	--	< 0.36 U	--	--
PREU-05	20c	9	N	5/23/2001	--	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	--	--	--	< 0.37 U	--	--
PRNBA-01	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.37 U	--	--
PRNBA-01	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNBA-02	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNBA-03	20c	0	N	5/31/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNBA-03	20c	4	N	5/31/2001	--	--	--	--	--	--	--	--	--	< 0.43 U	--	--
PRNBA-04	20c	0	N	5/31/2001	--	--	--	--	--	--	--	--	--	< 0.36 U	--	--
PRNBA-04	20c	4	N	5/31/2001	--	--	--	--	--	--	--	--	--	< 0.4 U	--	--
PRNBA-05	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	< 0.35 U	--	--
PRNBA-06	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs										1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane (DBCP)
					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene		
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	--	--	--	--	--	< 0.37 U	--	--
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	--	--	--	--	--	< 0.41 U	--	--
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	< 0.36 U	--	--
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	< 0.35 U	--	--
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	< 0.35 U	--	--
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	< 0.34 U	--	--
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.36 U	--	--
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.39 U	--	--
PRNSNP-19	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	< 0.33 U	--	--
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.35 U	--	--
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	< 0.36 U	--	--
PRNSNP-21	20c	0	N	5/18/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNSNP-22	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	< 0.35 UJ	--	--
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	< 0.38 UJ	--	--
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	< 0.34 U	--	--
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	< 0.44 UJ	--	--
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	< 0.42 UJ	--	--
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	--	--	--	--	--	< 0.36 U	--	--
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	--	--	--	--	--	< 0.38 U	--	--
PRNU-02	20c	9	N	5/22/2001	--	< 0.0061 U	< 0.0061 U	< 0.0061 U	< 0.0061 U	< 0.0061 U	--	--	--	< 0.4 U	--	--
WC-NB01	39	0	N	7/27/2006	< 0.00023 U	0.00065 J	< 0.00014 U	< 0.00029 U	< 0.00097 U	< 0.00056 U	--	--	< 0.00057 U	< 0.00075 U	--	< 0.00091 U
WC-NB02	39	0	N	7/27/2006	< 0.00023 U	< 0.00015 U	< 0.00014 U	< 0.00029 U	< 0.00097 U	< 0.00056 U	--	--	< 0.00057 U	< 0.00075 U	--	< 0.00091 U
WC-NB03	39	0	N	7/26/2006	< 0.00023 U	0.0015 J	< 0.00014 U	< 0.00029 U	< 0.00097 U	< 0.00056 U	--	--	< 0.00056 U	< 0.00074 U	--	< 0.0009 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 3 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs											
					1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trichlorobenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Phenylbutane
ADB-11	1a	1	N	3/21/1996	< 0.0054 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0011 U	--	< 0.0054 U	--	< 0.0011 U	--	--
ADB-11	1a	5	N	3/21/1996	< 0.0011 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0011 U	--	< 0.0011 U	--	< 0.0011 U	--	--
ADB-12	1a	1	N	3/22/1996	< 0.0053 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0011 U	--	< 0.0053 U	--	< 0.0011 U	--	--
ADB-12	1a	5	N	3/22/1996	< 0.0011 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0011 U	--	< 0.0011 U	--	< 0.0011 U	--	--
ADB-13	1a	1	N	4/11/1996	< 0.0056 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0056 U	--	< 0.0056 U	--	< 0.0011 U	--	--
ADB-13	1a	5	N	4/11/1996	< 0.00099 U	< 0.00099 U	< 0.00099 U	--	--	< 0.00099 U	--	< 0.00099 U	--	< 0.00099 U	--	--
BDB-21	1a	1	N	4/9/1996	< 0.0054 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0054 U	--	< 0.0054 U	--	< 0.0011 U	--	--
BDB-21	1a	5	N	4/9/1996	< 0.0056 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0056 U	--	< 0.0056 U	--	< 0.0011 U	--	--
BDB-24	1a	1	N	4/17/1996	< 0.0053 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0053 U	--	< 0.0053 U	--	< 0.0011 U	--	--
BDB-24	1a	5	N	4/17/1996	< 0.0061 U	< 0.0012 U	< 0.0012 U	--	--	< 0.0061 U	--	< 0.0061 U	--	< 0.0012 U	--	--
BDB-25	1a	1	N	4/11/1996	< 0.0053 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0053 U	--	< 0.0053 U	--	< 0.0011 U	--	--
BDB-25	1a	5	N	4/11/1996	< 0.0055 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0055 U	--	< 0.0055 U	--	< 0.0011 U	--	--
BDB-26	1a	1	N	4/11/1996	< 0.0057 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0057 U	--	< 0.0057 U	--	< 0.0011 U	--	--
BDB-26	1a	5	N	4/11/1996	< 0.74 U	--	--	--	--	< 0.74 U	--	< 0.74 U	--	--	--	--
DS-02	32	0	N	3/29/2005	< 0.00028 U	< 0.00083 U	< 0.00041 U	< 0.0053 U	< 0.0002 U	< 0.00018 U	< 0.00048 U	< 0.00025 U	< 0.00014 U	--	< 0.00057 U	< 0.00021 U
PLG-01	1a	1	N	4/10/1996	< 0.0065 U	< 0.0013 U	< 0.0013 U	--	--	< 0.0065 U	--	< 0.0065 U	--	< 0.0013 U	--	--
PLG-01	1a	5	N	4/10/1996	< 0.0055 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0055 U	--	< 0.0055 U	--	< 0.0011 U	--	--
PLG-05	1a	1	N	4/16/1996	< 0.0054 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0054 U	--	< 0.0054 U	--	< 0.0011 U	--	--
PLG-05	1a	5	N	4/16/1996	< 0.006 U	< 0.0012 U	< 0.0012 U	--	--	< 0.006 U	--	< 0.006 U	--	< 0.0012 U	--	--
PLH-01	1a	1	N	4/10/1996	< 0.0056 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0056 U	--	< 0.0056 U	--	< 0.0011 U	--	--
PLH-01	1a	5	N	4/10/1996	< 0.0055 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0055 U	--	< 0.0055 U	--	< 0.0011 U	--	--
PLH-04	1a	1	N	4/16/1996	< 0.0068 U	< 0.0014 U	< 0.0014 U	--	--	< 0.0068 U	--	< 0.0068 U	--	< 0.0014 U	--	--
PLH-04	1a	5	N	4/16/1996	< 0.0064 U	< 0.0013 U	< 0.0013 U	--	--	< 0.0064 U	--	< 0.0064 U	--	< 0.0013 U	--	--
PLI-03	1a	1	N	4/18/1996	< 0.0058 U	< 0.0012 U	< 0.0012 U	--	--	< 0.0058 U	--	< 0.0058 U	--	< 0.0012 U	--	--
PLI-03	1a	5	N	4/18/1996	< 0.0053 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0053 U	--	< 0.0053 U	--	< 0.0011 U	--	--
PLJ-01	1a	1	N	4/18/1996	< 0.0057 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0057 U	--	< 0.0057 U	--	< 0.0011 U	--	--
PLJ-02	1a	1	N	4/18/1996	< 0.0095 U	< 0.0019 U	< 0.0019 U	--	--	< 0.0095 U	--	< 0.0095 U	--	< 0.0019 U	--	--
PRAD-11	20c	0	N	6/29/2001	< 0.35 U	--	--	--	--	< 0.35 U	--	< 0.35 U	--	--	--	--
PREU-02	20c	0	N	5/23/2001	< 0.34 U	--	--	--	--	< 0.34 U	--	< 0.34 U	--	--	--	--
PREU-02	20c	4	N	6/21/2001	< 0.34 U	--	--	--	--	< 0.34 U	--	< 0.34 U	--	--	--	--
PREU-04	20c	0	N	5/17/2001	< 0.33 U	--	--	--	--	< 0.33 U	--	< 0.33 U	--	--	--	--
PREU-05	20c	0	N	5/23/2001	< 0.36 U	--	--	--	--	< 0.36 U	--	< 0.36 U	--	--	--	--
PREU-05	20c	4	N	5/23/2001	< 0.36 U	--	--	--	--	< 0.36 U	--	< 0.36 U	--	--	--	--
PREU-05	20c	9	N	5/23/2001	< 0.0056 U	< 0.0056 U	< 0.0056 U	--	--	< 0.0056 U	--	< 0.0056 U	--	--	--	--
PRNBA-01	20c	0	N	6/1/2001	< 0.37 U	--	--	--	--	< 0.37 U	--	< 0.37 U	--	--	--	--
PRNBA-01	20c	4	N	6/1/2001	< 0.38 U	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--	--
PRNBA-02	20c	0	N	6/4/2001	< 0.38 U	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--	--
PRNBA-03	20c	0	N	5/31/2001	< 0.38 U	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--	--
PRNBA-03	20c	4	N	5/31/2001	< 0.43 U	--	--	--	--	< 0.43 U	--	< 0.43 U	--	--	--	--
PRNBA-04	20c	0	N	5/31/2001	< 0.36 U	--	--	--	--	< 0.36 U	--	< 0.36 U	--	--	--	--
PRNBA-04	20c	4	N	5/31/2001	< 0.4 U	--	--	--	--	< 0.4 U	--	< 0.4 U	--	--	--	--
PRNBA-05	20c	0	N	6/4/2001	< 0.35 U	--	--	--	--	< 0.35 U	--	< 0.35 U	--	--	--	--
PRNBA-06	20c	0	N	6/1/2001	< 0.38 U	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--	--

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 4 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs											
					1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trichlorobenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Phenylbutane
PRNBA-06	20c	4	N	6/1/2001	< 0.38 U	--	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--
PRNBA-07	20c	0	N	5/31/2001	< 0.37 U	--	--	--	--	--	< 0.37 U	--	< 0.37 U	--	--	--
PRNBA-07	20c	4	N	5/31/2001	< 0.41 U	--	--	--	--	--	< 0.41 U	--	< 0.41 U	--	--	--
PRNBA-08	20c	0	N	6/4/2001	< 0.36 U	--	--	--	--	--	< 0.36 U	--	< 0.36 U	--	--	--
PRNBA-09	20c	0	N	6/4/2001	< 0.35 U	--	--	--	--	--	< 0.35 U	--	< 0.35 U	--	--	--
PRNBA-10	20c	0	N	6/4/2001	< 0.35 U	--	--	--	--	--	< 0.35 U	--	< 0.35 U	--	--	--
PRNSNP-17	20c	0	N	6/4/2001	< 0.34 U	--	--	--	--	--	< 0.34 U	--	< 0.34 U	--	--	--
PRNSNP-18	20c	0	N	6/1/2001	< 0.36 U	--	--	--	--	--	< 0.36 U	--	< 0.36 U	--	--	--
PRNSNP-18	20c	4	N	6/1/2001	< 0.39 U	--	--	--	--	--	< 0.39 U	--	< 0.39 U	--	--	--
PRNSNP-19	20c	0	N	5/17/2001	< 0.33 U	--	--	--	--	--	< 0.33 U	--	< 0.33 U	--	--	--
PRNSNP-20	20c	0	N	6/1/2001	< 0.35 U	--	--	--	--	--	< 0.35 U	--	< 0.35 U	--	--	--
PRNSNP-20	20c	4	N	6/1/2001	< 0.36 U	--	--	--	--	--	< 0.36 U	--	< 0.36 U	--	--	--
PRNSNP-21	20c	0	N	5/18/2001	< 0.38 U	--	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--
PRNSNP-22	20c	0	N	5/17/2001	< 0.38 U	--	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--
PRNSNP-23	20c	0	N	5/21/2001	< 0.35 UJ	--	--	--	--	--	< 0.35 UJ	--	< 0.35 UJ	--	--	--
PRNSNP-23	20c	4	N	5/21/2001	< 0.38 UJ	--	--	--	--	--	< 0.38 UJ	--	< 0.38 UJ	--	--	--
PRNSNP-24	20c	0	N	6/4/2001	< 0.34 U	--	--	--	--	--	< 0.34 U	--	< 0.34 U	--	--	--
PRNSNP-25	20c	0	N	5/21/2001	< 0.44 UJ	--	--	--	--	--	< 0.44 UJ	--	< 0.44 UJ	--	--	--
PRNSNP-25	20c	4	N	5/21/2001	< 0.42 UJ	--	--	--	--	--	< 0.42 UJ	--	< 0.42 UJ	--	--	--
PRNSNP-29C	20c	0	N	7/23/2001	< 0.38 U	--	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--
PRNSNP-30C	20c	0	N	7/23/2001	< 0.38 U	--	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--
PRNU-02	20c	0	N	5/22/2001	< 0.36 U	--	--	--	--	--	< 0.36 U	--	< 0.36 U	--	--	--
PRNU-02	20c	4	N	5/22/2001	< 0.38 U	--	--	--	--	--	< 0.38 U	--	< 0.38 U	--	--	--
PRNU-02	20c	9	N	5/22/2001	< 0.0061 U	< 0.0061 U	< 0.0061 U	--	--	--	< 0.0061 U	--	< 0.0061 U	--	--	--
WC-NB01	39	0	N	7/27/2006	< 0.00015 U	< 0.00045 U	< 0.00038 U	--	--	--	< 0.00013 U	--	< 0.00011 U	--	--	--
WC-NB02	39	0	N	7/27/2006	< 0.00015 U	< 0.00045 U	< 0.00038 U	--	--	--	< 0.00013 U	--	< 0.00011 U	--	--	--
WC-NB03	39	0	N	7/26/2006	< 0.00015 U	< 0.00044 U	< 0.00038 U	--	--	--	< 0.00013 U	--	< 0.00011 U	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 6 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs											
					4-Chlorotoluene	Acetone	Acetonitrile	Benzene	Bromobenzene	Bromodichloromethane	Bromomethane	Carbon disulfide	Carbon tetrachloride	CFC-11	CFC-12	Chlorinated fluorocarbon (Freon 113)
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-19	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-21	20c	0	N	5/18/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-22	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	9	N	5/22/2001	--	< 0.025 U	--	< 0.0061 U	--	< 0.0061 U	< 0.012 U	< 0.0061 U	< 0.0061 U	< 0.012 U	--	--
WC-NB01	39	0	N	7/27/2006	--	0.0098 J+	< 0.002 UJ	< 0.00017 U	--	< 0.00034 U	< 0.00032 U	< 0.00056 U	< 0.00092 U	< 0.00051 U	< 0.00038 U	< 0.00055 U
WC-NB02	39	0	N	7/27/2006	--	0.01 J+	< 0.002 UJ	< 0.00017 U	--	< 0.00034 U	< 0.00032 U	< 0.00056 U	< 0.00092 U	< 0.00051 U	< 0.00038 U	< 0.00055 U
WC-NB03	39	0	N	7/26/2006	--	0.017 J-	< 0.002 UJ	< 0.00017 U	--	< 0.00034 U	< 0.00032 U	< 0.00056 U	0.0024 J	< 0.00051 U	< 0.00038 U	< 0.00054 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

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TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 8 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs											
					Chlorobenzene	Chlorobromomethane	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethylene	cis-1,3-Dichloropropylene	Cymene	Dibromomethane	Dichloromethane	Ethylbenzene
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-19	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-21	20c	0	N	5/18/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-22	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	9	N	5/22/2001	< 0.0061 U	--	< 0.0061 U	< 0.012 U	< 0.0061 U	< 0.012 U	< 0.0031 U	< 0.0061 U	--	--	< 0.0061 U	< 0.0061 U
WC-NB01	39	0	N	7/27/2006	< 0.00013 U	--	< 0.00029 U	< 0.00036 U	< 0.00014 U	< 0.00045 U	--	< 0.00074 U	--	< 0.00036 U	< 0.0026 U	< 0.00019 U
WC-NB02	39	0	N	7/27/2006	< 0.00013 U	--	< 0.00029 U	< 0.00036 U	< 0.00015 U	< 0.00045 U	--	< 0.00074 U	--	< 0.00036 U	< 0.0026 U	< 0.00019 U
WC-NB03	39	0	N	7/26/2006	< 0.00013 U	--	< 0.00029 U	< 0.00036 U	< 0.00014 U	< 0.00045 U	--	< 0.00074 U	--	< 0.00036 U	< 0.0025 U	< 0.00019 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

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TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 10 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs											
					Isopropylbenzene	m,p-Xylene	Methyl disulfide	Methyl ethyl ketone	Methyl iodide	Methyl isobutyl ketone	Methyl n-butyl ketone	MTBE (Methyl tert-butyl ether)	n-Butyl benzene	n-Heptane	n-Propyl benzene	o-Xylene
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-19	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-21	20c	0	N	5/18/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-22	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	9	N	5/22/2001	--	--	--	< 0.025 U	--	< 0.025 U	< 0.025 U	--	--	--	--	--
WC-NB01	39	0	N	7/27/2006	--	--	--	0.0032 J	< 0.00026 U	< 0.0016 U	--	--	--	--	--	--
WC-NB02	39	0	N	7/27/2006	--	--	--	0.0031 J	< 0.00026 U	< 0.0016 U	--	--	--	--	--	--
WC-NB03	39	0	N	7/26/2006	--	--	--	0.0023 J	< 0.00026 U	< 0.0016 U	--	--	--	--	--	--

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TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 12 of 12)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	VOCs										
					Styrene (monomer)	tert-Butyl benzene	Tetrachloroethylene	Toluene	trans-1,2-Dichloro- ethylene	trans-1,3-Dichloro- propylene	Tribromomethane	Trichloroethylene	Vinyl acetate	Vinyl chloride	Xylenes (total)
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	--	--	--	--	--	--	--
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-19	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-21	20c	0	N	5/18/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-22	20c	0	N	5/17/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	--	--	--	--	--	--	--
PRNU-02	20c	9	N	5/22/2001	< 0.0061 U	--	< 0.0061 U	< 0.0061 U	< 0.0031 U	< 0.0061 U	< 0.0061 U	< 0.0061 U	< 0.0061 U	< 0.0061 U	< 0.0061 U
WC-NB01	39	0	N	7/27/2006	--	--	< 0.00028 U	< 0.00013 U	< 0.00023 U	< 0.00021 U	< 0.00025 U	0.0018 J	--	< 0.00024 U	< 0.00087 U
WC-NB02	39	0	N	7/27/2006	--	--	< 0.00028 U	< 0.00013 U	< 0.00023 U	< 0.00021 U	< 0.00025 U	< 0.00037 U	--	< 0.00024 U	< 0.00088 U
WC-NB03	39	0	N	7/26/2006	--	--	0.0022 J	< 0.00013 U	< 0.00022 U	< 0.00021 U	< 0.00025 U	< 0.00036 U	--	< 0.00024 U	< 0.00087 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					1,2,4,5-Tetrachloro- benzene	1,2-Diphenylhydrazine	1,4-Dioxane	2,2'-/4,4'-Dichlorobenzil	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene
ADB-11	1a	1	N	3/21/1996	--	--	--	--	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 3.4 U	< 0.67 U
ADB-12	1a	1	N	3/22/1996	--	--	--	--	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 3.4 U	< 0.69 U
ADB-13	1a	1	N	4/11/1996	--	--	--	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.5 U	< 0.71 U
BDB-21	1a	1	N	4/9/1996	--	--	--	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.6 U	< 0.71 U
BDB-21	1a	5	N	4/9/1996	--	--	--	--	< 0.76 U	< 0.76 U	< 0.76 U	< 0.76 U	< 3.8 U	< 0.76 U
BDB-24	1a	1	N	4/17/1996	--	--	--	--	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 3.4 U	< 0.68 U
BDB-24	1a	5	N	4/17/1996	--	--	--	--	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 3.7 U	< 0.74 U
BDB-25	1a	1	N	4/11/1996	--	--	--	--	< 0.73 U	< 0.73 U	< 0.73 U	< 0.73 U	< 3.6 U	< 0.73 U
BDB-26	1a	1	N	4/11/1996	--	--	--	--	< 0.73 U	< 0.73 U	< 0.73 U	< 0.73 U	< 3.7 U	< 0.73 U
BDB-26	1a	5	N	4/11/1996	--	--	--	--	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 3.7 U	< 0.74 U
DS-02	32	0	N	3/29/2005	< 0.011 U	--	--	< 0.33 U	< 0.032 U	< 0.033 U	< 0.027 U	< 0.03 U	< 0.068 U	< 0.019 U
PLG-01	1a	1	N	4/10/1996	--	--	--	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.5 U	< 0.71 U
PLG-05	1a	1	N	4/16/1996	--	--	--	--	< 0.79 U	< 0.79 U	< 0.79 U	< 0.79 U	< 3.9 U	< 0.79 U
PLG-05	1a	5	N	4/16/1996	--	--	--	--	< 0.77 U	< 0.77 U	< 0.77 U	< 0.77 U	< 3.8 U	< 0.77 U
PLH-01	1a	1	N	4/10/1996	--	--	--	--	< 0.83 U	< 0.83 U	< 0.83 U	< 0.83 U	< 4.1 U	< 0.83 U
PLH-04	1a	1	N	4/16/1996	--	--	--	--	< 0.78 U	< 0.78 U	< 0.78 U	< 0.78 U	< 3.9 U	< 0.78 U
PLH-04	1a	5	N	4/16/1996	--	--	--	--	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 3.7 U	< 0.74 U
PLI-03	1a	1	N	4/18/1996	--	--	--	--	< 0.84 U	< 0.84 U	< 0.84 U	< 0.84 U	< 4.2 U	< 0.84 U
PLJ-01	1a	1	N	4/18/1996	--	--	--	--	< 0.77 U	< 0.77 U	< 0.77 U	< 0.77 U	< 3.8 U	< 0.77 U
PLJ-02	1a	1	N	4/18/1996	--	--	--	--	--	--	--	--	--	--
PRAD-11	20c	0	N	6/29/2001	--	--	--	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PREU-02	20c	0	N	5/23/2001	--	--	--	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U
PREU-02	20c	4	N	6/21/2001	--	--	--	--	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 1.6 UJ	< 0.34 UJ
PREU-04	20c	0	N	5/17/2001	--	--	--	--	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	< 0.33 U
PREU-05	20c	0	N	5/23/2001	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PREU-05	20c	4	N	5/23/2001	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U
PREU-05	20c	9	N	5/23/2001	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U
PRNBA-01	20c	0	N	6/1/2001	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U
PRNBA-01	20c	4	N	6/1/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	< 0.38 U
PRNBA-02	20c	0	N	6/4/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	< 0.38 U
PRNBA-03	20c	0	N	5/31/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNBA-03	20c	4	N	5/31/2001	--	--	--	--	< 0.43 U	< 0.43 U	< 0.43 U	< 0.43 U	< 2.1 U	< 0.43 UJ
PRNBA-04	20c	0	N	5/31/2001	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PRNBA-04	20c	4	N	5/31/2001	--	--	--	--	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 1.9 U	< 0.4 U
PRNBA-05	20c	0	N	6/4/2001	--	--	--	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PRNBA-06	20c	0	N	6/1/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	< 0.41 U	< 0.41 U	< 0.41 U	< 0.41 U	< 2 U	< 0.41 U
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					1,2,4,5-Tetrachloro- benzene	1,2-Diphenylhydrazine	1,4-Dioxane	2,2'-/4,4'-Dichlorobenzil	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 1.9 U	< 0.39 U
PRNSNP-19	20c	0	N	5/17/2001	--	--	--	--	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	< 0.33 U
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PRNSNP-21	20c	0	N	5/18/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNSNP-22	20c	0	N	5/17/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 1.7 UJ	< 0.35 UJ
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 1.8 UJ	< 0.38 UJ
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 2.1 UJ	< 0.44 UJ
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 2 UJ	< 0.42 UJ
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNU-02	20c	9	N	5/22/2001	--	--	--	--	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 2 U	< 0.4 U
WC-NB01	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.34 U	< 0.034 U
WC-NB02	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.34 U	< 0.034 U
WC-NB03	39	0	N	7/26/2006	< 0.034 U	< 0.034 U	< 0.034 U	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.33 U	< 0.034 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 3 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Methylphenol & 4-Methylphenol	3-Nitroaniline	4,6-Dinitro-o-cresol
ADB-11	1a	1	N	3/21/1996	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 3.4 U	< 0.67 U	< 1.3 U	--	< 3.4 U	< 3.4 U
ADB-12	1a	1	N	3/22/1996	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 3.4 U	< 0.69 U	< 1.4 U	--	< 3.4 U	< 3.4 U
ADB-13	1a	1	N	4/11/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.5 U	< 0.71 U	< 1.4 U	--	< 3.5 U	< 3.5 U
BDB-21	1a	1	N	4/9/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.6 U	< 0.71 U	< 1.4 U	--	< 3.6 U	< 3.6 U
BDB-21	1a	5	N	4/9/1996	< 0.76 U	< 0.76 U	< 0.76 U	< 0.76 U	< 3.8 U	< 0.76 U	< 1.5 U	--	< 3.8 U	< 3.8 U
BDB-24	1a	1	N	4/17/1996	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 3.4 U	< 0.68 U	< 1.3 U	--	< 3.4 U	< 3.4 U
BDB-24	1a	5	N	4/17/1996	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 3.7 U	< 0.74 U	< 1.5 U	--	< 3.7 U	< 3.7 U
BDB-25	1a	1	N	4/11/1996	< 0.73 U	< 0.73 U	< 0.73 U	< 0.73 U	< 3.6 U	< 0.73 U	< 1.4 U	--	< 3.6 U	< 3.6 U
BDB-26	1a	1	N	4/11/1996	< 0.73 U	< 0.73 U	< 0.73 U	< 0.73 U	< 3.7 U	< 0.73 U	< 1.4 U	--	< 3.7 U	< 3.7 U
BDB-26	1a	5	N	4/11/1996	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 3.7 U	< 0.74 U	< 1.5 U	--	< 3.7 U	< 3.7 U
DS-02	32	0	N	3/29/2005	< 0.021 U	< 0.017 U	< 0.015 U	< 0.016 U	< 0.04 U	< 0.021 U	< 0.024 U	< 0.042 U	< 0.027 U	--
PLG-01	1a	1	N	4/10/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.5 U	< 0.71 U	< 1.4 U	--	< 3.5 U	< 3.5 U
PLG-05	1a	1	N	4/16/1996	< 0.79 U	< 0.79 U	< 0.79 U	< 0.79 U	< 3.9 U	< 0.79 U	< 1.5 U	--	< 3.9 U	< 3.9 U
PLG-05	1a	5	N	4/16/1996	< 0.77 U	< 0.77 U	< 0.77 U	< 0.77 U	< 3.8 U	< 0.77 U	< 1.5 U	--	< 3.8 U	< 3.8 U
PLH-01	1a	1	N	4/10/1996	< 0.83 U	< 0.83 U	< 0.83 U	< 0.83 U	< 4.1 U	< 0.83 U	< 1.6 U	--	< 4.1 U	< 4.1 U
PLH-04	1a	1	N	4/16/1996	< 0.78 U	< 0.78 U	< 0.78 U	< 0.78 U	< 3.9 U	< 0.78 U	< 1.5 U	--	< 3.9 U	< 3.9 U
PLH-04	1a	5	N	4/16/1996	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 3.7 U	< 0.74 U	< 1.5 U	--	< 3.7 U	< 3.7 U
PLI-03	1a	1	N	4/18/1996	< 0.84 U	< 0.84 U	< 0.84 U	< 0.84 U	< 4.2 U	< 0.84 U	< 1.7 U	--	< 4.2 U	< 4.2 U
PLJ-01	1a	1	N	4/18/1996	< 0.77 U	< 0.77 U	< 0.77 U	< 0.77 U	< 3.8 U	< 0.77 U	< 1.5 U	--	< 3.8 U	< 3.8 U
PLJ-02	1a	1	N	4/18/1996	--	--	--	--	--	--	--	--	--	--
PRAD-11	20c	0	N	6/29/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 1.7 U	--	< 1.7 U	< 1.7 U
PREU-02	20c	0	N	5/23/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U	< 1.6 U	--	< 1.6 U	< 1.6 U
PREU-02	20c	4	N	6/21/2001	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 1.6 UJ	< 0.34 UJ	< 1.6 UJ	--	< 1.6 UJ	< 1.6 UJ
PREU-04	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	< 0.33 U	< 1.6 U	--	< 1.6 U	< 1.6 U
PREU-05	20c	0	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PREU-05	20c	4	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 1.7 U	--	< 1.7 U	< 1.7 U
PREU-05	20c	9	N	5/23/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-01	20c	0	N	6/1/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-01	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	< 0.38 U	< 1.9 U	--	< 1.9 U	< 1.9 U
PRNBA-02	20c	0	N	6/4/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	< 0.38 U	< 1.9 U	--	< 1.9 U	< 1.9 U
PRNBA-03	20c	0	N	5/31/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-03	20c	4	N	5/31/2001	< 0.43 UJ	< 0.43 UJ	< 0.43 U	< 0.43 UJ	< 2.1 UJ	< 0.43 U	< 2.1 UJ	--	< 2.1 UJ	< 2.1 UJ
PRNBA-04	20c	0	N	5/31/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-04	20c	4	N	5/31/2001	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 1.9 U	< 0.4 U	< 1.9 U	--	< 1.9 U	< 1.9 U
PRNBA-05	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 1.7 U	--	< 1.7 U	< 1.7 U
PRNBA-06	20c	0	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-06	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-07	20c	0	N	5/31/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-07	20c	4	N	5/31/2001	< 0.41 U	< 0.41 U	< 0.41 U	< 0.41 U	< 2 U	< 0.41 U	< 2 U	--	< 2 U	< 2 U
PRNBA-08	20c	0	N	6/4/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNBA-09	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 1.7 U	--	< 1.7 U	< 1.7 U

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 4 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Methylphenol & 4-Methylphenol	3-Nitroaniline	4,6-Dinitro-o-cresol
PRNBA-10	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 1.7 U	--	< 1.7 U	< 1.7 U
PRNSNP-17	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U	< 1.6 U	--	< 1.6 U	< 1.6 U
PRNSNP-18	20c	0	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 1.7 U	--	< 1.7 U	< 1.7 U
PRNSNP-18	20c	4	N	6/1/2001	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 1.9 U	< 0.39 U	< 1.9 U	--	< 1.9 U	< 1.9 U
PRNSNP-19	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	< 0.33 U	< 1.6 U	--	< 1.6 U	< 1.6 U
PRNSNP-20	20c	0	N	6/1/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 1.7 U	--	< 1.7 U	< 1.7 U
PRNSNP-20	20c	4	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNSNP-21	20c	0	N	5/18/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNSNP-22	20c	0	N	5/17/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNSNP-23	20c	0	N	5/21/2001	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 1.7 UJ	< 0.35 UJ	< 1.7 UJ	--	< 1.7 UJ	< 1.7 UJ
PRNSNP-23	20c	4	N	5/21/2001	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 1.8 UJ	< 0.38 UJ	< 1.8 UJ	--	< 1.8 UJ	< 1.8 UJ
PRNSNP-24	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U	< 1.6 U	--	< 1.6 U	< 1.6 U
PRNSNP-25	20c	0	N	5/21/2001	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 2.1 UJ	< 0.44 UJ	< 2.1 UJ	--	< 2.1 UJ	< 2.1 UJ
PRNSNP-25	20c	4	N	5/21/2001	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 2 UJ	< 0.42 UJ	< 2 UJ	--	< 2 UJ	< 2 UJ
PRNSNP-29C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNSNP-30C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNU-02	20c	0	N	5/22/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 1.7 U	--	< 1.7 U	< 1.7 U
PRNU-02	20c	4	N	5/22/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U	< 1.8 U	--	< 1.8 U	< 1.8 U
PRNU-02	20c	9	N	5/22/2001	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 2 U	< 0.4 U	< 2 U	--	< 2 U	< 2 U
WC-NB01	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	--	< 0.034 U	< 0.034 U	--	< 0.068 U	--	--
WC-NB02	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	--	< 0.034 U	< 0.034 U	--	< 0.068 U	--	--
WC-NB03	39	0	N	7/26/2006	< 0.034 U	< 0.034 U	< 0.034 U	--	< 0.034 U	< 0.034 U	--	< 0.068 U	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 5 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					4-Bromophenyl phenyl ether	4-Chloro-3-Methylphenol	4-Chlorophenyl phenyl ether	4-Nitrophenol	Acetophenone	Aniline	Azobenzene	Benzenethiol	Benzoic acid	Benzyl alcohol
ADB-11	1a	1	N	3/21/1996	< 0.2 U	< 1.3 U	< 0.67 U	< 3.4 U	--	--	--	--	< 0.74 U	< 1.3 U
ADB-12	1a	1	N	3/22/1996	< 0.21 U	< 1.4 U	< 0.69 U	< 3.4 U	--	--	--	--	< 0.76 U	< 1.4 U
ADB-13	1a	1	N	4/11/1996	< 0.21 U	< 1.4 U	< 0.71 U	< 3.5 U	--	--	--	--	< 0.78 U	< 1.4 U
BDB-21	1a	1	N	4/9/1996	< 0.22 U	< 1.4 U	< 0.71 U	< 3.6 U	--	--	--	--	< 0.79 U	< 1.4 U
BDB-21	1a	5	N	4/9/1996	< 0.23 U	< 1.5 U	< 0.76 U	< 3.8 U	--	--	--	--	< 0.84 U	< 1.5 U
BDB-24	1a	1	N	4/17/1996	< 0.21 U	< 1.3 U	< 0.68 U	< 3.4 U	--	--	--	--	< 0.75 U	< 1.3 U
BDB-24	1a	5	N	4/17/1996	< 0.22 U	< 1.5 U	< 0.74 U	< 3.7 U	--	--	--	--	< 0.82 U	< 1.5 U
BDB-25	1a	1	N	4/11/1996	< 0.22 U	< 1.4 U	< 0.73 U	< 3.6 U	--	--	--	--	< 0.8 U	< 1.4 U
BDB-26	1a	1	N	4/11/1996	< 0.22 U	< 1.4 U	< 0.73 U	< 3.7 U	--	--	--	--	< 0.81 U	< 1.4 U
BDB-26	1a	5	N	4/11/1996	< 0.74 U	< 1.5 U	< 0.74 U	< 3.7 U	--	--	--	--	< 3.7 U	< 1.5 U
DS-02	32	0	N	3/29/2005	< 0.024 U	< 0.028 U	< 0.019 U	< 0.045 U	< 0.051 U	< 0.041 U	< 0.1 U	< 0.35 U	< 0.12 U	< 0.035 U
PLG-01	1a	1	N	4/10/1996	< 0.21 U	< 1.4 U	< 0.71 U	< 3.5 U	--	--	--	--	< 0.78 U	< 1.4 U
PLG-05	1a	1	N	4/16/1996	< 0.24 U	< 1.5 U	< 0.79 U	< 3.9 U	--	--	--	--	< 0.87 U	< 1.5 U
PLG-05	1a	5	N	4/16/1996	< 0.23 U	< 1.5 U	< 0.77 U	< 3.8 U	--	--	--	--	< 0.85 U	< 1.5 U
PLH-01	1a	1	N	4/10/1996	< 0.25 U	< 1.6 U	< 0.83 U	< 4.1 U	--	--	--	--	< 0.91 U	< 1.6 U
PLH-04	1a	1	N	4/16/1996	< 0.24 U	< 1.5 U	< 0.78 U	< 3.9 U	--	--	--	--	< 0.86 U	< 1.5 U
PLH-04	1a	5	N	4/16/1996	< 0.22 U	< 1.5 U	< 0.74 U	< 3.7 U	--	--	--	--	< 0.82 U	< 1.5 U
PLI-03	1a	1	N	4/18/1996	< 0.25 U	< 1.7 U	< 0.84 U	< 4.2 U	--	--	--	--	< 0.93 U	< 1.7 U
PLJ-01	1a	1	N	4/18/1996	< 0.23 U	< 1.5 U	< 0.77 U	< 3.8 U	--	--	--	--	< 0.85 U	< 1.5 U
PLJ-02	1a	1	N	4/18/1996	< 0.38 U	--	--	--	--	--	--	--	< 1.4 U	--
PRAD-11	20c	0	N	6/29/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	--	--	--	--	--	--
PREU-02	20c	0	N	5/23/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	--	--	--	--	--	--
PREU-02	20c	4	N	6/21/2001	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 1.6 UJ	--	--	--	--	--	--
PREU-04	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	--	--	--	--	--	--
PREU-05	20c	0	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	--	--	--	--	--	--
PREU-05	20c	4	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	--	--	--	--	--	--
PREU-05	20c	9	N	5/23/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	--	--	--	--	--	--
PRNBA-01	20c	0	N	6/1/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	--	--	--	--	--	--
PRNBA-01	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	--	--	--	--	--	--
PRNBA-02	20c	0	N	6/4/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	--	--	--	--	--	--
PRNBA-03	20c	0	N	5/31/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNBA-03	20c	4	N	5/31/2001	< 0.43 UJ	< 0.43 U	< 0.43 UJ	< 2.1 U	--	--	--	--	--	--
PRNBA-04	20c	0	N	5/31/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	--	--	--	--	--	--
PRNBA-04	20c	4	N	5/31/2001	< 0.4 U	< 0.4 U	< 0.4 U	< 1.9 U	--	--	--	--	--	--
PRNBA-05	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	--	--	--	--	--	--
PRNBA-06	20c	0	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNBA-06	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNBA-07	20c	0	N	5/31/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	--	--	--	--	--	--
PRNBA-07	20c	4	N	5/31/2001	< 0.41 U	< 0.41 U	< 0.41 U	< 2 U	--	--	--	--	--	--
PRNBA-08	20c	0	N	6/4/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	--	--	--	--	--	--
PRNBA-09	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	--	--	--	--	--	--

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 6 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					4-Bromophenyl phenyl ether	4-Chloro-3-Methylphenol	4-Chlorophenyl phenyl ether	4-Nitrophenol	Acetophenone	Aniline	Azobenzene	Benzenethiol	Benzoic acid	Benzyl alcohol
PRNBA-10	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	--	--	--	--	--	--
PRNSNP-17	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	--	--	--	--	--	--
PRNSNP-18	20c	0	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	--	--	--	--	--	--
PRNSNP-18	20c	4	N	6/1/2001	< 0.39 U	< 0.39 U	< 0.39 U	< 1.9 U	--	--	--	--	--	--
PRNSNP-19	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	--	--	--	--	--	--
PRNSNP-20	20c	0	N	6/1/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	--	--	--	--	--	--
PRNSNP-20	20c	4	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	--	--	--	--	--	--
PRNSNP-21	20c	0	N	5/18/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNSNP-22	20c	0	N	5/17/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNSNP-23	20c	0	N	5/21/2001	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 1.7 UJ	--	--	--	--	--	--
PRNSNP-23	20c	4	N	5/21/2001	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 1.8 UJ	--	--	--	--	--	--
PRNSNP-24	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	--	--	--	--	--	--
PRNSNP-25	20c	0	N	5/21/2001	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 2.1 UJ	--	--	--	--	--	--
PRNSNP-25	20c	4	N	5/21/2001	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 2 UJ	--	--	--	--	--	--
PRNSNP-29C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNSNP-30C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNU-02	20c	0	N	5/22/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	--	--	--	--	--	--
PRNU-02	20c	4	N	5/22/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	--	--	--	--	--	--
PRNU-02	20c	9	N	5/22/2001	< 0.4 U	< 0.4 U	< 0.4 U	< 2 U	--	--	--	--	--	--
WC-NB01	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	--	< 0.34 U	< 0.034 U	< 0.034 U	--	--	--	--
WC-NB02	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	--	< 0.34 U	< 0.034 U	< 0.034 U	--	--	--	--
WC-NB03	39	0	N	7/26/2006	< 0.034 U	< 0.034 U	--	< 0.33 U	< 0.034 U	< 0.034 U	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 7 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					Benzyl butyl phthalate	bis(2-Chloroethoxy) methane	bis(2-Chloroethyl) ether	bis(2-Chloroisopropyl) ether	bis(2-Ethylhexyl) phthalate	bis(p-Chlorophenyl) disulfide	bis(p-Chlorophenyl) sulfone	Carbazole	Dibenzofuran	Dibutyl phthalate
ADB-11	1a	1	N	3/21/1996	< 0.24 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.32 U	--	--	< 0.67 U	< 0.67 U	< 0.67 U
ADB-12	1a	1	N	3/22/1996	< 0.25 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.32 U	--	--	< 0.69 U	< 0.69 U	< 0.69 U
ADB-13	1a	1	N	4/11/1996	< 0.26 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.33 U	--	--	< 0.71 U	< 0.71 U	< 0.71 U
BDB-21	1a	1	N	4/9/1996	< 0.26 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.33 U	--	--	< 0.71 U	< 0.71 U	10
BDB-21	1a	5	N	4/9/1996	< 0.28 U	< 0.76 U	< 0.76 U	< 0.76 U	< 0.36 U	--	--	< 0.76 U	< 0.76 U	< 0.76 U
BDB-24	1a	1	N	4/17/1996	< 0.25 U	< 0.68 U	< 0.68 U	< 0.68 U	< 1.2 U	--	--	< 6.68 U	< 0.68 U	< 0.68 U
BDB-24	1a	5	N	4/17/1996	< 0.27 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.35 U	--	--	< 0.74 U	< 0.74 U	< 0.74 U
BDB-25	1a	1	N	4/11/1996	< 0.26 U	< 0.73 U	< 0.73 U	< 0.73 U	< 0.34 U	--	--	< 0.73 U	< 0.73 U	2.9
BDB-26	1a	1	N	4/11/1996	< 0.27 U	< 0.73 U	< 0.73 U	< 0.73 U	< 0.34 U	--	--	< 0.73 U	< 0.73 U	< 0.73 U
BDB-26	1a	5	N	4/11/1996	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	--	--	< 0.74 U	< 0.74 U	< 0.74 U
DS-02	32	0	N	3/29/2005	< 0.028 U	< 0.022 U	< 0.014 U	< 0.016 U	< 0.036 U	< 0.35 U	< 0.35 U	< 0.021 U	< 0.024 U	< 0.03 U
PLG-01	1a	1	N	4/10/1996	< 0.26 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.33 U	--	--	< 0.71 U	< 0.71 U	< 0.71 U
PLG-05	1a	1	N	4/16/1996	< 0.29 U	< 0.79 U	< 0.79 U	< 0.79 U	< 1.8 U	--	--	< 0.79 U	< 0.79 U	< 0.79 U
PLG-05	1a	5	N	4/16/1996	< 0.28 U	< 0.77 U	< 0.77 U	< 0.77 U	< 0.77 U	--	--	< 0.77 U	< 0.77 U	< 0.77 U
PLH-01	1a	1	N	4/10/1996	< 0.3 U	< 0.83 U	< 0.83 U	< 0.83 U	< 0.39 U	--	--	< 0.83 U	< 0.83 U	< 0.83 U
PLH-04	1a	1	N	4/16/1996	< 0.28 U	< 0.78 U	< 0.78 U	< 0.78 U	< 1.3 U	--	--	< 0.78 U	< 0.78 U	< 0.78 U
PLH-04	1a	5	N	4/16/1996	< 0.27 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.35 U	--	--	< 0.74 U	< 0.74 U	< 0.74 U
PLI-03	1a	1	N	4/18/1996	< 0.3 U	< 0.84 U	< 0.84 U	< 0.84 U	< 0.39 U	--	--	< 0.84 U	< 0.84 U	< 0.84 U
PLJ-01	1a	1	N	4/18/1996	< 0.28 U	< 0.77 U	< 0.77 U	< 0.77 U	< 0.36 U	--	--	< 0.77 U	< 0.77 U	< 0.77 U
PLJ-02	1a	1	N	4/18/1996	< 0.46 U	--	--	--	< 0.59 U	--	--	--	--	< 1.3 U
PRAD-11	20c	0	N	6/29/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	0.34	--	--	< 0.35 U	< 0.35 U	< 0.35 U
PREU-02	20c	0	N	5/23/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	--	--	< 0.34 U	< 0.34 U	< 0.34 U
PREU-02	20c	4	N	6/21/2001	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	--	--	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ
PREU-04	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	--	--	< 0.33 U	< 0.33 U	< 0.33 U
PREU-05	20c	0	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	--	< 0.36 U	< 0.36 U	< 0.36 U
PREU-05	20c	4	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	--	< 0.36 U	< 0.36 U	< 0.36 U
PREU-05	20c	9	N	5/23/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	--	< 0.37 U	< 0.37 U	< 0.37 U
PRNBA-01	20c	0	N	6/1/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	1.5	--	--	< 0.37 U	< 0.37 U	< 0.37 U
PRNBA-01	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	1.3	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNBA-02	20c	0	N	6/4/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	0.72	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNBA-03	20c	0	N	5/31/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	0.5	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNBA-03	20c	4	N	5/31/2001	< 0.43 UJ	< 0.43 UJ	< 0.43 UJ	< 0.43 UJ	0.5 J-	--	--	< 0.43 UJ	< 0.43 UJ	< 0.43 UJ
PRNBA-04	20c	0	N	5/31/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	0.88	--	--	< 0.36 U	< 0.36 U	< 0.36 U
PRNBA-04	20c	4	N	5/31/2001	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.89	--	--	< 0.4 U	< 0.4 U	< 0.4 U
PRNBA-05	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	0.28	--	--	< 0.35 U	< 0.35 U	< 0.35 U
PRNBA-06	20c	0	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	0.57	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNBA-06	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	0.4	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNBA-07	20c	0	N	5/31/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	0.9	--	--	< 0.37 U	< 0.37 U	< 0.37 U
PRNBA-07	20c	4	N	5/31/2001	< 0.41 U	< 0.41 U	< 0.41 U	< 0.41 U	1.3	--	--	< 0.41 U	< 0.41 U	< 0.41 U
PRNBA-08	20c	0	N	6/4/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	0.36	--	--	< 0.36 U	< 0.36 U	< 0.36 U
PRNBA-09	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	0.23	--	--	< 0.35 U	< 0.35 U	< 0.35 U

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 8 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					Benzyl butyl phthalate	bis(2-Chloroethoxy) methane	bis(2-Chloroethyl) ether	bis(2-Chloroisopropyl) ether	bis(2-Ethylhexyl) phthalate	bis(p-Chlorophenyl) disulfide	bis(p-Chlorophenyl) sulfone	Carbazole	Dibenzofuran	Dibutyl phthalate
PRNBA-10	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	0.33	--	--	< 0.35 U	< 0.35 U	< 0.35 U
PRNSNP-17	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	0.16	--	--	< 0.34 U	< 0.34 U	< 0.34 U
PRNSNP-18	20c	0	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	0.73	--	--	< 0.36 U	< 0.36 U	< 0.36 U
PRNSNP-18	20c	4	N	6/1/2001	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	1.1	--	--	< 0.39 U	< 0.39 U	< 0.39 U
PRNSNP-19	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	--	--	< 0.33 U	< 0.33 U	< 0.33 U
PRNSNP-20	20c	0	N	6/1/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	0.26	--	--	< 0.35 U	< 0.35 U	< 0.35 U
PRNSNP-20	20c	4	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	0.44	--	--	< 0.36 U	< 0.36 U	< 0.36 U
PRNSNP-21	20c	0	N	5/18/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNSNP-22	20c	0	N	5/17/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNSNP-23	20c	0	N	5/21/2001	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	--	--	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ
PRNSNP-23	20c	4	N	5/21/2001	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	--	--	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ
PRNSNP-24	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	0.24	--	--	< 0.34 U	< 0.34 U	< 0.34 U
PRNSNP-25	20c	0	N	5/21/2001	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	--	--	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ
PRNSNP-25	20c	4	N	5/21/2001	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	--	--	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ
PRNSNP-29C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	0.74	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNSNP-30C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	0.4	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNU-02	20c	0	N	5/22/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	--	< 0.36 U	< 0.36 U	< 0.36 U
PRNU-02	20c	4	N	5/22/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	--	< 0.38 U	< 0.38 U	< 0.38 U
PRNU-02	20c	9	N	5/22/2001	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	--	--	< 0.4 U	< 0.4 U	< 0.4 U
WC-NB01	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	--	--	--	--	--	< 0.034 U
WC-NB02	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	--	--	--	--	--	< 0.034 U
WC-NB03	39	0	N	7/26/2006	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	--	--	--	--	--	< 0.034 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 9 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					Diethyl phthalate	Dimethyl phthalate	Di-n-octyl phthalate	Diphenyl sulfone	Fluoranthene	Fluorene	Hexachloro-1,3-butadiene	Hexachlorobenzene	Hexachlorocyclopentadiene	Hexachloroethane
ADB-11	1a	1	N	3/21/1996	< 0.67 U	< 0.67 U	< 0.67 U	--	< 0.67 U	< 0.67 U	< 0.67 U	< 0.34 U	< 0.67 U	< 0.67 U
ADB-12	1a	1	N	3/22/1996	< 0.69 U	< 0.69 U	< 0.69 U	--	< 0.69 U	< 0.69 U	< 0.69 U	< 0.34 U	< 0.69 U	< 0.69 U
ADB-13	1a	1	N	4/11/1996	< 0.71 U	< 0.71 U	< 0.71 U	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.35 U	< 0.71 U	< 0.71 U
BDB-21	1a	1	N	4/9/1996	< 0.71 U	< 0.71 U	< 0.71 U	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.36 U	< 0.71 U	< 0.71 U
BDB-21	1a	5	N	4/9/1996	< 0.76 U	< 0.76 U	< 0.76 U	--	< 0.76 U	< 0.76 U	< 0.76 U	< 0.38 U	< 0.76 U	< 0.76 U
BDB-24	1a	1	N	4/17/1996	< 0.68 U	< 0.68 U	< 0.68 U	--	< 0.68 U	< 0.68 U	< 0.68 U	< 0.34 U	< 0.68 U	< 0.68 U
BDB-24	1a	5	N	4/17/1996	< 0.74 U	< 0.74 U	< 0.74 U	--	< 0.74 U	< 0.74 U	< 0.74 U	< 0.37 U	< 0.74 U	< 0.74 U
BDB-25	1a	1	N	4/11/1996	< 0.73 U	< 0.73 U	< 0.73 U	--	< 0.73 U	< 0.73 U	< 0.73 U	< 0.36 U	< 0.73 U	< 0.73 U
BDB-26	1a	1	N	4/11/1996	< 0.73 U	< 0.73 U	< 0.73 U	--	< 0.73 U	< 0.73 U	< 0.73 U	< 0.37 U	< 0.73 U	< 0.73 U
BDB-26	1a	5	N	4/11/1996	< 0.74 U	< 0.74 U	< 0.74 U	--	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U	< 0.74 U
DS-02	32	0	N	3/29/2005	< 0.043 U	< 0.021 U	< 0.15 U	< 0.35 U	< 0.024 U	< 0.02 U	< 0.013 U	< 0.019 U	< 0.076 U	< 0.017 U
PLG-01	1a	1	N	4/10/1996	< 0.71 U	< 0.71 U	< 0.71 U	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.35 U	< 0.71 U	< 0.71 U
PLG-05	1a	1	N	4/16/1996	< 0.79 U	< 0.79 U	< 0.79 U	--	< 0.79 U	< 0.79 U	< 0.79 U	< 0.39 U	< 0.79 U	< 0.79 U
PLG-05	1a	5	N	4/16/1996	< 0.77 U	< 0.77 U	< 0.77 U	--	< 0.77 U	< 0.77 U	< 0.77 U	< 0.38 U	< 0.77 U	< 0.77 U
PLH-01	1a	1	N	4/10/1996	< 0.83 U	< 0.83 U	< 0.83 U	--	< 0.83 U	< 0.83 U	< 0.83 U	< 0.41 U	< 0.83 U	< 0.83 U
PLH-04	1a	1	N	4/16/1996	< 0.78 U	< 0.78 U	< 0.78 U	--	< 0.78 U	< 0.78 U	< 0.78 U	< 0.39 U	< 0.78 U	< 0.78 U
PLH-04	1a	5	N	4/16/1996	< 0.74 U	< 0.74 U	< 0.74 U	--	< 0.74 U	< 0.74 U	< 0.74 U	< 0.37 U	< 0.74 U	< 0.74 U
PLI-03	1a	1	N	4/18/1996	< 0.84 U	< 0.84 U	< 0.84 U	--	< 0.84 U	< 0.84 U	< 0.84 U	< 0.42 U	< 0.84 U	< 0.84 U
PLJ-01	1a	1	N	4/18/1996	< 0.77 U	< 0.77 U	< 0.77 U	--	< 0.77 U	< 0.77 U	< 0.77 U	< 0.38 U	< 0.77 U	< 0.77 U
PLJ-02	1a	1	N	4/18/1996	--	--	--	--	< 1.3 U	--	< 1.3 U	< 0.63 U	--	--
PRAD-11	20c	0	N	6/29/2001	< 0.35 U	< 0.35 U	< 0.35 U	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PREU-02	20c	0	N	5/23/2001	< 0.34 U	< 0.34 U	< 0.34 U	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U
PREU-02	20c	4	N	6/21/2001	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	--	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 0.34 UJ	< 1.6 UJ	< 0.34 UJ
PREU-04	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	--	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	< 0.33 U
PREU-05	20c	0	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PREU-05	20c	4	N	5/23/2001	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U
PREU-05	20c	9	N	5/23/2001	< 0.37 U	< 0.37 U	< 0.37 U	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U
PRNBA-01	20c	0	N	6/1/2001	< 0.37 U	< 0.37 U	< 0.37 U	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U
PRNBA-01	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	< 0.38 U
PRNBA-02	20c	0	N	6/4/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.9 U	< 0.38 U
PRNBA-03	20c	0	N	5/31/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNBA-03	20c	4	N	5/31/2001	< 0.43 UJ	< 0.43 UJ	< 0.43 UJ	--	< 0.43 UJ	< 0.43 UJ	< 0.43 UJ	< 0.43 UJ	< 2.1 UJ	< 0.43 UJ
PRNBA-04	20c	0	N	5/31/2001	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PRNBA-04	20c	4	N	5/31/2001	< 0.4 U	< 0.4 U	< 0.4 U	--	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 1.9 U	< 0.4 U
PRNBA-05	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PRNBA-06	20c	0	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNBA-06	20c	4	N	6/1/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNBA-07	20c	0	N	5/31/2001	< 0.37 U	< 0.37 U	< 0.37 U	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U
PRNBA-07	20c	4	N	5/31/2001	< 0.41 U	< 0.41 U	< 0.41 U	--	< 0.41 U	< 0.41 U	< 0.41 U	< 0.41 U	< 2 U	< 0.41 U
PRNBA-08	20c	0	N	6/4/2001	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PRNBA-09	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					Diethyl phthalate	Dimethyl phthalate	Di-n-octyl phthalate	Diphenyl sulfone	Fluoranthene	Fluorene	Hexachloro-1,3- butadiene	Hexachlorobenzene	Hexachlorocyclo- pentadiene	Hexachloroethane
PRNBA-10	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PRNSNP-17	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U
PRNSNP-18	20c	0	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U
PRNSNP-18	20c	4	N	6/1/2001	< 0.39 U	< 0.39 U	< 0.39 U	--	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 1.9 U	< 0.39 U
PRNSNP-19	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	--	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 1.6 U	< 0.33 U
PRNSNP-20	20c	0	N	6/1/2001	< 0.35 U	< 0.35 U	< 0.35 U	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U
PRNSNP-20	20c	4	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.8 U	< 0.36 U
PRNSNP-21	20c	0	N	5/18/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNSNP-22	20c	0	N	5/17/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNSNP-23	20c	0	N	5/21/2001	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	--	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 1.7 UJ	< 0.35 UJ
PRNSNP-23	20c	4	N	5/21/2001	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	--	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 1.8 UJ	< 0.38 UJ
PRNSNP-24	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 1.6 U	< 0.34 U
PRNSNP-25	20c	0	N	5/21/2001	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	--	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 2.1 UJ	< 0.44 UJ
PRNSNP-25	20c	4	N	5/21/2001	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	--	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 2 UJ	< 0.42 UJ
PRNSNP-29C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNSNP-30C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNU-02	20c	0	N	5/22/2001	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U
PRNU-02	20c	4	N	5/22/2001	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 1.8 U	< 0.38 U
PRNU-02	20c	9	N	5/22/2001	< 0.4 U	< 0.4 U	< 0.4 U	--	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 2 U	< 0.4 U
WC-NB01	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.015 U	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.34 U	< 0.034 U
WC-NB02	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.015 U	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.34 U	< 0.034 U
WC-NB03	39	0	N	7/26/2006	< 0.034 U	< 0.034 U	< 0.015 U	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.33 U	< 0.034 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

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[illegible]

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 12 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs									
					Hydroxymethyl phthalimide	Isophorone	Naphthalene	Nitrobenzene	N-nitrosodi-n-propylamine	N-nitrosodiphenylamine	o-Cresol	p-Chloroaniline	p-Chlorothiophenol	p-Cresol
PRNBA-10	20c	0	N	6/4/2001	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	--	< 0.35 U
PRNSNP-17	20c	0	N	6/4/2001	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	--	< 0.34 U
PRNSNP-18	20c	0	N	6/1/2001	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U
PRNSNP-18	20c	4	N	6/1/2001	--	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	--	< 0.39 U
PRNSNP-19	20c	0	N	5/17/2001	--	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	--	< 0.33 U
PRNSNP-20	20c	0	N	6/1/2001	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	--	< 0.35 U
PRNSNP-20	20c	4	N	6/1/2001	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U
PRNSNP-21	20c	0	N	5/18/2001	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U
PRNSNP-22	20c	0	N	5/17/2001	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U
PRNSNP-23	20c	0	N	5/21/2001	--	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	--	< 0.35 UJ
PRNSNP-23	20c	4	N	5/21/2001	--	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	--	< 0.38 UJ
PRNSNP-24	20c	0	N	6/4/2001	--	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	--	< 0.34 U
PRNSNP-25	20c	0	N	5/21/2001	--	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	--	< 0.44 UJ
PRNSNP-25	20c	4	N	5/21/2001	--	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	--	< 0.42 UJ
PRNSNP-29C	20c	0	N	7/23/2001	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U
PRNSNP-30C	20c	0	N	7/23/2001	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U
PRNU-02	20c	0	N	5/22/2001	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	< 0.36 U
PRNU-02	20c	4	N	5/22/2001	--	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	--	< 0.38 U
PRNU-02	20c	9	N	5/22/2001	--	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	--	< 0.4 U
WC-NB01	39	0	N	7/27/2006	--	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 UJ	--	--
WC-NB02	39	0	N	7/27/2006	--	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 UJ	--	--
WC-NB03	39	0	N	7/26/2006	--	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 UJ	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 13 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs							
					Pentachlorobenzene	Pentachlorophenol	Phenol	Phenyl Disulfide	Phenyl Sulfide	Phthalic acid	p-Nitroaniline	Pyridine
ADB-11	1a	1	N	3/21/1996	--	< 0.37 U	< 0.67 U	--	--	--	< 3.4 U	--
ADB-12	1a	1	N	3/22/1996	--	< 0.37 U	< 0.69 U	--	--	--	< 3.4 U	--
ADB-13	1a	1	N	4/11/1996	--	< 0.39 U	< 0.71 U	--	--	--	< 3.5 U	--
BDB-21	1a	1	N	4/9/1996	--	< 0.39 U	< 0.71 U	--	--	--	< 3.6 U	--
BDB-21	1a	5	N	4/9/1996	--	< 0.41 U	< 0.76 U	--	--	--	< 3.8 U	--
BDB-24	1a	1	N	4/17/1996	--	< 0.37 U	< 0.68 U	--	--	--	< 3.4 U	--
BDB-24	1a	5	N	4/17/1996	--	< 0.4 U	< 0.74 U	--	--	--	< 3.7 U	--
BDB-25	1a	1	N	4/11/1996	--	< 0.4 U	< 0.73 U	--	--	--	< 3.6 U	--
BDB-26	1a	1	N	4/11/1996	--	< 0.4 U	< 0.73 U	--	--	--	< 3.7 U	--
BDB-26	1a	5	N	4/11/1996	--	< 3.7 U	< 0.74 U	--	--	--	< 3.7 U	--
DS-02	32	0	N	3/29/2005	< 0.023 U	< 0.12 U	< 0.093 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.023 U	< 0.07 U
PLG-01	1a	1	N	4/10/1996	--	< 0.39 U	< 0.71 U	--	--	--	< 3.5 U	--
PLG-05	1a	1	N	4/16/1996	--	< 0.43 U	< 0.79 U	--	--	--	< 3.9 U	--
PLG-05	1a	5	N	4/16/1996	--	< 0.42 U	< 0.77 U	--	--	--	< 3.8 U	--
PLH-01	1a	1	N	4/10/1996	--	< 0.45 U	< 0.83 U	--	--	--	< 4.1 U	--
PLH-04	1a	1	N	4/16/1996	--	< 0.42 U	< 0.78 U	--	--	--	< 3.9 U	--
PLH-04	1a	5	N	4/16/1996	--	< 0.4 U	< 0.74 U	--	--	--	< 3.7 U	--
PLI-03	1a	1	N	4/18/1996	--	< 0.46 U	< 0.84 U	--	--	--	< 4.2 U	--
PLJ-01	1a	1	N	4/18/1996	--	< 0.42 U	< 0.77 U	--	--	--	< 3.8 U	--
PLJ-02	1a	1	N	4/18/1996	--	< 0.69 U	< 1.3 U	--	--	--	--	--
PRAD-11	20c	0	N	6/29/2001	--	< 1.7 U	< 0.35 U	--	--	--	< 1.7 U	--
PREU-02	20c	0	N	5/23/2001	--	< 1.6 U	< 0.34 U	--	--	--	< 1.6 U	--
PREU-02	20c	4	N	6/21/2001	--	< 1.6 UJ	< 0.34 UJ	--	--	--	< 1.6 UJ	--
PREU-04	20c	0	N	5/17/2001	--	< 1.6 U	< 0.33 U	--	--	--	< 1.6 U	--
PREU-05	20c	0	N	5/23/2001	--	< 1.8 U	< 0.36 U	--	--	--	< 1.8 U	--
PREU-05	20c	4	N	5/23/2001	--	< 1.7 U	< 0.36 U	--	--	--	< 1.7 U	--
PREU-05	20c	9	N	5/23/2001	--	< 1.8 U	< 0.37 U	--	--	--	< 1.8 U	--
PRNBA-01	20c	0	N	6/1/2001	--	< 1.8 U	< 0.37 U	--	--	--	< 1.8 U	--
PRNBA-01	20c	4	N	6/1/2001	--	< 1.9 U	< 0.38 U	--	--	--	< 1.9 U	--
PRNBA-02	20c	0	N	6/4/2001	--	< 1.9 U	< 0.38 U	--	--	--	< 1.9 U	--
PRNBA-03	20c	0	N	5/31/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNBA-03	20c	4	N	5/31/2001	--	< 2.1 U	< 0.43 U	--	--	--	< 2.1 UJ	--
PRNBA-04	20c	0	N	5/31/2001	--	< 1.8 U	< 0.36 U	--	--	--	< 1.8 U	--
PRNBA-04	20c	4	N	5/31/2001	--	< 1.9 U	< 0.4 U	--	--	--	< 1.9 U	--
PRNBA-05	20c	0	N	6/4/2001	--	< 1.7 U	< 0.35 U	--	--	--	< 1.7 U	--
PRNBA-06	20c	0	N	6/1/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNBA-06	20c	4	N	6/1/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNBA-07	20c	0	N	5/31/2001	--	< 1.8 U	< 0.37 U	--	--	--	< 1.8 U	--
PRNBA-07	20c	4	N	5/31/2001	--	< 2 U	< 0.41 U	--	--	--	< 2 U	--
PRNBA-08	20c	0	N	6/4/2001	--	< 1.8 U	< 0.36 U	--	--	--	< 1.8 U	--
PRNBA-09	20c	0	N	6/4/2001	--	< 1.7 U	< 0.35 U	--	--	--	< 1.7 U	--

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 14 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	SVOCs							
					Pentachlorobenzene	Pentachlorophenol	Phenol	Phenyl Disulfide	Phenyl Sulfide	Phthalic acid	p-Nitroaniline	Pyridine
PRNBA-10	20c	0	N	6/4/2001	--	< 1.7 U	< 0.35 U	--	--	--	< 1.7 U	--
PRNSNP-17	20c	0	N	6/4/2001	--	< 1.6 U	< 0.34 U	--	--	--	< 1.6 U	--
PRNSNP-18	20c	0	N	6/1/2001	--	< 1.7 U	< 0.36 U	--	--	--	< 1.7 U	--
PRNSNP-18	20c	4	N	6/1/2001	--	< 1.9 U	< 0.39 U	--	--	--	< 1.9 U	--
PRNSNP-19	20c	0	N	5/17/2001	--	< 1.6 U	< 0.33 U	--	--	--	< 1.6 U	--
PRNSNP-20	20c	0	N	6/1/2001	--	< 1.7 U	< 0.35 U	--	--	--	< 1.7 U	--
PRNSNP-20	20c	4	N	6/1/2001	--	< 1.8 U	< 0.36 U	--	--	--	< 1.8 U	--
PRNSNP-21	20c	0	N	5/18/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNSNP-22	20c	0	N	5/17/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNSNP-23	20c	0	N	5/21/2001	--	< 1.7 UJ	< 0.35 UJ	--	--	--	< 1.7 UJ	--
PRNSNP-23	20c	4	N	5/21/2001	--	< 1.8 UJ	< 0.38 UJ	--	--	--	< 1.8 UJ	--
PRNSNP-24	20c	0	N	6/4/2001	--	< 1.6 U	< 0.34 U	--	--	--	< 1.6 U	--
PRNSNP-25	20c	0	N	5/21/2001	--	< 2.1 UJ	< 0.44 UJ	--	--	--	< 2.1 UJ	--
PRNSNP-25	20c	4	N	5/21/2001	--	< 2 UJ	< 0.42 UJ	--	--	--	< 2 UJ	--
PRNSNP-29C	20c	0	N	7/23/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNSNP-30C	20c	0	N	7/23/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNU-02	20c	0	N	5/22/2001	--	< 1.7 U	< 0.36 U	--	--	--	< 1.7 U	--
PRNU-02	20c	4	N	5/22/2001	--	< 1.8 U	< 0.38 U	--	--	--	< 1.8 U	--
PRNU-02	20c	9	N	5/22/2001	--	< 2 U	< 0.4 U	--	--	--	< 2 U	--
WC-NB01	39	0	N	7/27/2006	< 0.034 U	< 0.34 U	< 0.034 U	--	--	< 1.6 U	< 0.34 U	< 0.34 U
WC-NB02	39	0	N	7/27/2006	< 0.034 U	< 0.34 U	< 0.034 U	--	--	< 1.6 U	< 0.34 U	< 0.34 U
WC-NB03	39	0	N	7/26/2006	< 0.034 U	< 0.33 U	< 0.034 U	--	--	< 0.25 U	< 0.33 U	< 0.33 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-5
SOIL DIOXINS/FURANS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Dioxins/Furans								
					1,2,3,4,6,7,8-HpCDF	1,2,3,4,6,7,8-HpCDD	1,2,3,4,7,8,9-HpCDF	1,2,3,4,7,8-HxCDF	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDF	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDF	1,2,3,7,8,9-HxCDD
DS-02	32	0	N	3/29/2005	4.5 J	15	< 2 U	< 1.9 U	< 0.48 U	< 2 U	< 0.51 U	< 0.69 U	< 0.44 U
PREU-01	8c	0	N	10/12/2000	5.8	1	2	2.6	0.19	1.7	0.27	0.37	0.34
PREU-05	20c	0	N	5/23/2001	230	30	85	99	3.2	52	6.4	9.3	6.5
PRNBA-06	20c	0	N	6/1/2001	92	10	47	81	< 2 U	41	4.9	8.7	4.5
PRNSNP-19	20c	0	N	5/17/2001	190	22	100	180	4.7	74	8.9	12	8.5
PRNSNP-22	20c	0	N	5/17/2001	13	< 2.2 U	8.6	14	< 0.92 U	5.6	< 0.9 U	< 1.2 U	< 0.87 U
PRNU-02	20c	0	N	5/22/2001	100	13	34	57	< 1.7 U	34	3.9	4.1	3.9
PRPLI-03	8c	0	N	10/12/2000	7.1	1.4	2.7	4	0.14	2.3	0.39	0.44	0.45
WC-NB01	39	0	N	7/27/2006	52	5.4	24	--	--	--	--	--	--
WC-NB02	39	0	N	7/27/2006	430	38	140	--	--	--	--	--	--
WC-NB03	39	0	N	7/26/2006	140	14	53	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in pg/g.

-- = no sample data.

TABLE B-5
SOIL DIOXINS/FURANS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Dioxins/Furans								
					1,2,3,7,8-PeCDF	1,2,3,7,8-PeCDD	2,3,4,6,7,8-HxCDF	2,3,4,7,8-PeCDF	2,3,7,8-TCDF	2,3,7,8-TCDD	OCDD	OCDF	TCDD TEQ
DS-02	32	0	N	3/29/2005	< 1.3 U	< 0.85 U	< 0.83 U	< 0.63 U	0.79 J	< 0.29 U	160 J-	16 J-	1.4
PREU-01	8c	0	N	10/12/2000	1.2	0.18	1	0.76	0.55	< 0.1 U	2.4	11.5	1.5
PREU-05	20c	0	N	5/23/2001	42	3.3	15	23	26	0.99	130	1100	43.2
PRNBA-06	20c	0	N	6/1/2001	43	3.5	13	18	24	1	11	160	35
PRNSNP-19	20c	0	N	5/17/2001	75	6	19	35	44	1.3	27	410	66.8
PRNSNP-22	20c	0	N	5/17/2001	7.6	< 0.98 U	< 1.7 U	2.9	3.6	< 0.51 U	9.1	27	5.4
PRNU-02	20c	0	N	5/22/2001	28	< 2.6 U	8.9	16	17	< 0.61 U	15	210	25.5
PRPLI-03	8c	0	N	10/12/2000	1.8	0.21	1.4	1.1	1.1	0.1	2.9	12.3	2.1
WC-NB01	39	0	N	7/27/2006	--	--	--	--	--	--	< 4.4 U	72	0.8
WC-NB02	39	0	N	7/27/2006	--	--	--	--	--	--	53	770	6.2
WC-NB03	39	0	N	7/26/2006	--	--	--	--	--	--	17	260	2.1

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in pg/g.

-- = no sample data.

TABLE B-6
SOIL GENERAL CHEMISTRY AND IONS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 3)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	General Chemistry / Ions													
					Ammonia	Bromide	Chlorate	Chloride	Cyanide (Total)	Fluoride	Iodide	Nitrate (as N)	Nitrite (as N)	Orthophosphate as P	Perchlorate	Sulfate	Sulfide	Total Kjeldahl Nitrogen (TKN)
ADB-11	1a	1	N	3/21/1996	--	--	0.23	300	< 1 U	--	--	--	--	--	--	--	--	--
ADB-11	1a	5	N	3/21/1996	--	--	0.59	69	< 1.1 U	--	--	--	--	--	--	--	--	--
ADB-12	1a	1	N	3/22/1996	--	--	< 0.052 U	95	< 1.1 U	--	--	--	--	--	--	--	--	--
ADB-12	1a	5	N	3/22/1996	--	--	< 0.055 U	160	< 1 U	--	--	--	--	--	--	--	--	--
ADB-13	1a	1	N	4/11/1996	--	--	19	--	< 1 U	--	--	--	--	--	--	--	--	--
ADB-13	1a	5	N	4/11/1996	--	--	20	--	< 1.2 U	--	--	--	--	--	--	--	--	--
BDB-21	1a	1	N	4/9/1996	--	--	12	--	< 1.1 U	--	--	--	--	--	--	--	--	--
BDB-21	1a	5	N	4/9/1996	--	--	4.6	--	< 1.1 U	--	--	--	--	--	--	--	--	--
BDB-24	1a	1	N	4/17/1996	--	--	< 0.052 U	--	< 1 U	--	--	--	--	--	--	--	--	--
BDB-24	1a	5	N	4/17/1996	--	--	< 0.056 U	--	< 1.1 U	--	--	--	--	--	--	--	--	--
BDB-25	1a	1	N	4/11/1996	--	--	5.6	--	< 1.1 U	--	--	--	--	--	--	--	--	--
BDB-25	1a	5	N	4/11/1996	--	--	< 0.56 U	--	< 1.1 U	--	--	--	--	--	--	--	--	--
BDB-26	1a	1	N	4/11/1996	--	--	< 0.56 U	--	< 1.1 U	--	--	--	--	--	--	--	--	--
BDB-26	1a	5	N	4/11/1996	--	--	0.92	--	< 1.1 U	--	--	--	--	--	--	--	--	--
DS-02	32	0	N	3/29/2005	< 0.062 U	< 0.22 UJ-	< 1.1 U	7.7	< 0.11 U	< 0.11 U	< 2.1 U	0.27 J-	< 0.042 U	< 0.53 U	< 0.0212 U	56.9 J-	< 7.7 U	< 16.2 U
PLG-01	1a	1	N	4/10/1996	--	--	0.24	--	< 1.1 U	--	--	--	--	--	--	--	--	--
PLG-01	6c	1	N	7/14/1999	--	--	--	--	--	--	--	--	--	--	0.32	--	--	--
PLG-01	1a	5	N	4/10/1996	--	--	< 0.065 U	--	< 1.3 U	--	--	--	--	--	--	--	--	--
PLG-01PA-1	7b	1	N	2/28/2000	--	--	--	--	--	--	--	--	--	--	< 0.04 UJ	--	--	--
PLG-01PA-5	7b	1	N	2/28/2000	--	--	--	--	--	--	--	--	--	--	< 0.04 UJ	--	--	--
PLG-02PA-1	8b	1	N	2/24/2000	--	--	--	--	--	--	--	--	--	--	14	--	--	--
PLG-02PA-5	8b	5	N	2/24/2000	--	--	--	--	--	--	--	--	--	--	15	--	--	--
PLG-04NCD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	2.3	--	--	--
PLG-04NCOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	1.3	--	--	--
PLG-04NED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	14	--	--	--
PLG-04NWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	8.8	--	--	--
PLG-04SCD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	10	--	--	--
PLG-04SCOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	9.1	--	--	--
PLG-04SED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	0.76	--	--	--
PLG-04SWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	0.19	--	--	--
PLG-05	1a	1	N	4/16/1996	--	--	< 0.6 U	--	< 1.2 U	--	--	--	--	--	--	--	--	--
PLG-05	6c	1	N	7/14/1999	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--
PLG-05	6c	3	N	7/14/1999	--	--	--	--	--	--	--	--	--	--	0.24	--	--	--
PLG-05	1a	5	N	4/16/1996	--	--	< 0.58 U	--	< 1.2 U	--	--	--	--	--	--	--	--	--
PLG-05CED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	0.057	--	--	--
PLG-05CWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	< 0.0436 U	--	--	--
PLG-05ECOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	0.064	--	--	--
PLG-05NED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	0.052	--	--	--
PLG-05PA-1	7b	1	N	2/29/2000	--	--	--	--	--	--	--	--	--	--	< 0.04 UJ	--	--	--
PLG-05PA-3	7b	3	N	2/29/2000	--	--	--	--	--	--	--	--	--	--	< 0.04 UJ	--	--	--
PLG-05SED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	0.089	--	--	--
PLG-05SWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	< 0.0472 U	--	--	--
PLG-05WCOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	< 0.44 U	--	--	--

TABLE B-6
SOIL GENERAL CHEMISTRY AND IONS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 2 of 3)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	General Chemistry / Ions													
					Ammonia	Bromide	Chlorate	Chloride	Cyanide (Total)	Fluoride	Iodide	Nitrate (as N)	Nitrite (as N)	Orthophosphate as P	Perchlorate	Sulfate	Sulfide	Total Kjeldahl Nitrogen (TKN)
PLH-01	1a	1	N	4/10/1996	--	--	10	--	< 1.3 U	--	--	--	--	--	--	--	--	--
PLH-01	1a	5	N	4/10/1996	--	--	9.3	--	< 1.1 U	--	--	--	--	--	--	--	--	--
PLH--02PA-1	8b	1	N	2/24/2000	--	--	--	--	--	--	--	--	--	--	6	--	--	--
PLH--02PA-5	8b	5	N	2/24/2000	--	--	--	--	--	--	--	--	--	--	3.3	--	--	--
PLH-03NCD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	130	--	--	--
PLH-03NCOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	57	--	--	--
PLH-03NED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	240	--	--	--
PLH-03NWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	100	--	--	--
PLH--03PA-1	8b	1	N	2/24/2000	--	--	--	--	--	--	--	--	--	--	170	--	--	--
PLH--03PA-5	8b	5	N	2/24/2000	--	--	--	--	--	--	--	--	--	--	3	--	--	--
PLH-03SCD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	1.6	--	--	--
PLH-03SCOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	180	--	--	--
PLH-03SED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	190	--	--	--
PLH-03SWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	71	--	--	--
PLH-04	1a	1	N	4/16/1996	--	--	< 5.9 U	--	< 1.2 U	--	--	--	--	--	--	--	--	--
PLH-04	1a	5	N	4/16/1996	--	--	< 0.056 U	--	< 1.1 U	--	--	--	--	--	--	--	--	--
PLI-01PA-1	7b	1	N	2/28/2000	--	--	--	--	--	--	--	--	--	--	5.5 J-	--	--	--
PLI-01PA-2.5	7b	3	N	2/28/2000	--	--	--	--	--	--	--	--	--	--	1.5 J-	--	--	--
PLI-02CWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	41	--	--	--
PLI-02ECD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	41	--	--	--
PLI-02ECOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	66	--	--	--
PLI-02ESD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	11	--	--	--
PLI-02NED	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	120	--	--	--
PLI-02NWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	110	--	--	--
PLI-02PA-1	8b	1	N	3/1/2000	--	--	--	--	--	--	--	--	--	--	50	--	--	--
PLI-02SWD	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	44	--	--	--
PLI-02WCOM	8a	1	N	7/20/2000	--	--	--	--	--	--	--	--	--	--	50	--	--	--
PLI-03	1a	1	N	4/18/1996	--	--	9.4	--	< 1.3 U	--	--	--	--	--	--	--	--	--
PLI-03	1a	5	N	4/18/1996	--	--	< 0.053 U	--	< 1.1 U	--	--	--	--	--	--	--	--	--
PLI-03PA-1	8b	1	N	3/1/2000	--	--	--	--	--	--	--	--	--	--	26	--	--	--
PLI-03PA-5	7b	1	N	2/28/2000	--	--	--	--	--	--	--	--	--	--	< 4 UJ	--	--	--
PLJ-01	1a	1	N	4/18/1996	--	--	3.4	--	< 1.2 U	--	--	--	--	--	--	--	--	--
PLJ-02	6c	0	N	7/14/1999	--	--	--	--	--	--	--	--	--	--	830	--	--	--
PLJ-02	6c	3	N	7/14/1999	--	--	--	--	--	--	--	--	--	--	22	--	--	--
PLJ--02PA-1	8b	1	N	3/1/2000	--	--	--	--	--	--	--	--	--	--	65	--	--	--
PRAD-11	20c	0	N	6/29/2001	--	--	--	--	< 0.53 UJ	--	--	--	--	--	2.11	--	--	--
PREU-02	20c	0	N	5/23/2001	--	--	--	--	< 0.51 UJ	--	--	--	--	--	0.135 J-	--	--	--
PREU-02	20c	4	N	5/23/2001	--	--	--	--	--	--	--	--	--	--	0.418	--	--	--
PREU-02	20c	4	N	6/21/2001	--	--	--	--	< 0.51 U	--	--	--	--	--	--	--	--	--
PREU-04	20c	0	N	5/17/2001	--	--	--	--	< 0.51 U	--	--	--	--	--	0.0225	--	--	--
PREU-05	20c	0	N	5/23/2001	--	--	--	--	< 0.55 UJ	--	--	--	--	--	4.26 J-	--	--	--
PREU-05	20c	4	N	5/23/2001	--	--	--	--	< 0.54 UJ	--	--	--	--	--	9.65	--	--	--
PREU-05	20c	9	N	5/23/2001	--	--	--	--	< 0.56 UJ	--	--	--	--	--	10.4 J-	--	--	--

TABLE B-6
SOIL GENERAL CHEMISTRY AND IONS DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 3 of 3)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	General Chemistry / Ions													
					Ammonia	Bromide	Chlorate	Chloride	Cyanide (Total)	Fluoride	Iodide	Nitrate (as N)	Nitrite (as N)	Orthophosphate as P	Perchlorate	Sulfate	Sulfide	Total Kjeldahl Nitrogen (TKN)
PRNBA-01	20c	0	N	6/1/2001	--	--	--	--	< 0.56 U	--	--	--	--	--	9.79	--	--	--
PRNBA-01	20c	4	N	6/1/2001	--	--	--	--	0.68	--	--	--	--	--	14.4	--	--	--
PRNBA-02	20c	0	N	6/4/2001	--	--	--	--	< 0.58 UJ	--	--	--	--	--	17.4	--	--	--
PRNBA-03	20c	0	N	5/31/2001	--	--	--	--	< 0.58 U	--	--	--	--	--	3.95	--	--	--
PRNBA-03	20c	4	N	5/31/2001	--	--	--	--	< 0.65 U	--	--	--	--	--	3.44	--	--	--
PRNBA-04	20c	0	N	5/31/2001	--	--	--	--	< 0.55 U	--	--	--	--	--	7.98	--	--	--
PRNBA-04	20c	4	N	5/31/2001	--	--	--	--	< 0.61 U	--	--	--	--	--	4.52	--	--	--
PRNBA-05	20c	0	N	6/4/2001	--	--	--	--	< 0.53 UJ	--	--	--	--	--	14	--	--	--
PRNBA-06	20c	0	N	6/1/2001	--	--	--	--	< 0.57 U	--	--	--	--	--	79.2	--	--	--
PRNBA-06	20c	4	N	6/1/2001	--	--	--	--	< 0.57 U	--	--	--	--	--	96.9	--	--	--
PRNBA-07	20c	0	N	5/31/2001	--	--	--	--	< 0.56 U	--	--	--	--	--	0.221	--	--	--
PRNBA-07	20c	4	N	5/31/2001	--	--	--	--	< 0.62 U	--	--	--	--	--	1.61	--	--	--
PRNBA-08	20c	0	N	6/4/2001	--	--	--	--	< 0.55 UJ	--	--	--	--	--	4.82	--	--	--
PRNBA-09	20c	0	N	6/4/2001	--	--	--	--	< 0.53 UJ	--	--	--	--	--	22.9	--	--	--
PRNBA-10	20c	0	N	6/4/2001	--	--	--	--	< 0.53 UJ	4.71	--	--	--	--	4.71	--	--	--
PRNSNP-17	20c	0	N	6/4/2001	--	--	--	--	< 0.51 UJ	--	--	--	--	--	0.17	--	--	--
PRNSNP-18	20c	0	N	6/1/2001	--	--	--	--	< 0.54 U	--	--	--	--	--	5.87	--	--	--
PRNSNP-18	20c	4	N	6/1/2001	--	--	--	--	< 0.59 U	--	--	--	--	--	0.0888	--	--	--
PRNSNP-20	20c	0	N	6/1/2001	--	--	--	--	< 0.53 U	--	--	--	--	--	0.093	--	--	--
PRNSNP-20	20c	4	N	6/1/2001	--	--	--	--	< 0.55 U	--	--	--	--	--	0.031	--	--	--
PRNSNP-21	20c	0	N	5/18/2001	--	--	--	--	< 0.57 U	--	--	--	--	--	400	--	--	--
PRNSNP-23	20c	0	N	5/21/2001	--	--	--	--	< 0.52 UJ	--	--	--	--	--	0.0539 J-	--	--	--
PRNSNP-23	20c	4	N	5/21/2001	--	--	--	--	< 0.58 UJ	--	--	--	--	--	0.125 J-	--	--	--
PRNSNP-24	20c	0	N	6/4/2001	--	--	--	--	< 0.51 UJ	--	--	--	--	--	3.32	--	--	--
PRNSNP-25	20c	0	N	5/21/2001	--	--	--	--	< 0.67 UJ	--	--	--	--	--	48.2 J-	--	--	--
PRNSNP-25	20c	4	N	5/21/2001	--	--	--	--	< 0.63 UJ	--	--	--	--	--	45 J-	--	--	--
PRNSNP-29C	20c	0	N	7/23/2001	--	--	--	--	< 0.57 U	--	--	--	--	--	< 0.0575 U	--	--	--
PRNSNP-30C	20c	0	N	7/23/2001	--	--	--	--	< 0.58 U	--	--	--	--	--	0.0937	--	--	--
PRNU-02	20c	0	N	5/22/2001	--	--	--	--	< 0.54 U	--	--	--	--	--	0.816	--	--	--
PRNU-02	20c	4	N	5/22/2001	--	--	--	--	< 0.58 U	--	--	--	--	--	0.273	--	--	--
PRNU-02	20c	9	N	5/22/2001	--	--	--	--	< 0.61 U	--	--	--	--	--	0.229	--	--	--
WC-NB01	39	0	N	7/27/2006	--	--	--	--	< 0.12 U	--	--	--	--	--	--	--	--	--
WC-NB02	39	0	N	7/27/2006	--	--	--	--	< 0.12 U	--	--	--	--	--	--	--	--	--
WC-NB03	39	0	N	7/26/2006	--	--	--	--	< 0.12 U	--	--	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 10)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorous Pesticides									
					Aspon	Azinphos-ethyl	Azinphos-methyl	Bidrin	Carbophenothion	Carbophenothion-methyl	Chlorfenvinfos	Chlorpyrifos-methyl	Chlorpyrifos	Coumaphos
DS-02	32	0	N	3/29/2005	--	< 0.0092 U	< 0.003 U	--	< 0.0075 U	< 0.0087 U	--	--	< 0.0011 U	< 0.0029 U
PRAD-11	20c	0	N	6/29/2001	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	--	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ
PREU-02	20c	0	N	5/23/2001	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	--	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ
PREU-02	20c	4	N	5/23/2001	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	--	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ
PREU-04	20c	0	N	5/15/2001	< 0.10162 U	< 0.10162 U	< 0.10162 U	< 0.10162 U	< 0.10162 U	--	< 0.10162 U	< 0.10162 U	< 0.10162 U	< 0.10162 U
PREU-05	20c	0	N	5/23/2001	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	--	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ
PREU-05	20c	4	N	5/23/2001	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	--	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ
PREU-05	20c	9	N	5/23/2001	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	--	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ
PRNBA-01	20c	0	N	6/1/2001	< 0.11074 U	< 0.11074 U	< 0.11074 UJ	< 0.11074 U	< 0.11074 U	--	< 0.11074 U	< 0.11074 U	< 0.11074 U	< 0.11074 U
PRNBA-01	20c	4	N	6/1/2001	< 0.11682 U	< 0.11682 U	< 0.11682 UJ	< 0.11682 U	< 0.11682 U	--	< 0.11682 U	< 0.11682 U	< 0.11682 U	< 0.11682 U
PRNBA-02	20c	0	N	6/4/2001	< 0.11614 U	< 0.11614 UJ	< 0.11614 UJ	< 0.11614 U	< 0.11614 U	--	< 0.11614 U	< 0.11614 U	< 0.11614 U	< 0.11614 U
PRNBA-03	20c	0	N	5/31/2001	< 0.11286 U	< 0.11286 UJ	< 0.11286 UJ	< 0.11286 U	< 0.11286 U	--	< 0.11286 U	< 0.11286 U	< 0.11286 U	< 0.11286 U
PRNBA-03	20c	4	N	5/31/2001	< 0.1385 U	< 0.1385 UJ	< 0.1385 UJ	< 0.1385 U	< 0.1385 U	--	< 0.1385 U	< 0.1385 U	< 0.1385 U	< 0.1385 U
PRNBA-04	20c	0	N	5/31/2001	< 0.12406 U	< 0.12406 UJ	< 0.12406 UJ	< 0.12406 U	< 0.12406 U	--	< 0.12406 U	< 0.12406 U	< 0.12406 U	< 0.12406 U
PRNBA-04	20c	4	N	5/31/2001	< 0.12224 UJ	< 0.12224 UJ	< 0.12224 UJ	< 0.12224 U	< 0.12224 U	--	< 0.12224 U	< 0.12224 U	< 0.12224 U	< 0.12224 U
PRNBA-05	20c	0	N	6/4/2001	< 0.10504 U	< 0.10504 UJ	< 0.10504 UJ	< 0.10504 U	< 0.10504 U	--	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 U
PRNBA-06	20c	0	N	6/1/2001	< 0.1121 U	< 0.1121 U	< 0.1121 UJ	< 0.1121 U	< 0.1121 U	--	< 0.1121 U	< 0.1121 U	< 0.1121 U	< 0.1121 U
PRNBA-06	20c	4	N	6/1/2001	< 0.11862 U	< 0.11862 UJ	< 0.11862 UJ	< 0.11862 U	< 0.11862 U	--	< 0.11862 U	< 0.11862 U	< 0.11862 U	< 0.11862 U
PRNBA-07	20c	0	N	5/31/2001	< 0.11001 U	< 0.11001 UJ	< 0.11001 UJ	< 0.11001 U	< 0.11001 U	--	< 0.11001 U	< 0.11001 U	< 0.11001 U	< 0.11001 U
PRNBA-07	20c	4	N	5/31/2001	< 0.123 U	< 0.123 UJ	< 0.123 UJ	< 0.123 U	< 0.123 U	--	< 0.123 U	< 0.123 U	< 0.123 U	< 0.123 U
PRNBA-08	20c	0	N	6/4/2001	< 0.10928 U	< 0.10928 UJ	< 0.10928 UJ	< 0.10928 U	< 0.10928 U	--	< 0.10928 U	< 0.10928 U	< 0.10928 U	< 0.10928 U
PRNBA-09	20c	0	N	6/4/2001	< 0.10537 U	< 0.10537 UJ	< 0.10537 UJ	< 0.10537 U	< 0.10537 U	--	< 0.10537 U	< 0.10537 U	< 0.10537 U	< 0.10537 U
PRNBA-10	20c	0	N	6/4/2001	< 0.10504 U	< 0.10504 UJ	< 0.10504 UJ	< 0.10504 U	< 0.10504 U	--	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 U
PRNSNP-17	20c	0	N	5/17/2001	< 0.10141 U	< 0.10141 UJ	< 0.10141 UJ	< 0.10141 U	< 0.10141 U	--	< 0.10141 U	< 0.10141 U	< 0.10141 U	< 0.10141 U
PRNSNP-18	20c	0	N	6/1/2001	< 0.10917 U	< 0.10917 UJ	< 0.10917 UJ	< 0.10917 U	< 0.10917 U	--	< 0.10917 U	< 0.10917 U	< 0.10917 U	< 0.10917 U
PRNSNP-18	20c	4	N	5/17/2001	< 0.11695 U	< 0.11695 UJ	< 0.11695 UJ	< 0.11695 U	< 0.11695 U	--	< 0.11695 U	< 0.11695 U	< 0.11695 U	< 0.11695 U
PRNSNP-19	20c	0	N	5/17/2001	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	--	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ
PRNSNP-20	20c	0	N	6/1/2001	< 0.10482 U	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 U	< 0.10482 U	--	< 0.10482 U	< 0.10482 U	< 0.10482 U	< 0.10482 U
PRNSNP-20	20c	4	N	6/1/2001	< 0.1156 U	< 0.1156 U	< 0.1156 UJ	< 0.1156 U	< 0.1156 U	--	< 0.1156 U	< 0.1156 U	< 0.1156 U	< 0.1156 U
PRNSNP-21	20c	0	N	5/16/2001	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	--	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ
PRNSNP-22	20c	0	N	5/17/2001	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	--	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ
PRNSNP-23	20c	0	N	5/21/2001	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	--	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ
PRNSNP-23	20c	4	N	5/21/2001	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	--	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ
PRNSNP-24	20c	0	N	6/4/2001	< 0.10224 UJ	< 0.10224 UJ	< 0.10224 UJ	< 0.10224 U	< 0.10224 U	--	< 0.10224 U	< 0.10224 U	< 0.10224 U	< 0.10224 U
PRNSNP-25	20c	0	N	5/21/2001	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	--	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ
PRNSNP-25	20c	4	N	5/21/2001	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	--	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ
PRNSNP-29C	20c	0	N	7/23/2001	< 0.11454 U	< 0.11454 UJ	< 0.11454 UJ	< 0.11454 U	< 0.11454 U	--	< 0.11454 U	< 0.11454 U	< 0.11454 U	< 0.11454 UJ
PRNSNP-30C	20c	0	N	7/23/2001	< 0.11574 U	< 0.11574 UJ	< 0.11574 UJ	< 0.11574 U	< 0.11574 U	--	< 0.11574 U	< 0.11574 U	< 0.11574 UJ	< 0.11574 UJ
PRNU-02	20c	0	N	5/22/2001	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	--	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ
PRNU-02	20c	4	N	5/22/2001	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	--	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ
PRNU-02	20c	9	N	5/22/2001	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	--	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ

TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 10)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorous Pesticides									
					Aspon	Azinphos-ethyl	Azinphos-methyl	Bidrin	Carbophenothion	Carbophenothion-methyl	Chlorfenvinfos	Chlorpyrifos-methyl	Chlorpyrifos	Coumaphos
WC-NB01	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	--	--
WC-NB02	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	--	--
WC-NB03	39	0	N	7/26/2006	--	--	--	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 4 of 10)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorous Pesticides								Disulfoton	Ethion
					Crotoxyphos	Demeton-O	Demeton-S	Diazinon	Dichlorfenthion	Dichlorvos	Dimethoate	Dioxathion		
WC-NB01	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	< 0.0079 U	--
WC-NB02	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	< 0.0079 U	--
WC-NB03	39	0	N	7/26/2006	--	--	--	--	--	--	--	--	< 0.0078 U	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 6 of 10)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorous Pesticides									
					Ethoprophos	Ethyl p-nitrophenyl phenylphosphorothioate	Famphur	Fensulfothion	Fenthion	Fonofos	Leptophos	Malathion	Merphos	Metathione
WC-NB01	39	0	N	7/27/2006	--	--	< 0.0033 U	--	--	--	--	--	--	--
WC-NB02	39	0	N	7/27/2006	--	--	< 0.0033 U	--	--	--	--	--	--	--
WC-NB03	39	0	N	7/26/2006	--	--	< 0.0033 U	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 7 of 10)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorous Pesticides									
					Methyl parathion	Mevinphos	Monocrotophos	Naled	O,O,O-Triethyl phosphorothioate	o,o-Diethyl o-pyrazinyl phosphorothioate	Parathion	Phorate	Phosmet	Phosphamidon
DS-02	32	0	N	3/29/2005	< 0.0011 U	< 0.0046 U	--	--	< 0.0018 U	--	< 0.0028 U	< 0.002 U	< 0.016 U	--
PRAD-11	20c	0	N	6/29/2001	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	--	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ	< 0.10438 UJ
PREU-02	20c	0	N	5/23/2001	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	--	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ	< 0.10672 UJ
PREU-02	20c	4	N	5/23/2001	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	--	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ	< 0.10482 UJ
PREU-04	20c	0	N	5/15/2001	< 0.10162 U	< 0.10162 U	< 0.10162 U	< 0.10162 U	--	< 0.10162 U	< 0.10162 U	< 0.10162 U	< 0.10162 U	< 0.10162 U
PREU-05	20c	0	N	5/23/2001	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	--	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ	< 0.10869 UJ
PREU-05	20c	4	N	5/23/2001	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	--	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ	< 0.10775 UJ
PREU-05	20c	9	N	5/23/2001	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	--	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ	< 0.12674 UJ
PRNBA-01	20c	0	N	6/1/2001	< 0.11074 U	< 0.11074 U	< 0.11074 U	< 0.11074 UJ	--	< 0.11074 U	< 0.11074 U	< 0.11074 U	< 0.11074 U	< 0.11074 UJ
PRNBA-01	20c	4	N	6/1/2001	< 0.11682 U	< 0.11682 U	< 0.11682 U	< 0.11682 UJ	--	< 0.11682 U	< 0.11682 U	< 0.11682 U	< 0.11682 U	< 0.11682 UJ
PRNBA-02	20c	0	N	6/4/2001	< 0.11614 U	< 0.11614 U	< 0.11614 U	< 0.11614 UJ	--	< 0.11614 U	< 0.11614 U	< 0.11614 U	< 0.11614 U	< 0.11614 UJ
PRNBA-03	20c	0	N	5/31/2001	< 0.11286 U	< 0.11286 U	< 0.11286 U	< 0.11286 UJ	--	< 0.11286 U	< 0.11286 U	< 0.11286 U	< 0.11286 U	< 0.11286 UJ
PRNBA-03	20c	4	N	5/31/2001	< 0.1385 U	< 0.1385 U	< 0.1385 U	< 0.1385 UJ	--	< 0.1385 U	< 0.1385 U	< 0.1385 U	< 0.1385 U	< 0.1385 UJ
PRNBA-04	20c	0	N	5/31/2001	< 0.12406 U	< 0.12406 U	< 0.12406 U	< 0.12406 UJ	--	< 0.12406 U	< 0.12406 U	< 0.12406 U	< 0.12406 U	< 0.12406 UJ
PRNBA-04	20c	4	N	5/31/2001	< 0.12224 U	< 0.12224 U	< 0.12224 U	< 0.12224 UJ	--	< 0.12224 U	< 0.12224 U	< 0.12224 U	< 0.12224 U	< 0.12224 UJ
PRNBA-05	20c	0	N	6/4/2001	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 UJ	--	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 UJ
PRNBA-06	20c	0	N	6/1/2001	< 0.1121 U	< 0.1121 U	< 0.1121 U	< 0.1121 UJ	--	< 0.1121 U	< 0.1121 U	< 0.1121 U	< 0.1121 U	< 0.1121 UJ
PRNBA-06	20c	4	N	6/1/2001	< 0.11862 U	< 0.11862 U	< 0.11862 U	< 0.11862 UJ	--	< 0.11862 U	< 0.11862 U	< 0.11862 U	< 0.11862 U	< 0.11862 UJ
PRNBA-07	20c	0	N	5/31/2001	< 0.11001 U	< 0.11001 U	< 0.11001 U	< 0.11001 UJ	--	< 0.11001 U	< 0.11001 U	< 0.11001 U	< 0.11001 U	< 0.11001 UJ
PRNBA-07	20c	4	N	5/31/2001	< 0.123 U	< 0.123 U	< 0.123 U	< 0.123 UJ	--	< 0.123 U	< 0.123 U	< 0.123 U	< 0.123 U	< 0.123 UJ
PRNBA-08	20c	0	N	6/4/2001	< 0.10928 U	< 0.10928 U	< 0.10928 U	< 0.10928 UJ	--	< 0.10928 U	< 0.10928 U	< 0.10928 U	< 0.10928 U	< 0.10928 UJ
PRNBA-09	20c	0	N	6/4/2001	< 0.10537 U	< 0.10537 U	< 0.10537 U	< 0.10537 UJ	--	< 0.10537 U	< 0.10537 U	< 0.10537 U	< 0.10537 U	< 0.10537 UJ
PRNBA-10	20c	0	N	6/4/2001	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 UJ	--	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 U	< 0.10504 UJ
PRNSNP-17	20c	0	N	5/17/2001	< 0.10141 U	< 0.10141 U	< 0.10141 U	< 0.10141 UJ	--	< 0.10141 U	< 0.10141 U	< 0.10141 U	< 0.10141 U	< 0.10141 UJ
PRNSNP-18	20c	0	N	6/1/2001	< 0.10917 U	< 0.10917 U	< 0.10917 U	< 0.10917 UJ	--	< 0.10917 U	< 0.10917 U	< 0.10917 U	< 0.10917 U	< 0.10917 UJ
PRNSNP-18	20c	4	N	5/17/2001	< 0.11695 U	< 0.11695 U	< 0.11695 U	< 0.11695 UJ	--	< 0.11695 U	< 0.11695 U	< 0.11695 U	< 0.11695 U	< 0.11695 UJ
PRNSNP-19	20c	0	N	5/17/2001	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	--	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ	< 0.1233 UJ
PRNSNP-20	20c	0	N	6/1/2001	< 0.10482 U	< 0.10482 U	< 0.10482 U	< 0.10482 UJ	--	< 0.10482 U	< 0.10482 U	< 0.10482 U	< 0.10482 U	< 0.10482 UJ
PRNSNP-20	20c	4	N	6/1/2001	< 0.1156 U	< 0.1156 U	< 0.1156 U	< 0.1156 UJ	--	< 0.1156 U	< 0.1156 U	< 0.1156 U	< 0.1156 U	< 0.1156 UJ
PRNSNP-21	20c	0	N	5/16/2001	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	--	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ	< 0.11376 UJ
PRNSNP-22	20c	0	N	5/17/2001	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	--	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ	< 0.10799 UJ
PRNSNP-23	20c	0	N	5/21/2001	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	--	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ	< 0.10471 UJ
PRNSNP-23	20c	4	N	5/21/2001	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	--	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ	< 0.11299 UJ
PRNSNP-24	20c	0	N	6/4/2001	< 0.10224 U	< 0.10224 U	< 0.10224 U	< 0.10224 UJ	--	< 0.10224 U	< 0.10224 U	< 0.10224 U	< 0.10224 U	< 0.10224 UJ
PRNSNP-25	20c	0	N	5/21/2001	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	--	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ	< 0.13698 UJ
PRNSNP-25	20c	4	N	5/21/2001	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	--	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ	< 0.13054 UJ
PRNSNP-29C	20c	0	N	7/23/2001	< 0.11454 UJ	< 0.11454 UJ	< 0.11454 UJ	< 0.11454 U	--	< 0.11454 U	< 0.11454 U	< 0.11454 U	< 0.11454 U	< 0.11454 U
PRNSNP-30C	20c	0	N	7/23/2001	< 0.11574 UJ	< 0.11574 UJ	< 0.11574 UJ	< 0.11574 U	--	< 0.11574 U	< 0.11574 U	< 0.11574 U	< 0.11574 U	< 0.11574 U
PRNU-02	20c	0	N	5/22/2001	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	--	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ	< 0.10905 UJ
PRNU-02	20c	4	N	5/22/2001	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	--	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ	< 0.11481 UJ
PRNU-02	20c	9	N	5/22/2001	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	--	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ	< 0.1282 UJ

TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorous Pesticides									
					Methyl parathion	Mevinphos	Monocrotophos	Naled	O,O,O-Triethyl phosphorothioate	o,o-Diethyl o-pyrazinyl phosphorothioate	Parathion	Phorate	Phosmet	Phosphamidon
WC-NB01	39	0	N	7/27/2006	< 0.0065 U	--	--	--	--	--	< 0.0054 U	< 0.0058 U	--	--
WC-NB02	39	0	N	7/27/2006	< 0.0065 U	--	--	--	--	--	< 0.0054 U	< 0.0058 U	--	--
WC-NB03	39	0	N	7/26/2006	< 0.0065 U	--	--	--	--	--	< 0.0054 U	< 0.0058 U	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
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TABLE B-7
SOIL ORGANOPHOSPHOROUS PESTICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 10 of 10)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorous Pesticides								
					Ronnel	Stirophos (Tetrachlorovinphos)	Sulfotep	Sulprofos	Terbufos	Tetraethyl pyrophosphite	Tokuthion (Protothiofos)	Trichlorfon	Trichloronate
WC-NB01	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	--
WC-NB02	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	--
WC-NB03	39	0	N	7/26/2006	--	--	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

TABLE B-8
SOIL POLYCHLORINATED BIPHENYLS (PCBs) DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	PCBs						
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
PRNBA-05	20c	0	N	6/4/2001	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U
PRNBA-06	20c	0	N	6/1/2001	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
PRNBA-06	20c	4	N	6/1/2001	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
PRNBA-07	20c	0	N	5/31/2001	< 0.037 U	< 0.037 U	< 0.037 U	< 0.037 U	< 0.037 U	< 0.037 U	< 0.037 U
PRNBA-07	20c	4	N	5/31/2001	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U
PRNBA-08	20c	0	N	6/4/2001	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U
PRNBA-09	20c	0	N	6/4/2001	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U
PRNBA-10	20c	0	N	6/4/2001	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U
PRNSNP-17	20c	0	N	6/4/2001	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U
PRNSNP-18	20c	0	N	6/1/2001	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U
PRNSNP-18	20c	4	N	6/1/2001	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U	< 0.039 U
PRNSNP-19	20c	0	N	5/17/2001	< 0.033 U	< 0.033 U	< 0.033 U	< 0.033 U	< 0.033 U	< 0.033 U	< 0.033 U
PRNSNP-20	20c	0	N	6/1/2001	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U
PRNSNP-20	20c	4	N	6/1/2001	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U
PRNSNP-21	20c	0	N	5/18/2001	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
PRNSNP-22	20c	0	N	5/17/2001	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
PRNSNP-23	20c	0	N	5/21/2001	< 0.035 UJ	< 0.035 UJ	< 0.035 UJ	< 0.035 UJ	< 0.035 UJ	< 0.035 UJ	< 0.035 UJ
PRNSNP-23	20c	4	N	5/21/2001	< 0.038 UJ	< 0.038 UJ	< 0.038 UJ	< 0.038 UJ	< 0.038 UJ	< 0.038 UJ	< 0.038 UJ
PRNSNP-24	20c	0	N	6/4/2001	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U
PRNSNP-25	20c	0	N	5/21/2001	< 0.044 UJ	< 0.044 UJ	< 0.044 UJ	< 0.044 UJ	< 0.044 UJ	< 0.044 UJ	< 0.044 UJ
PRNSNP-25	20c	4	N	5/21/2001	< 0.042 UJ	< 0.042 UJ	< 0.042 UJ	< 0.042 UJ	< 0.042 UJ	< 0.042 UJ	< 0.042 UJ
PRNSNP-29C	20c	0	N	7/23/2001	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
PRNSNP-30C	20c	0	N	7/23/2001	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
PRNU-02	20c	0	N	5/22/2001	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U	< 0.036 U
PRNU-02	20c	4	N	5/22/2001	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U	< 0.038 U
PRNU-02	20c	9	N	5/22/2001	< 0.04 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.04 U

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-9
SOIL RADIONUCLIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 1 of 3)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Radionuclides									
					Actinium-228	Bismuth-210	Bismuth-212	Bismuth-214	Cobalt-57	Cobalt-60	Gross alpha	Gross beta	Lead-210	Lead-212
DS-02	32	0	N	3/29/2005	2.26	1 U	1.06	0.89	0.044 U	0.1 U	29.1	39.8	1 U	1.61
PLG-05PA-1	7b	1	N	2/29/2000	--	--	--	--	--	--	--	--	--	--
PLJ-02	1a	0	N	7/14/1999	--	--	--	--	--	--	16.2	20.5	--	--
PREU-05	20c	0	N	5/23/2001	1.52	--	2.2 U	0.76	--	--	--	--	2.1 U	1.32
PRNBA-06	20c	0	N	6/1/2001	1.67	--	2.2 U	1.32	--	--	--	--	2.8 U	1.24
PRNSNP-19	20c	0	N	5/17/2001	1.27	--	2.1 U	0.8	--	--	--	--	2.8 U	0.92
PRNSNP-22	20c	0	N	5/17/2001	0.98	--	2.2 U	1.51	--	--	--	--	1.9 U	1.26
PRNU-02	20c	0	N	5/22/2001	1.2	--	2.3	1.27	--	--	--	--	2.9 U	1.35

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in pCi/g.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-9
SOIL RADIONUCLIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 3)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Radionuclides									
					Lead-214	Polonium-210	Polonium-212	Polonium-214	Polonium-216	Polonium-218	Potassium-40	Protactinium-234	Radium-223	Radium-224
DS-02	32	0	N	3/29/2005	0.78	1 U	0.68	0.89	2.95	1	24.2	0.22 U	0.76 U	2.9
PLG-05PA-1	7b	1	N	2/29/2000	--	--	--	--	--	--	--	--	--	--
PLJ-02	1a	0	N	7/14/1999	--	--	--	--	--	--	--	--	--	--
PREU-05	20c	0	N	5/23/2001	0.69	--	--	--	--	--	23.5	--	--	--
PRNBA-06	20c	0	N	6/1/2001	1.06	--	--	--	--	--	24.1	--	--	--
PRNSNP-19	20c	0	N	5/17/2001	0.9	--	--	--	--	--	19.5	--	--	--
PRNSNP-22	20c	0	N	5/17/2001	0.99	--	--	--	--	--	20.5	--	--	--
PRNU-02	20c	0	N	5/22/2001	0.98	--	--	--	--	--	24.7	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in pCi/g.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-9
SOIL RADIONUCLIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 3 of 3)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Radionuclides									
					Radium-226	Radium-228	Thallium-208	Thorium-228	Thorium-230	Thorium-232	Thorium-234	Uranium-233/234	Uranium-235/236	Uranium-238
DS-02	32	0	N	3/29/2005	1	1.35	0.4	1.64	1.24	1.85	1.16	0.9	0.042 U	0.89
PLG-05PA-1	7b	1	N	2/29/2000	0.92	0.91	--	1.94	2.07	1.5	--	2.19	0.058	1.72
PLJ-02	1a	0	N	7/14/1999	0.69	0.55	--	1.16	0.69	0.87	--	3.39	0.05	2.5
PREU-05	20c	0	N	5/23/2001	1.13	1.15 J-	0.49	1.52	1.24	1.57	--	1.16	0.14 U	1.2 U
PRNBA-06	20c	0	N	6/1/2001	1.32	1.54	0.44	1.46	1.65	1.82	--	2.71	0.18	1.6 U
PRNSNP-19	20c	0	N	5/17/2001	1.25	1.07	0.42	1.39	1.23	1.14	--	0.75	0.06	1.4 U
PRNSNP-22	20c	0	N	5/17/2001	1.75	1.37	0.38	1.3	1.85	1.29	--	0.77	0.07 U	1.3 U
PRNU-02	20c	0	N	5/22/2001	2.51	0.82 J-	0.34	1.36	1.37	1.41	--	2.39	0.1 U	1.52

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in pCi/g.

-- = no sample data.

Shaded results indicate soil has been excavated and removed.

TABLE B-10
SOIL ALDEHYDES, ORGANIC ACIDS, GLYCOL/ALCOHOLS, AND CHLORINATED HERBICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA

(Page 1 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Aldehydes					Organic Acids					Glycol/Alcohols	
					Acetaldehyde	Chloral	Chloroacetaldehyde	Dichloroacetaldehyde	Formaldehyde	4-Chlorobenzene-sulfonic acid	Benzenesulfonic acid	Diethyl phosphoro-dithioic acid	Dimethyl phosphoro-dithioic acid	Phthalic acid	Ethanol	Ethylene glycol
DS-02	32	0	N	3/29/2005	< 0.5 U	< 0.07 U	< 1 U	< 0.07 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	--	< 6.3 U	< 2.2 U
WC-NB01	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
WC-NB02	39	0	N	7/27/2006	--	--	--	--	--	--	--	--	--	--	--	--
WC-NB03	39	0	N	7/26/2006	--	--	--	--	--	--	--	--	--	--	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.

-- = no sample data.

TABLE B-10
SOIL ALDEHYDES, ORGANIC ACIDS, GLYCOL/ALCOHOLS, AND CHLORINATED HERBICIDES DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 2 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Glycol/Alcohols		Chlorinated Herbicides									
					Methanol	Propylene glycol	2,2-Dichloropropionic acid	2,4,5-T	2,4,5-TP	2,4-D	4-(2,4-Dichloro- phenoxy)butyric acid	Dicamba	Dichlorprop	Dinitrobutyl phenol	MCPA (2-Methyl-4- chlorophenoxyacetic acid)	Mecoprop
DS-02	32	0	N	3/29/2005	< 13 U	< 0.81 U	< 0.023 U	< 0.0028 U	< 0.0013 U	< 0.012 U	< 0.023 U	< 0.0016 U	< 0.012 U	< 0.0045 U	< 0.82 U	< 1.3 U
WC-NB01	39	0	N	7/27/2006	--	--	--	< 0.0051 U	< 0.0033 U	< 0.03 U	--	--	--	< 0.006 U	--	--
WC-NB02	39	0	N	7/27/2006	--	--	--	< 0.0051 U	< 0.0033 U	< 0.03 U	--	--	--	< 0.006 U	--	--
WC-NB03	39	0	N	7/26/2006	--	--	--	< 0.0051 U	< 0.0033 U	< 0.03 U	--	--	--	< 0.006 U	--	--

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

All units in mg/kg.
 -- = no sample data.

TABLE B-11
SOIL POLYAROMATIC HYDROCARBON DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
(Page 1 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	PAHs												
					Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene
ADB-11	1a	1	N	3/21/1996	<0.67 U	<0.67 U	<0.67 U	<0.14 U	<0.14 U	<0.2 U	<0.67 U	<0.67 U	<0.67 U	<0.67 U	<0.67 U	<0.67 U	<0.67 U
ADB-12	1a	1	N	3/22/1996	<0.69 U	<0.69 U	<0.69 U	<0.15 U	<0.15 U	<0.21 U	<0.69 U	<0.69 U	<0.69 U	<0.69 U	<0.69 U	<0.69 U	<0.69 U
ADB-13	1a	1	N	4/11/1996	<0.71 U	<0.71 U	<0.71 U	<0.15 U	<0.15 U	<0.21 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U
BDB-21	1a	1	N	4/9/1996	<0.71 U	<0.71 U	<0.71 U	<0.15 U	<0.15 U	<0.22 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U
BDB-21	1a	5	N	4/9/1996	<0.76 U	<0.76 U	<0.76 U	<0.16 U	<0.16 U	<0.23 U	<0.76 U	<0.76 U	<0.76 U	<0.76 U	<0.76 U	<0.76 U	<0.76 U
BDB-24	1a	1	N	4/17/1996	<0.68 U	<0.68 U	<0.68 U	<0.14 U	<0.14 U	<0.21 U	<0.68 U	<0.68 U	<0.68 U	<0.68 U	<0.68 U	<0.68 U	<0.68 U
BDB-24	1a	5	N	4/17/1996	<0.74 U	<0.74 U	<0.74 U	<0.16 U	<0.16 U	<0.22 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U
BDB-25	1a	1	N	4/11/1996	<0.73 U	<0.73 U	<0.73 U	<0.15 U	<0.15 U	<0.22 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U
BDB-26	1a	1	N	4/11/1996	<0.73 U	<0.73 U	<0.73 U	<0.16 U	<0.16 U	<0.22 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U	<0.73 U
BDB-26	1a	5	N	4/11/1996	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U
DS-02	32	0	N	3/29/2005	<0.02 U	<0.034 U	<0.0018 U	<0.0018 U	<0.0021 U	<0.003 U	<0.0033 U	<0.0014 U	<0.0033 U	<0.0072 U	<0.0042 U	<0.0057 U	<0.0059 U
PLG-01	1a	1	N	4/10/1996	<0.71 U	<0.71 U	<0.71 U	<0.15 U	<0.15 U	<0.21 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U	<0.71 U
PLG-05	1a	1	N	4/16/1996	<0.79 U	<0.79 U	<0.79 U	<0.17 U	<0.17 U	<0.24 U	<0.79 U	<0.79 U	<0.79 U	<0.79 U	<0.79 U	<0.79 U	<0.79 U
PLG-05	1a	5	N	4/16/1996	<0.77 U	<0.77 U	<0.77 U	<0.16 U	<0.16 U	<0.23 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U
PLH-01	1a	1	N	4/10/1996	<0.83 U	<0.83 U	<0.83 U	<0.18 U	<0.18 U	<0.25 U	<0.83 U	<0.83 U	<0.83 U	<0.83 U	<0.83 U	<0.83 U	<0.83 U
PLH-04	1a	1	N	4/16/1996	<0.78 U	<0.78 U	<0.78 U	<0.17 U	<0.17 U	<0.24 U	<0.78 U	<0.78 U	<0.78 U	<0.78 U	<0.78 U	<0.78 U	<0.78 U
PLH-04	1a	5	N	4/16/1996	<0.74 U	<0.74 U	<0.74 U	<0.16 U	<0.16 U	<0.22 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U	<0.74 U
PLI-03	1a	1	N	4/18/1996	<0.84 U	<0.84 U	<0.84 U	<0.18 U	<0.18 U	<0.25 U	<0.84 U	<0.84 U	<0.84 U	<0.84 U	<0.84 U	<0.84 U	<0.84 U
PLJ-01	1a	1	N	4/18/1996	<0.77 U	<0.77 U	<0.77 U	<0.16 U	<0.16 U	<0.23 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U	<0.77 U
PLJ-02	1a	1	N	4/18/1996	--	--	--	<0.27 U	<0.27 U	<0.38 U	--	--	<1.3 U	--	--	<1.3 U	<1.3 U
PRAD-11	20c	0	N	6/29/2001	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U
PREU-02	20c	0	N	5/23/2001	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U	<0.34 U
PREU-02	20c	4	N	6/21/2001	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ	<0.34 UJ
PREU-04	20c	0	N	5/17/2001	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U	<0.33 U
PREU-05	20c	0	N	5/23/2001	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U
PREU-05	20c	4	N	5/23/2001	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U
PREU-05	20c	9	N	5/23/2001	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U
PRNBA-01	20c	0	N	6/1/2001	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U
PRNBA-01	20c	4	N	6/1/2001	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U
PRNBA-02	20c	0	N	6/4/2001	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U
PRNBA-03	20c	0	N	5/31/2001	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U
PRNBA-03	20c	4	N	5/31/2001	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ
PRNBA-04	20c	0	N	5/31/2001	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U
PRNBA-04	20c	4	N	5/31/2001	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U	<0.4 U
PRNBA-05	20c	0	N	6/4/2001	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U
PRNBA-06	20c	0	N	6/1/2001	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U
PRNBA-06	20c	4	N	6/1/2001	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U	<0.38 U
PRNBA-07	20c	0	N	5/31/2001	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U	<0.37 U
PRNBA-07	20c	4	N	5/31/2001	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U	<0.41 U
PRNBA-08	20c	0	N	6/4/2001	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U	<0.36 U
PRNBA-09	20c	0	N	6/4/2001	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U	<0.35 U

TABLE B-11
SOIL POLYAROMATIC HYDROCARBON DATA
WESTERN HOOK-OPEN SPACE SUB-AREA
 (Page 2 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	PAHs												
					Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene
PRNBA-10	20c	0	N	6/4/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	
PRNSNP-17	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	
PRNSNP-18	20c	0	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	
PRNSNP-18	20c	4	N	6/1/2001	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	< 0.39 U	
PRNSNP-19	20c	0	N	5/17/2001	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	
PRNSNP-20	20c	0	N	6/1/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	
PRNSNP-20	20c	4	N	6/1/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	
PRNSNP-21	20c	0	N	5/18/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	
PRNSNP-22	20c	0	N	5/17/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	
PRNSNP-23	20c	0	N	5/21/2001	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	< 0.35 UJ	
PRNSNP-23	20c	4	N	5/21/2001	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	< 0.38 UJ	
PRNSNP-24	20c	0	N	6/4/2001	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	< 0.34 U	
PRNSNP-25	20c	0	N	5/21/2001	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	< 0.44 UJ	
PRNSNP-25	20c	4	N	5/21/2001	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	< 0.42 UJ	
PRNSNP-29C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	
PRNSNP-30C	20c	0	N	7/23/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	
PRNU-02	20c	0	N	5/22/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	
PRNU-02	20c	4	N	5/22/2001	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	< 0.38 U	
PRNU-02	20c	9	N	5/22/2001	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	
WC-NB01	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	
WC-NB02	39	0	N	7/27/2006	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	
WC-NB03	39	0	N	7/26/2006	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	

Note: This table includes all data, regardless of depth. Because of this, the total number of analyses does not always coincide with the total number of analyses reported in Table 1, which includes data only to 10 feet bgs.

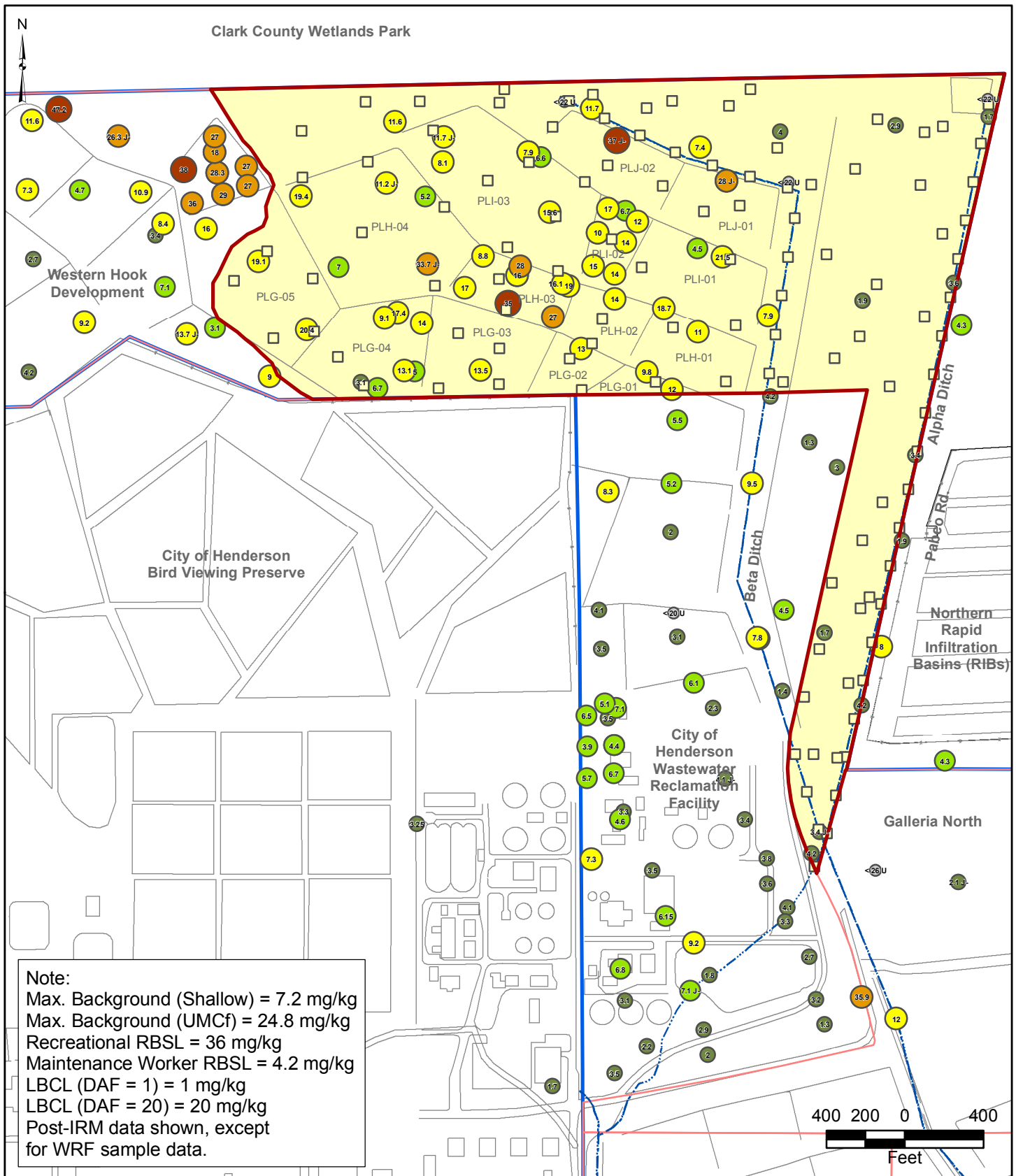
All units in mg/kg.

-- = no sample data.

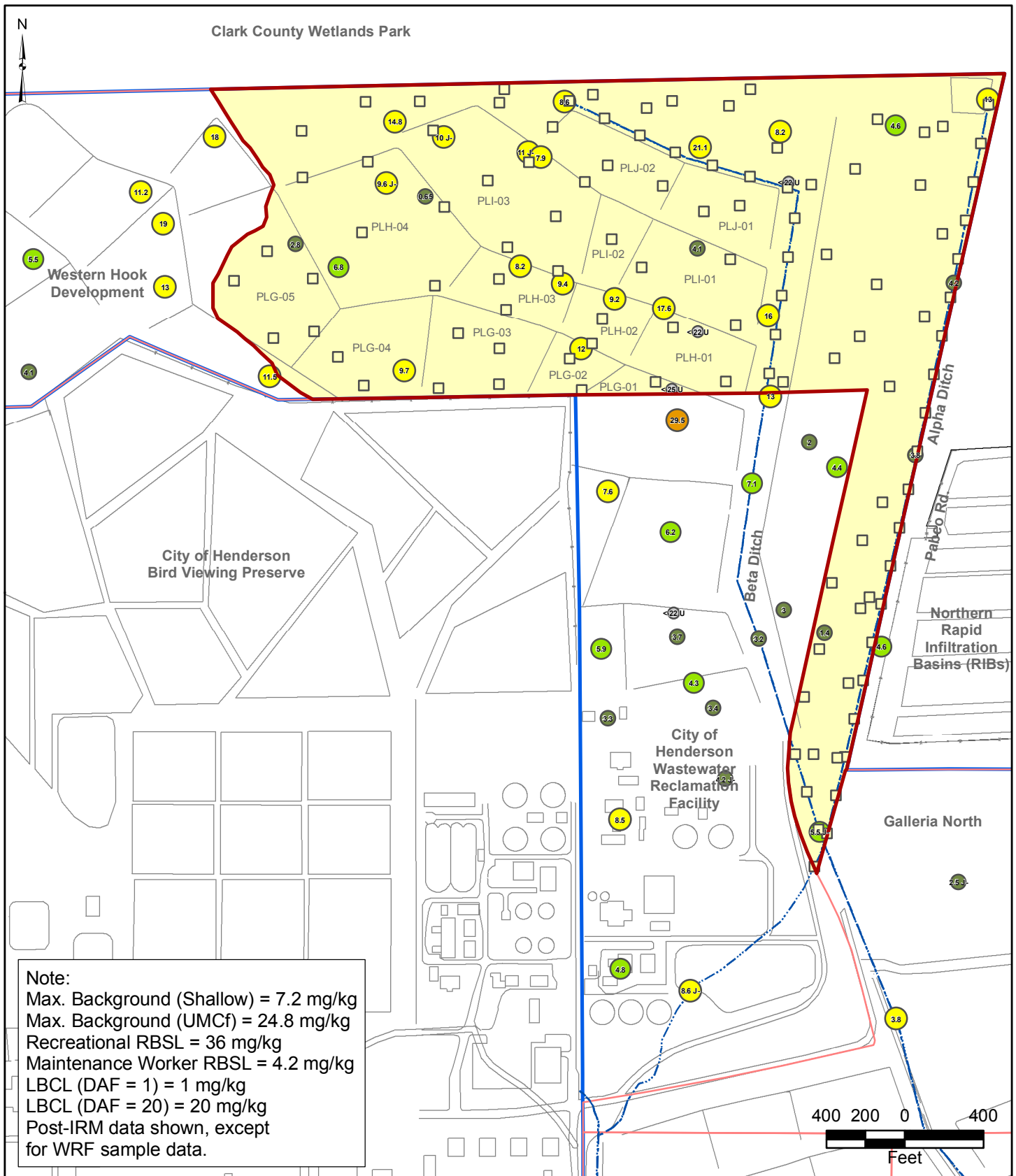
Shaded results indicate soil has been excavated and removed.

APPENDIX C

SOIL CONCENTRATION DISTRIBUTION FIGURES



<p> Western Hook-Open Space Sub-Area</p> <p> Site AOC3 Boundary</p> <p> Eastside Soil Sub-Areas</p> <p> SAP Proposed Soil Sample Location</p>	<p> Non-Detect</p> <p> Detect < Maint. Worker RBSL</p> <p> >= Maint. Work. RBSL & < Max. Shallow Backgrnd</p> <p> >= Max. Shallow Backgrnd & < Max. Deep Backgrnd</p> <p> >= Max. Deep Backgrnd & < Recreational RBSL</p> <p> >= Recreational RBSL</p>	<p>BMI Common Areas (Eastside) Clark County, Nevada</p> <p>FIGURE C-1</p> <p>ARSENIC RESULTS IN WESTERN HOOK-OPEN SPACE SUB-AREA AND ADJA- CENT 1,000 FT - 0 to 2 FT BGS</p> <p>Prepared by: MKJ (ERM) Date: 07/06/09 JOB No. 0064276 FILE: GIS\BRC\OPEN-SPACE_SAP\APPENDIX_C.MXD</p> <p>Basic Remediation COMPANY</p>
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BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-2

**ARSENIC RESULTS
IN WESTERN HOOK-OPEN
SPACE SUB-AREA AND ADJA-
CENT 1,000 FT - 3 to 5 FT BGS**

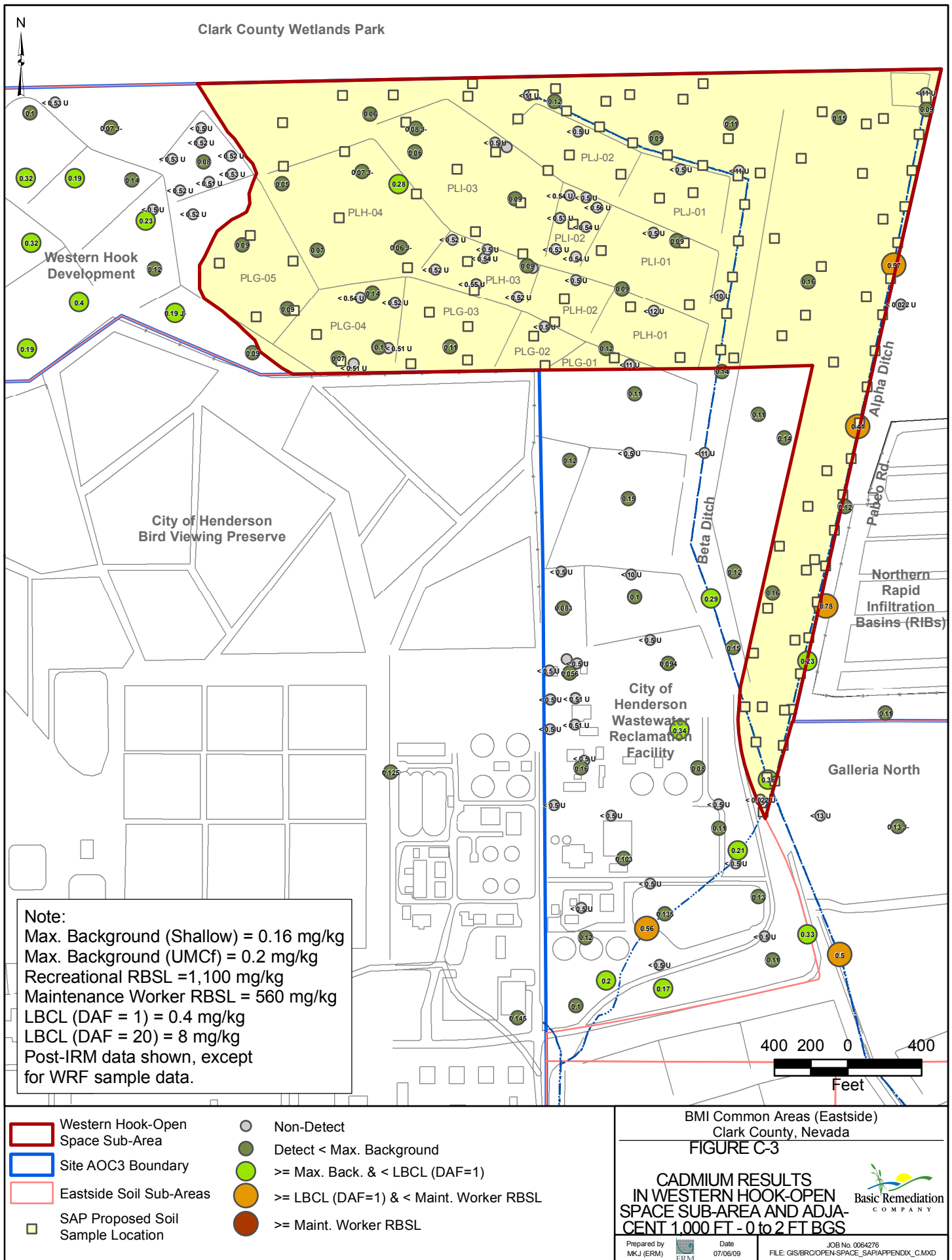


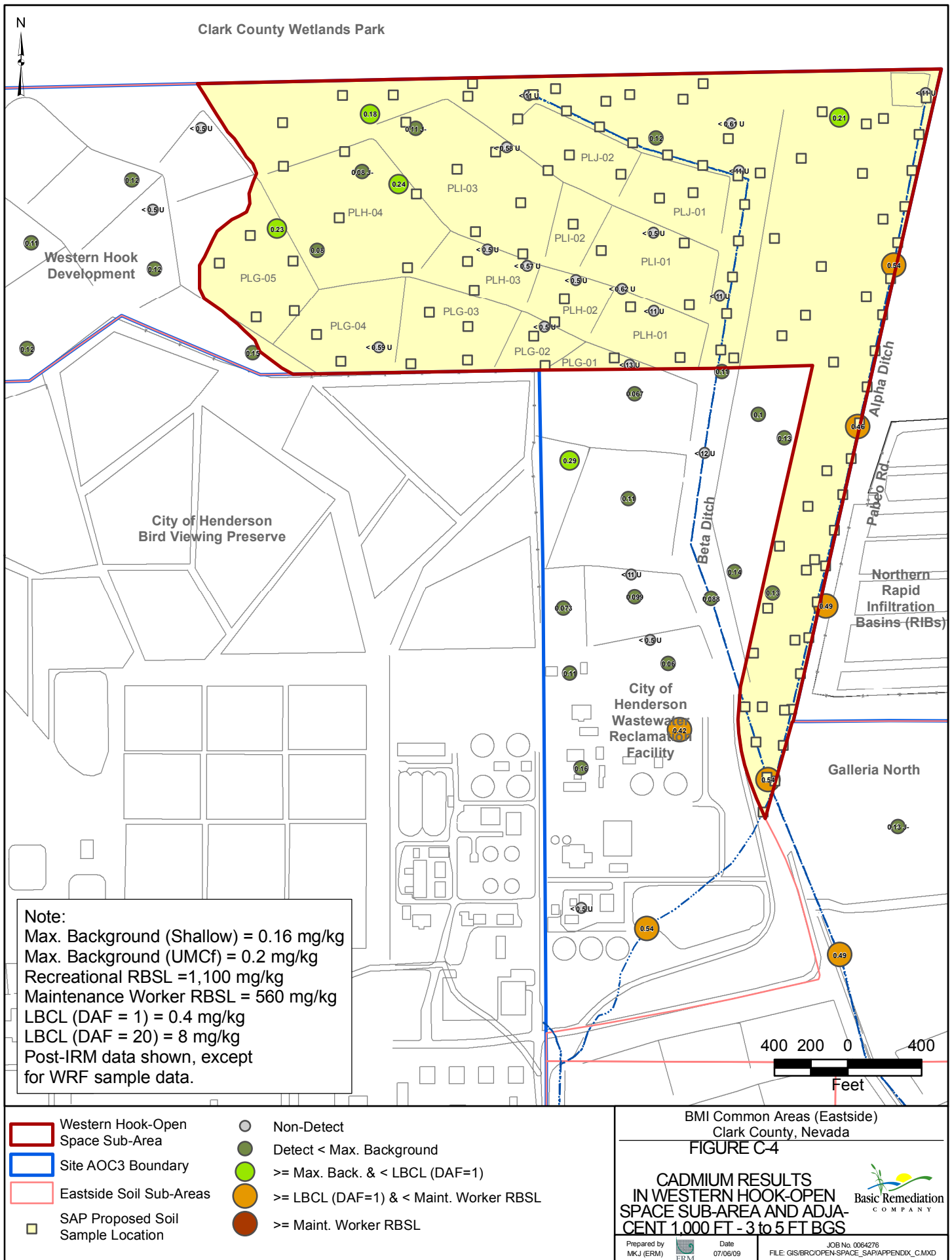
Prepared by
MKJ (ERM)

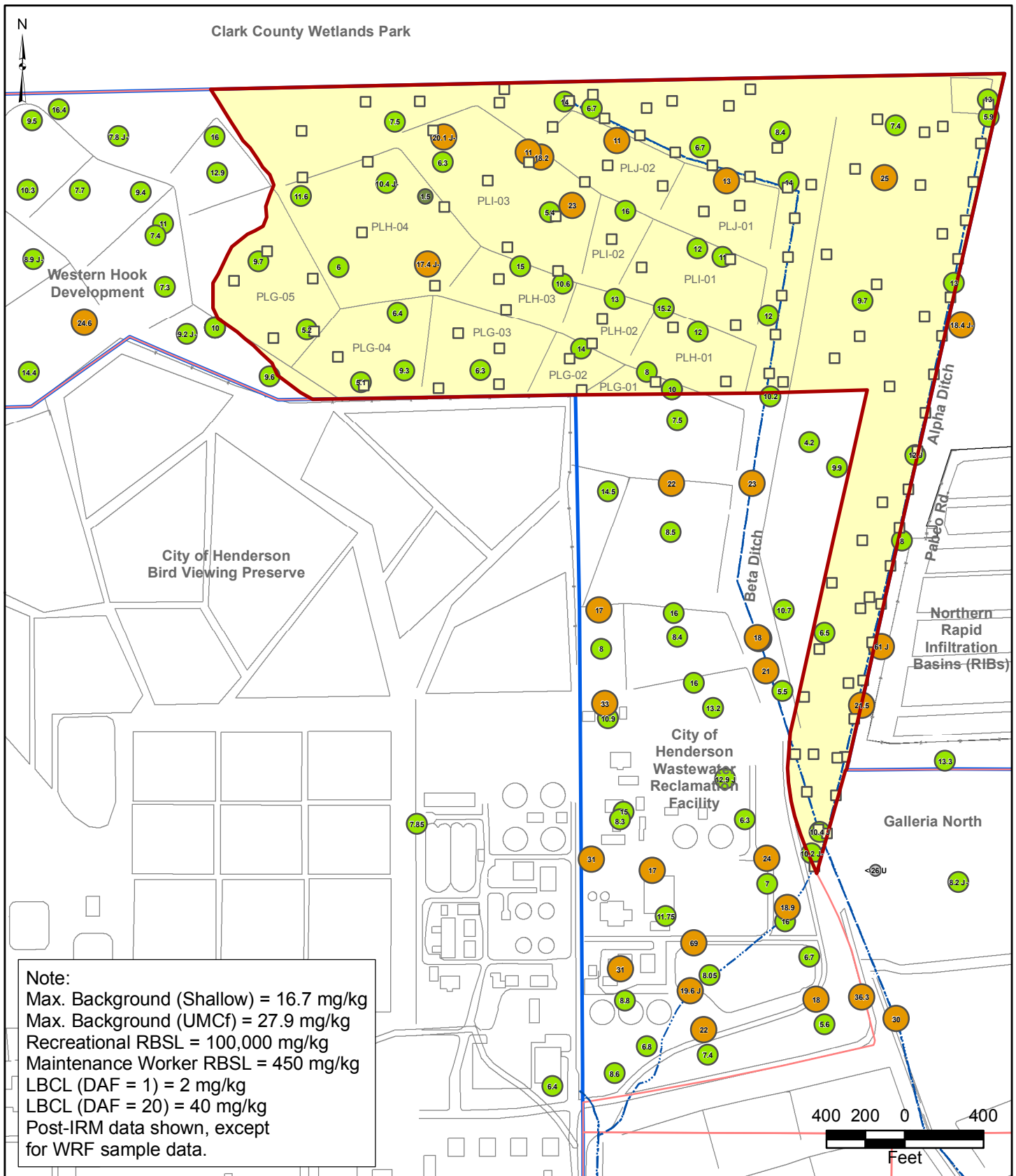


Date
07/06/09

JOB No. 0064276
FILE: GIS\BROOPEN-SPACE_SAP\APPENDIX_C.MXD







BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-5

**TOTAL CHROMIUM RESULTS
IN WESTERN HOOK-OPEN
SPACE SUB-AREA AND ADJA-
CENT 1,000 FT - 0 to 2 FT BGS**

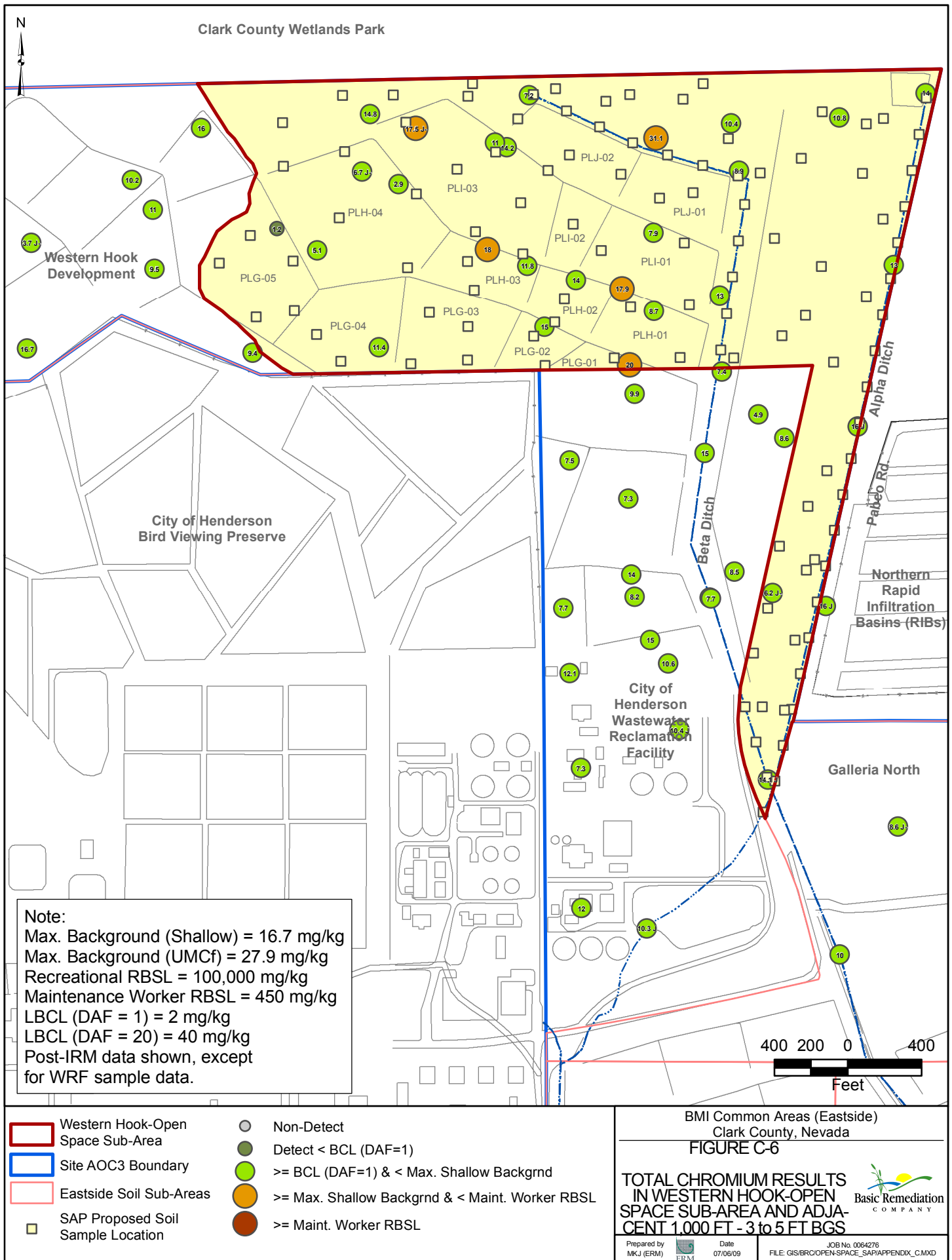


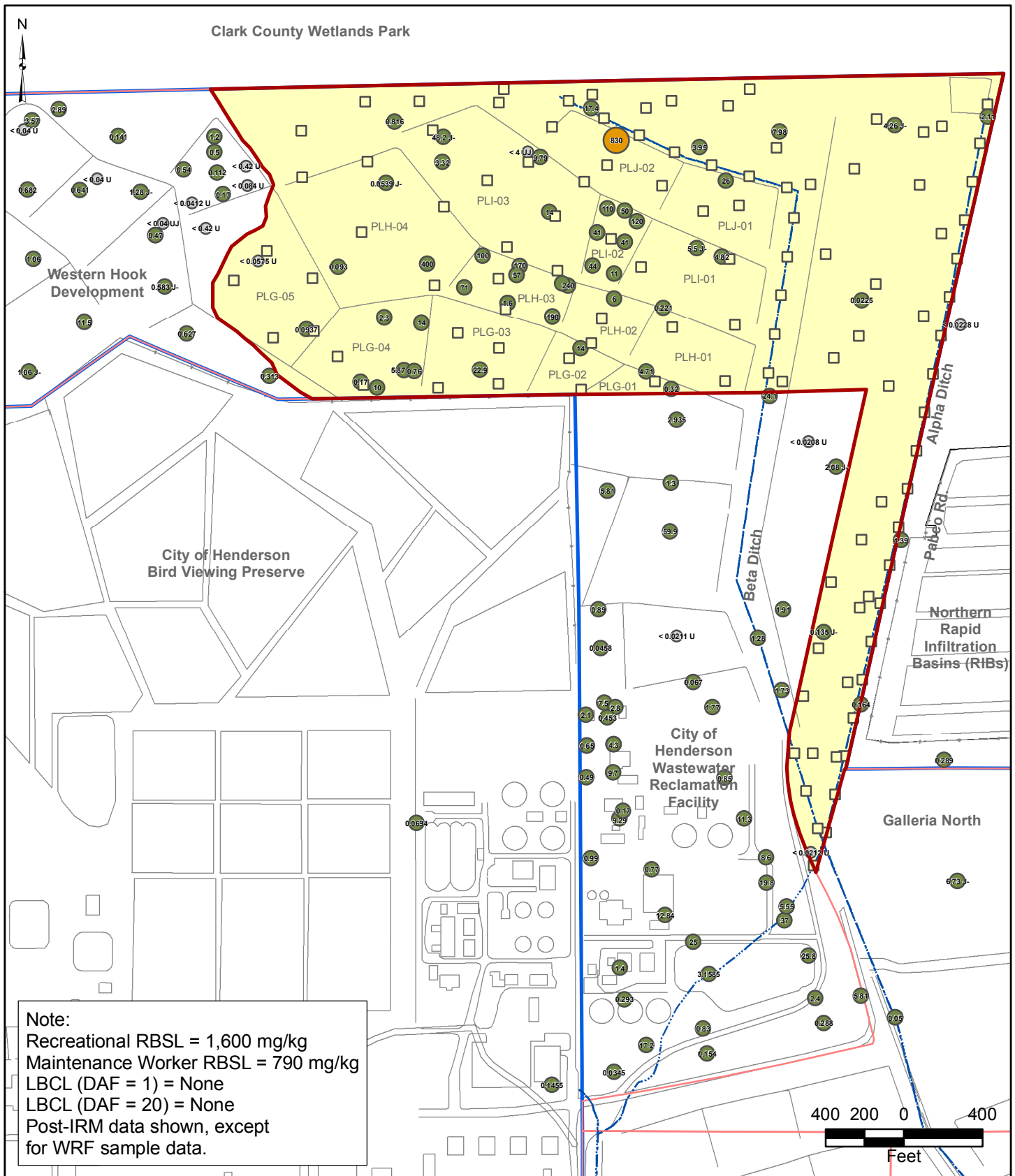
Prepared by
MKJ (ERM)



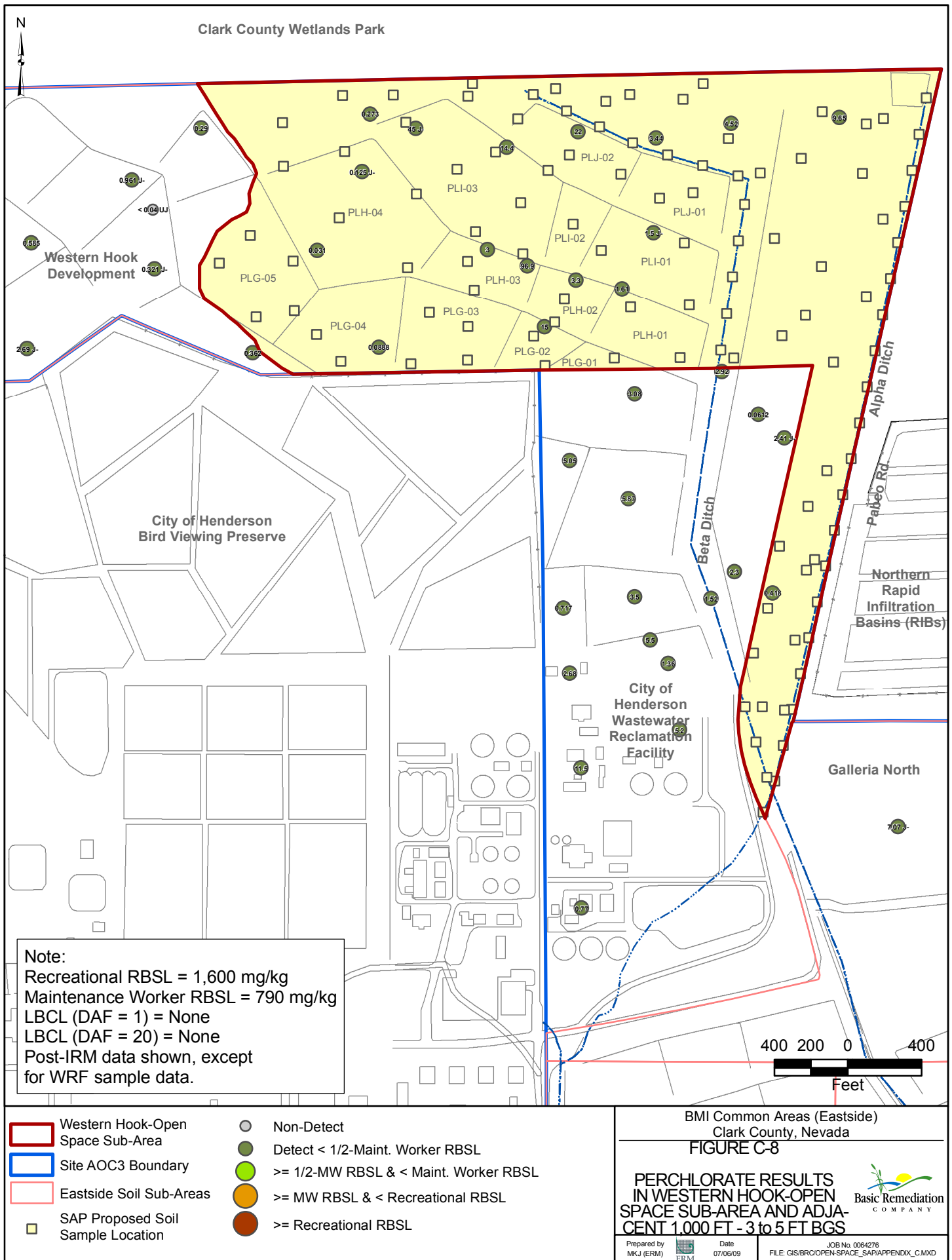
Date
07/06/09

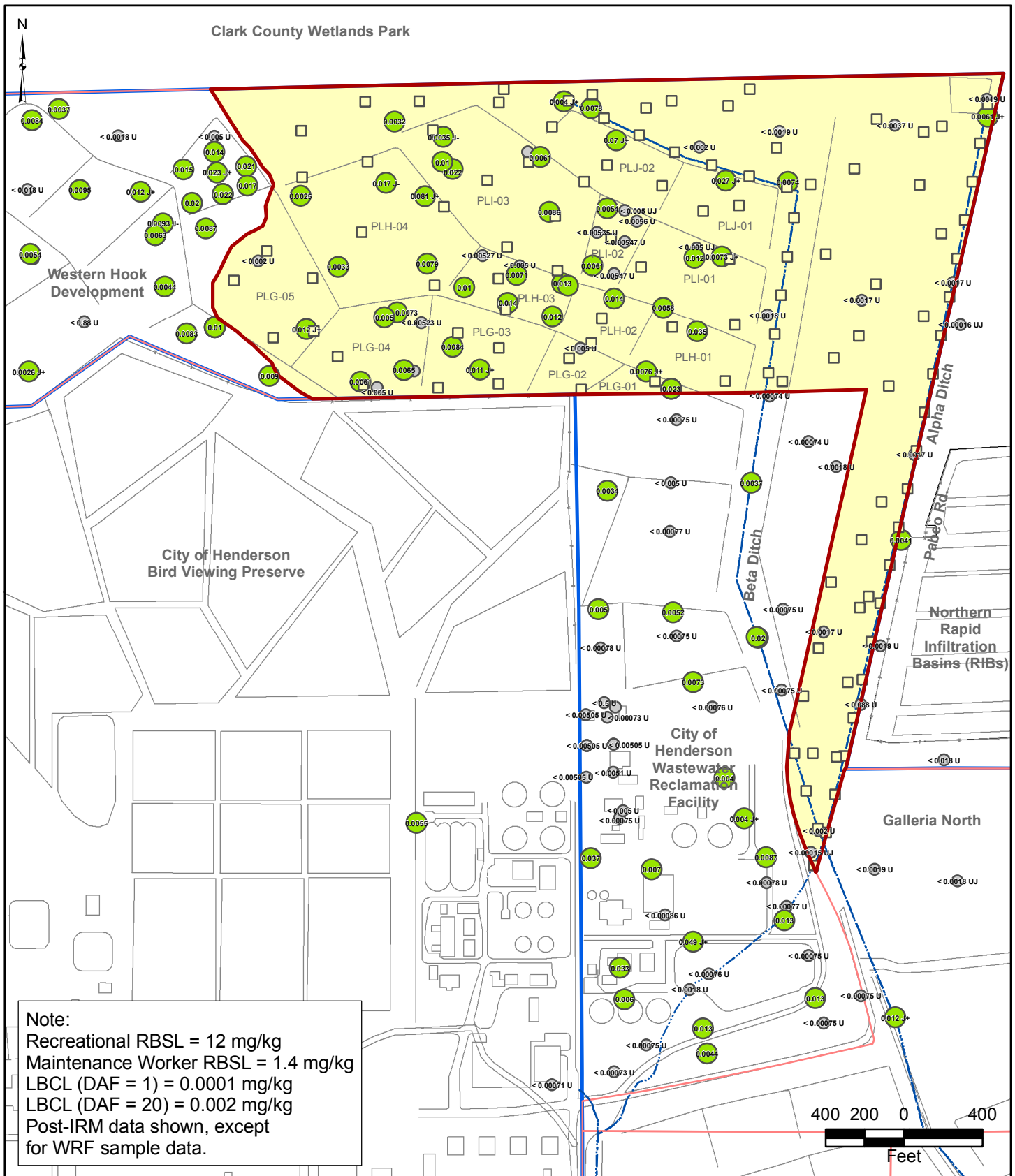
JOB No. 0064276
FILE: GIS\BRC\OPEN-SPACE_SAP\APPENDIX_C.MXD





<ul style="list-style-type: none"> Western Hook-Open Space Sub-Area Site AOC3 Boundary Eastside Soil Sub-Areas SAP Proposed Soil Sample Location 	<ul style="list-style-type: none"> Non-Detect Detect < 1/2-Maint. Worker RBSL >= 1/2-MW RBSL & < Maint. Worker RBSL >= MW RBSL & < Recreational RBSL >= Recreational RBSL 	<p>BMI Common Areas (Eastside) Clark County, Nevada FIGURE C-7 PERCHLORATE RESULTS IN WESTERN HOOK-OPEN SPACE SUB-AREA AND ADJACENT 1,000 FT - 0 to 2 FT BGS</p> <p>Prepared by: MKJ (ERM) Date: 07/06/09 JOB No. 0064276 FILE: GIS\BRC\OPEN-SPACE_SAP\APPENDIX_C.MXD</p> <p>Basic Remediation Company</p>	
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<div style="border: 2px solid red; width: 20px; height: 10px; display: inline-block;"></div> Western Hook-Open Space Sub-Area <div style="border: 2px solid blue; width: 20px; height: 10px; display: inline-block;"></div> Site AOC3 Boundary <div style="border: 2px solid pink; width: 20px; height: 10px; display: inline-block;"></div> Eastside Soil Sub-Areas <div style="width: 10px; height: 10px; border: 1px solid black; display: inline-block;"></div> SAP Proposed Soil Sample Location	<div style="border: 1px solid gray; width: 10px; height: 10px; display: inline-block;"></div> Non-Detect <div style="border: 1px solid darkgray; width: 10px; height: 10px; display: inline-block;"></div> Detect < LBCL (DAF=1) <div style="border: 1px solid green; width: 10px; height: 10px; display: inline-block;"></div> >= LBCL (DAF=1) & < Maint. Worker RBSL <div style="border: 1px solid orange; width: 10px; height: 10px; display: inline-block;"></div> >= MW RBSL & < Recreational RBSL <div style="border: 1px solid brown; width: 10px; height: 10px; display: inline-block;"></div> >= Recreational RBSL	<p>BMI Common Areas (Eastside) Clark County, Nevada FIGURE C-9</p> <p>beta-BHC RESULTS IN WESTERN HOOK-OPEN SPACE SUB-AREA AND ADJA- CENT 1,000 FT - 0 to 2 FT BGS</p> <p>Prepared by: MKJ (ERM) Date: 07/06/09 JOB No. 0064276 FILE: GIS\BROOPEN-SPACE_SAP\APPENDIX_C.MXD</p> <p style="text-align: right;">Basic Remediation COMPANY</p>
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