SAMPLING AND ANALYSIS PLAN FOR THE STAGING SUB-AREA AND PARCEL 9 SOUTH

BMI COMMON AREAS (EASTSIDE) CLARK COUNTY, NEVADA

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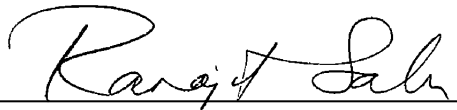
I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable 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.



April 7, 2010

Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2011) 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
BCL_W	Basic Comparison Level for residential water
BCL_{RS}	Basic Comparison Level for residential soil
bgs	below ground surface
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
DQA	data quality assessment
DQOs	data quality objectives
DVSR	Data Validation Summary Report
ECI	Environmental Conditions Investigation
FSSOP	Field Sampling and Standard Operating Procedures
ft/ft	foot per foot
HSA	Hollow Stem Auger
IRMs	interim remedial measures
LBCL	Leaching-based Basic Comparison Level for protection of groundwater
$LBCL_{DAF1}$	LBCL for protection of groundwater (Dilution Attenuation Factor 1)
$LBCL_{DAF20}$	LBCL for protection of groundwater (Dilution Attenuation Factor 20)
MCL	Maximum Contaminant Level
NDEP	Nevada Division of Environmental Protection
NFAD	no further action determination
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
ppt	parts per trillion
PSQs	Principal Study Questions
QA/QC	Quality Assurance/Quality Control
Qal	Quaternary alluvium
QAPP	Quality Assurance Project Plan
RAP	Remedial Action Plan
RIBs	rapid infiltration basins
SAP	Sampling and Analysis Plan

ACRONYMS AND ABBREVIATIONS

SOP	Standard Operating Procedure
SPLP	synthetic precipitation leaching procedure
SRC	Site-related chemicals
SVOC	semi-volatile organic compound
TDS	total dissolved solids
TEQ	toxic equivalency
TPH	total petroleum hydrocarbons
UCL	upper confidence limit
UMCf	Upper Muddy Creek formation
USEPA	U.S. Environmental Protection Agency
VI SL	Vapor Intrusion Screening Level
VOC	volatile organic compound

1.0 INTRODUCTION

Basic Remediation Company (BRC) has prepared this Sampling and Analysis Plan (SAP) for the Staging sub-area and a portion of Parcel 9 (hereinafter, "Parcel 9 South").[1] The SAP describes tasks for performance of confirmation sampling of soils and soil vapor flux in order to obtain a no further action determination (NFAD) for these areas. 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 1, incorporates comments received from the NDEP, dated March 16, 2010, on Revision 0 of the Staging Sub-Area and Parcel 9 South SAP, dated February 2010. 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 February 2010 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 Staging sub-area represents one of several sub-areas of the BMI Common Areas (Eastside) and Parcel 9 South is located to the west and across Boulder Highway from the Eastside property. Both parcels are located in Clark County, Nevada (Figure 1). The Staging sub-area encompasses an area of approximately 65.9 acres[2] and Parcel 9 South is approximately 9.5 acres in size[3] (Figure 2). For the purpose of this SAP, the area associated with both parcels (a total of approximately 75.4 acres) will hereinafter be referred to collectively as the "Site," and distinctions between the portions of the Site will be made when appropriate. The Site is transected by portions of Pabco Road and Warm Springs Road, which are not considered part of the Site.

The primary on-site structures consist of (1) unlined wastewater effluent evaporation/infiltration ponds that were built and into which various plant wastewaters were discharged from 1942

[1] The northern portion of Parcel 9 was granted an NFAD on September 27, 1999; accordingly, this SAP does not include sampling in that area, This SAP represents the last of the SAPs that is planned for the Eastside properties. Parcel 9 South is a very small parcel for which there are no validated historical data. To avoid generation and submittal of a separate SAP for that parcel alone, BRC chose to include Parcel 9 South with the Staging sub-area in a single SAP. This grouping is appropriate given the close proximity of the two parcels, despite the presence of Boulder Highway between them. BRC will determined whether the two parcels will be addressed as part of the same risk assessment at a later time.

[2] This acreage estimate reflects a change from that presented in the Closure Plan (115 acres) that has resulted from the revision of site boundaries that occurred subsequent to Closure Plan finalization.

[3] This parcel was formerly referred to as Exclusion Area 9, for which exclusion status was previously requested but not granted by NDEP.

through 1976 (Staging sub-area only); (2) conveyance ditches associated with the historical effluent discharge (primarily unlined, but including a culverted section of the Beta Ditch in Parcel 9 South); and (3) miscellaneous structures associated with remediation of Eastside soils. These include management/engineering trailers; staging area for trucks; excavation and hauling vehicle parking area; and vehicular and personnel decontamination areas. As agreed in a March 18, 2010 meeting between NDEP and BRC, the decontamination areas and haul roads within the Site will be remediated and sampled after all other activities have been completed for the project in general. That is, these areas will be remediated (with the remainder of the haul roads) last. Sampling in these areas will occur after the remediation is complete.

This SAP relies upon information provided in the BRC Closure Plan for the BMI Common Areas (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);
- 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 (DQA; Closure Plan Section 5).

For certain areas within the BMI Common Areas remediation is planned and/or ongoing based on existing Site data, and will be performed prior to conducting the Site characterization activities such as proposed under this SAP for Site closure; however, no remediation is planned for this Site prior to conducting the sampling in accordance with this SAP, other than (1) clearing of obvious contamination (*e.g.*, burn pits, stained soil, abandoned vehicles, and other debris, if determined to be present on the Site) and (2) removal of materials from other sub-areas that have been temporarily placed within the Staging sub-area pending their ultimate disposal. These clearing activities will occur prior to implementing the procedures described in this SAP.

Because of the various factors discussed below, 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 than employed during the historical sampling events and can thus be more reliably used to delineate areas requiring remediation. Validated, reliable historical data associated with areas or depth intervals not affected by the remediation will be used as appropriate to augment the dataset derived from the SAP activities.[4] However, the following data gaps associated with the existing Site characterization have been identified: the previous soil samples from within the uppermost 10 feet below ground surface (bgs) were collected at least ten 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 vapor flux samples have been collected; and spatial coverage of the Site is incomplete (for example, no historical data are available for Parcel 9 South).

The historical data represent incomplete coverage for certain constituents and will be redundant for others after implementation of this SAP. Therefore, 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 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.

[4] Only those historical data that are representative of the conditions to which current (non-remediation workers) or future users would be exposed (*i.e.*, excluding data associated with soils removed from the Site prior to the risk assessment) and that pass a data usability evaluation will be included in the risk assessment for the Site.

Sampling performed as described in this SAP relies on the statistical methodologies presented in the *Statistical Methodology Report* (NewFields 2006). 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 conditions in soils and soil vapor flux at the Site after remediation has been performed. As described in the Closure Plan, this information will be used to determine potential impacts to current (non-remediation workers) or future Site users from chemicals present in Site soils and whether additional remediation is needed to achieve cleanup goals. In this SAP, as recommended in the Statistical Methodology Report, soil samples will be collected throughout the Site on a systematic sampling basis. This random sampling consists of a regular 3-acre grid overlay across the property with a randomly placed sample within each grid cell. The goal of this sampling is to provide enough samples for 1) completion of a statistically robust assessment of contaminant distribution, and subsequently; 2) 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 interest, including but not limited to previous debris locations, construction-related activity areas, ponds, berm walls, and conveyance ditches. Soil vapor flux samples will be collected from a subset of the soil sampling locations (that is, one sample within each grid cell).

1.1 PURPOSE OF THE SAP

The purpose of this SAP is to develop a sampling program for the Site that will provide an understanding of *pre-development* soil and soil vapor conditions (including any indirect impacts from underlying groundwater) at the Site.[5] Portions of the Site are known to be impacted with chemicals as a result of historical Site operations, and without performing a formal risk assessment; BRC assumes that remediation would be required for protection of human health and the environment. BRC expects that risk assessments for Site closure will primarily use the data collected as part of this SAP, which has been designed to produce data representative of the

[5] This SAP includes summaries of chemical data associated with historical sampling events at the Site. These summaries document the known nature and extent of chemical occurrence at the Site, which was used to identify the need for additional biased sampling locations to augment the sample locations proposed as part of the SAP (Section 4), such that all potential source areas are addressed. This SAP includes a process for adding sampling locations in response to the discovery of currently unknown impacted areas, if any, that may be identified during remediation.

conditions to which current or future (post-development) users would be exposed. Data collected under this SAP will also be used to assess the need for remediation of Site soils.

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 (SRCs) such that the potential impacts from chemicals present in Site soils to current (non-remediation workers) and 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, 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.

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, including a summary of the historical investigations performed at the Site.

2.1 SITE DESCRIPTION

The Site (Figure 2) is approximately 75.4 acres in size[6], and is gently sloping to the northeast. The Site was undeveloped desert land until the construction of various effluent evaporation/infiltration ponds[7] and associated conveyance ditches once associated with historical conveyance and/or disposal of operations effluent and cooling water by companies operating at the BMI Complex. The wastewater effluent evaporation/infiltration ponds were unlined; various plant wastewaters were discharged into these ponds from 1942 through 1976. One row of these ponds, which were defined by berms along the north, east, and west sides, traversed the Staging sub-area; evaporation/infiltration ponds were not historically present in Parcel 9 South. Remnants of the evaporation/infiltration ponds are visible in historical aerial photographs of the Site (Figure 3). Historical aerial photographs do not show evidence of fluids within the ponds, with the exception of the easternmost edge of the Staging sub-area, into which the City Rapid Infiltration Basins (RIBs) to the south appear to have directed effluent. Darkened discoloration in that area that is presumed to reflect effluent discharge is observed in aerial photographs taken during the 1960s (Figure 3; see 1968 aerial photograph); by 1974, this practice appears to have ended, based on aerial photographs taken at that time and subsequently.

[6] This delineation of the Site boundaries and the associated acreage estimate reflect a change from the Closure Plan that has resulted from the revision of site boundaries that occurred subsequent to Closure Plan finalization. The Staging area combined acreage has decreased from the 115 acres presented in the Closure Plan

[7] The Closure Plan and historical documents associated with the BMI Common Areas distinguish two primary sets of ponds in the BMI Common Areas that are associated with historical conveyance and/or disposal operations: the "Upper Ponds" and the "Lower Ponds". The pond row labels shown on Figure 1 distinguish between the two; the 18 rows of Upper Ponds are labeled with a "U" followed by a letter (A through R) and the ten rows of Lower Ponds are labeled with an "L" followed by a letter (A through J). The Upper Ponds are the basis of the name applied to the Upper Ponds sub-area; but the Upper Ponds sub-area does not encompass all of the Upper Ponds, rather only the northern half of the Upper Ponds, which had little to no historical usage (the southern portion of the Upper Ponds are within the First Eight Rows [Phases I and II], TIMET Ponds, and Spray Wheel sub-areas). The Lower Ponds are located further north on the BMI Common Areas, within the Western Hook-Development and Western Hook-Open Space sub-areas, and were previously located within the footprint of the City of Henderson WRF prior to its construction, during which they were regraded.

In addition to the unlined, open air drainage ditches typical of those observed elsewhere on Eastside, the Site contains other associated features that are unique to this Site (see Figures 2 and 3), specifically (1) a subsurface, culverted extension to the Beta Ditch (historically known as the BMI Siphon) that traverses Parcel 9 South, passes beneath Boulder Highway, and terminates at an outlet on the other side within the Staging sub-area; and (2) a cross-over pipe within the Staging sub-area that allowed operators of ditch effluent to divert flows between the Alpha and Beta Ditches, as desired. In addition to effluent conveyance and discharge, other historical activities at the Site are as follows, and are evident in several of the historical aerial photographs provided on Figure 3:

- Borrow pits are noted in historical topographic maps (1970; photorevised 1983) as being present in the southwest corner of the Staging sub-area, near the intersection of the Alpha and Beta Ditches. The project team has found no documentation of use of this area for borrow pits; however, surface expressions of disturbances in this area are apparent in aerial photographs through the 1980s. Aerial photographs show a history of soil disturbance in this area (Figure 3, 1950 photograph, light colored patches relative to the surrounding ground surface), followed by dark discoloration suggesting the presence of topographic depressions in two separate features (most obvious in photographs representing the period from 1969 through 1976). The discoloration could be associated with various conditions (*e.g.*, surface water ponding, stained soils, disposal of materials darker in color than the native soils, vegetative growth), which cannot now be determined with certainty. Subsequent aerial photographs suggest that these depressions were filled in over time, and current aerial photographs show no obvious surface expressions of these features. An area of buried debris was observed in 1998 in this area during site walks conducted in preparation for the then-proposed Warm Springs/Pabco Road realignment. Trenches were dug in this area prior to the realignment construction activities to evaluate environmental conditions within the then-proposed realignment. Demolition debris (*e.g.*, primarily soil, concrete, glass, asphalt, rebar, and piping) was observed to depths of approximately 7 feet bgs in those trenches. The source of this debris is unknown. Because debris tends to be preferentially placed into depressions, it is plausible that borrow pits once existed in this area.

- According to the Montrose Phase II report (Montrose 1997), demolition debris from the former Montrose facility was disposed of in the Staging sub-area, south of the TIMET Active Ponds. That report included a review of historical aerial photographs (from select years between 1964 and 1992) to attempt to identify the location of the demolition disposal area for the former Montrose facility, as no information on the exact location of the disposal area was

available. As presented in that report, the aerial photograph review indicated the potential disposal of materials in an area immediately south of the Pabco Road ponds from the early 1970s to 1982. However, the timeline of these observations is not consistent with disposal of debris from the Montrose facility, because the Montrose facility was reportedly not in the process of being demolished until 1984, after activities in this apparent debris area appear to have ceased. Therefore, even though the nature of the debris in the area, as described in the prior bullet, is consistent with demolition debris, the disposal operations in this area are presumed to be associated with activities other than the demolition of the Montrose facility.

- Miscellaneous objects are observable within what appears to be a square fenced area in the northwestern corner of the Staging sub-area, immediately south of the Upper Ponds, in aerial photographs taken from the mid 1970s to the 1990s (see 1990 aerial photograph on Figure 3). The exact nature of these objects is unknown, but the fenced area appears to be related to construction and management of the TIMET Ponds.

- As noted above, in the late 1990s, the Pabco Road/Warm Springs Road intersection was shifted eastward onto the Site (Figure 3). A portion of Pabco Road currently transects the Site, and Warm Springs Road has been extended across Boulder Highway along the southern boundary of the Staging sub-area. These roadways are paved and in use at the time of this report. The road rights-of-way are excluded from the Site property proper, as the footprints of these roads were granted an NFAD on October 6, 1998. Activities related to construction of these parts of Pabco Road and Warm Springs Road could have had some influence on soil characteristics within the Site, possibly including contamination.

- In the early 1990s, the RIBs south of the TIMET Ponds were appreciably expanded; a portion of the RIB located furthest to the northwest falls within the Staging sub-area boundaries (Figure 3). These RIBs were in use from approximately 1992 to 2002 by the City of Henderson for municipal wastewater treatment (see 2001 aerial photograph on Figure 3).

- Starting in 2008, staging activities associated with the excavation of soils from other Eastside areas were conducted at the Staging sub-area. Activities conducted in the Staging sub-area included: (1) construction management, including construction trailers that provided storage of supplies and offices for management and field personnel; (2) equipment decontamination, including paved pads for rinsing off vehicles and miscellaneous field equipment, decontamination water tanks, and ponds for storage of decontamination rinse water; (3) vehicle and excavation equipment storage, service and refueling; (4) designated haul roads for transport of impacted materials to the off-site Corrective Action Management Unit

(CAMU); and (5) employee/visitor parking. At the time of this SAP submittal, the contents of the lined ponds in the TIMET Ponds sub-area have been excavated and transported to the CAMU for disposal in accordance with the *Corrective Action Plan* (CAP; BRC 2006). For certain ponds, dewatering was performed to reduce the moisture content to a level appropriate for placement into the CAMU. A portion of the Beta Ditch within the Staging sub-area has been used as a temporary staging area for certain materials removed from the TIMET Ponds prior to transportation of these materials to the CAMU. Details regarding the dewatering and staging process will be provided in the Closure Report for the TIMET Ponds sub-area.

Most of the former effluent ponds in the Staging sub-area have been disturbed by Site activities undertaken after their use was discontinued. The native soils are compacted, poorly-sorted, non-plastic, light brown to red silty sand with varying amounts of gravel.

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 may be used for a variety of potential purposes. Residential (low, medium and high density), retail/commercial, and urban core land uses with roads, parks and trails interspersed, is currently planned for the Staging sub-area.[8] The entire Site will be enhanced by restoration and redevelopment once remediation is complete. Therefore, exposures to ecological receptors will be mitigated or removed (see Section 10 of the Closure Plan). 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 4. To construct commercial facilities, the land will be cut and/or filled, paved with roads or foundations, and nurtured with imported soils from other areas within the BMI Common Areas[9] as needed. Figure 5 shows the current grading plan for the Site, indicating which areas will be filled and which areas will be cut.

[8] A development and grading plan has not yet been developed for Parcel 9 South.
[9] 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 the fill was obtained).

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 compounds (VOCs) and radon from soil and groundwater to indoor air. 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.

Parcel 9 South is not directly adjacent to any Eastside sub-areas; it is bounded by Boulder Highway to the east, Parcel 9 North to the north (former BMI Common Areas property granted NFA status in September 1999), and the BMI Complex to the south and west. The Staging sub-area is bounded by the Pittman area to the west, and is surrounded on the other three sides by Eastside sub-areas as follows (Figure 1):

- The TIMET Ponds sub-area (approximately 269.5 acres[10]) to the north and east; and
- The Southern RIBs sub-area (approximately 84.2 acres[11]) to the south and east.

Chemicals historically detected in these sub-areas are similar to those found at the Site.

The phased remediation schedule for Eastside calls for the TIMET Ponds and Southern RIBs sub-areas to be remediated prior to the Site. Human health risk assessments will be conducted for these sub-areas to determine whether an NFAD is warranted after sampling is performed in accordance with the SAPs for those areas (BRC 2010, approved by NDEP on January 29, 2010; and BRC 2008a, approved by NDEP in September 11, 2008, respectively) to delineate locations requiring remediation.

[10] Subsequent to Closure Plan finalization, the boundaries of the TIMET Ponds sub-area were revised; as a result, the acreage specified in this sub-section for that sub-area is not consistent with that specified in the Closure Plan.
[11] Subsequent to Closure Plan finalization, the boundaries of the Southern RIBs sub-area were revised, including the establishment of a separate Staging sub-area from within the original Southern RIBs sub-area; as a result, the acreage specified in this sub-section for that sub-area is not consistent with that specified in the Closure Plan.

Remediation of the adjacent sub-areas may occur after sampling is performed at the Site in accordance with this SAP. Based on historical sampling, and as presented in the SAPs for those sub-areas, soils in those sub-areas contain chemicals at concentrations greater than applicable comparison levels for protection of human health and groundwater protection (see Section 2.7). Remediation at this adjacent sub-area involves major earth-moving activities and could result in a significant amount of airborne dispersion and/or overland runoff that could adversely affect Site conditions (thus potentially rendering the SAP Site sampling results unrepresentative) if mitigation measures were not employed. However, potential impacts from these off-site areas to the Site are considered negligible because dust suppression/mitigation measures and storm water pollution prevention controls will be implemented at each sub-area undergoing remediation[12]. These dust suppression controls are implemented to comply with applicable air quality regulations and to impede the generation of airborne dust due to intrusive on-site activities. These control measures are discussed in detail in the CAP (BRC 2006). In addition, emissions of particulate matter from the Site will be monitored by BRC as described in the *Perimeter Air Monitoring Plan* (BRC 2008b) to assess the effectiveness of these dust control measures.

At the time of this SAP submittal, the contents of the lined ponds in the TIMET Ponds sub-area have been excavated and transported to the CAMU for disposal in accordance with the CAP. For certain ponds, dewatering was performed to reduce the moisture content to a level appropriate for placement into the CAMU. The First Eight Rows, Spray Wheel, and Staging sub-areas have been used as temporary staging areas for these activities prior to the soils being transported to the CAMU. Details regarding the above activities will be provided in the Closure Report for the TIMET Ponds sub-area.

2.2 SURFACE WATER

Surface water flow occurs for brief periods of time during periodic precipitation events. The unlined wastewater effluent evaporation/infiltration ponds within and topographically downgradient of the Site currently serve to reduce overland transport of surface waters collected within the former Ponds area. Under current conditions, it is unlikely that contaminants in surface waters generated within the Site will migrate via overland transport to the Las Vegas

[12] The possibility exists that airborne dispersion and/or overland transport of surface soils/sediments from adjacent sub-areas could have historically resulted in contamination at the Staging sub-area. However, if this was in fact the case, the nature and extent of associated impacts would be evident from historical surface soil data, and/or the data to be collected under this SAP. The need for remediation of the Staging sub-area will be based on current chemical concentrations in Site soils regardless of the source of contamination, and including airborne dispersion and overland transport, if any.

Wash from the Site due to (1) the distance to the Wash (approximately 2 miles); and (2) the intervening presence of developed areas (including the Pittman area, the City of Henderson bird viewing preserve and water reclamation facility, Weston Hills and Tuscany developments and northern RIBs) between the Site and the Wash. However, the presence of the drainage ditches within the Site suggests the current potential for rainfall to be carried from the Site to the Wash.

After development there will continue to be a low likelihood that contaminants in surface waters generated within the Site will migrate via overland transport to the Las Vegas Wash from the Site, because of (1) the removal of the conveyance ditches during remediation; (2) the large distance to the Wash; (3) the intervening presence of other developed properties; and (4) storm water features as part of the future development of the Site.

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 from the River Mountains and from the volcanic source rocks in the McCullough Range, located to the southeast and southwest 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 55 to 60 feet thick at the Site with variations due, in part, to the non-uniform contact between the Qal and the underlying Upper Muddy Creek Formation (UMCf).

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. 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 at depths ranging from 55 feet to 60 ft bgs, and extending to the maximum explored depth of 400 feet bgs. Lithologic cross sections using Site-specific stratigraphic information are shown on Figures 6 and 7.

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[13]), 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. Based on recent groundwater monitoring performed in 2009, the depth from the surface to first groundwater at the Site is approximately 40 to 50 feet bgs. 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 2.8.[14]

Groundwater seeps currently exist at various locations within the BMI Common Areas near the Las Vegas Wash. However, an evaluation of historical aerial photos taken between 1964 and 1970 indicates that seeps have historically appeared to the north of the Site (in the Western Hook-Open Space, Galleria North, and Sunset North Commercial sub-areas), and at nearby off-site locations, but not in the Site itself. 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.

[13] Note: hydrogeologic and lithologic nomenclature is based on NDEP (2009a).

[14] 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.

2.4 HISTORICAL SITE INVESTIGATIONS

Shallow soil samples were collected within the Site during the following separate events (see Figure 2 for sample locations in the Staging sub-area;[15] 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 accordance with a work plan approved by NDEP in February 1996 (ERM 1996a). The soil sampling results for the investigation activities were 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;

- An investigation conducted in 1998 in the rights-of way for the Pabco Road realignment and Warm Springs Road extension (dataset 2). The soil investigation activities were performed in accordance with a March 26, 1998, work plan. The soil sampling results for the investigation activities were presented in a July 9, 1998 letter report that was submitted to NDEP (ERM 1998). NDEP granted a No Further Action Status of the rights-of-way on October 6, 1998. Data validation results are presented in the DVSR for dataset 2 (ERM 2006b), which was approved by NDEP on October 25, 2006;

- A TIMET Ponds investigation conducted in 2000 (dataset 9) to evaluate the nature and volume of (1) pond materials that could require dewatering and/or disposal, and (2) impacted soils adjacent to and beneath the ponds. The soil investigation activities were performed in accordance with an internal work plan that was not approved in advance by NDEP. The soil sampling results for the investigation activities have not been presented in an NDEP-approved report. Data validation results are presented in the DVSR for dataset 9 (MWH 2006a), which was approved by NDEP on November 3, 2006;

- An investigation conducted during December 2000/January 2001 (dataset 14) to assess conditions in this area to support potential transfer of the property for educational uses. The soil investigation activities were not performed in accordance with an NDEP-approved work plan and the soil sampling results have not been formally presented to NDEP prior to

[15] As seen in Figure 2, no historical sampling locations are associated with Parcel 9 South.

this SAP. Data validation results are presented in the DVSR for dataset 14 (MWH, 2006b), which was approved by NDEP on 8 November 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 2006c), which was approved by NDEP on November 3, 2006.

During these investigations, soil samples at various depths were collected and analyzed for VOCs, semi-volatile organic compounds (SVOCs), organochlorine pesticides, organophosphorus pesticides, polychlorinated biphenyls (PCBs), chlorinated herbicides, dioxins/furans, polynuclear aromatic hydrocarbon (PAHs), metals, general chemistry, perchlorate, and/or radionuclides. The data associated with these investigations are included in the database excerpt provided in Appendix B.

2.5 INTERIM REMEDIAL MEASURES (IRMs)

This section is intended to describe the various on-site and off-site IRMs affecting the Site that have been performed to date by BRC as part of the overall Eastside remediation effort. By definition, IRMs are "interim" remedial activities conducted at a given site, performed in advance of: (1) longer-term evaluations of applicable remedial options, (2) selection of a final remedy to address conditions at that site, and (3) implementation of that remedy. As previously noted, a final remedy for the Site has been selected and the CAP has been approved by NDEP.

In 2000, a localized IRM was initiated in the Beta Ditch (Figure 2) to address elevated detections of metals, hexachlorobenzene and dioxins, but BRC elected to pursue further remediation, as needed, in accordance with the standard closure process set forth in the Closure Plan. The initial IRM was not performed in accordance with an NDEP-approved work plan. Sample data collected prior to and during the IRM are presented in the data tables in Appendix B.

Starting in Summer 2008, the TIMET ponds were dewatered, and their contents were removed and transported to the off-site CAMU for disposal. In some cases, pond contents were temporarily staged in secured locations within the First Eight Rows, Spray Wheel, and Staging sub-areas for further dewatering to reduce the moisture content to a level appropriate for

placement into the CAMU. The stockpile locations were near the southern boundary of the Staging sub-area, along the Beta Ditch, as evidenced by dark coloration in Figure 2. As of the date of this report submittal, these stockpiled soils have been removed to the CAMU. During soil handling, the soils were treated to prevent generation of wind-blown dusts and runoff. Activities associated with stockpile management and disposal in the CAMU are documented in daily progress reports and monthly Interim Status Reports that are regularly submitted to NDEP. As specified in the CAP, remedial activities for a given sub-area will be documented in the Closure Report prepared at the conclusion of remediation at that sub-area. As such, interim stockpile storage, removal, and disposal in the CAMU will be discussed in the TIMET Ponds Closure Report.

2.6 IRM-RELATED CONFIRMATION SAMPLING

The results of confirmation sampling performed during the activities associated with excavation of the former pond contents will be provided in the Closure Report for the TIMET Ponds sub-area. Given the impending sampling that will be conducted in accordance with this SAP, no confirmation sampling has been performed in either the localized IRM area within the Beta Ditch or the temporary stockpile area within the Staging sub-area since removal of those materials.

2.7 CHEMICAL DISTRIBUTION WITHIN SOILS

This section provides summaries of chemical data associated with historical sampling events conducted by BRC at the Site, all of which are associated with the Staging sub-area. It should be noted that because no sampling has been subsequently conducted in the areas affected by the IRM and temporary storage of TIMET Ponds materials noted above, the summary tables and chemical distribution figures and summaries presented later in this section do not reflect current conditions (*i.e.*, conditions at the time of this SAP submittal). The historical data were used to assess the need for biased sampling locations to augment the sample locations proposed as part of the SAP (Section 4), such that all potential source areas are addressed in the SAP sampling program. The historical data summaries are accordingly provided in this SAP to present the known nature of impacts at the Site such that the adequacy of the sampling program in this SAP can be demonstrated. Recognizing that the historical data summaries do not reflect current conditions, this SAP includes a process for adding sampling locations in response to the discovery of currently unknown impacted areas, if any, that may be identified during remediation (Section 4).

A summary of historic, compound-specific soil chemical data for the Site from surface to 10 feet bgs is presented in Table 1. Location-specific historical sampling results associated with the Site, including depth intervals deeper than 10 feet bgs, are provided in Appendix B, Tables B-1 through B-10, and included electronically in Appendix B. Sample locations are shown on Figure 2. Various applicable constituent-specific comparison levels are provided on the tables for reference, specifically:

- NDEP Basic Comparison Levels (BCLs) for residential soil (NDEP 2009b), hereinafter "BCL_{RS}",
- NDEP BCLs for protection of groundwater (LBCL), assuming dilution attenuation factors (DAF) of 1 and 20 (NDEP 2009b), hereinafter "LBCL", and
- The maximum background concentration (for metals and radionuclides only), derived from the background soil dataset for the BMI Common Areas presented in *Background Shallow Soil Summary Report, BMI Complex and Common Areas Vicinity* (BRC/TIMET 2007), which was approved by NDEP on July 26, 2007. Establishment of background conditions for the BMI Common Areas project is complicated by the unique geologic conditions in the area, specifically, the BMI Common Areas location at the confluence of alluvial fan deposits from the McCullough Range to the southwest and the River Mountains to the east. The Staging sub-area and Parcel 9 South both appear to be underlain by sediments that are derived from the McCullough Range, and background conditions associated with soils in this area are expected to be comparable to those used as comparison levels in this report, which are primarily associated with alluvial fan deposits derived from the McCullough Range.

Figures showing the 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 BCL_{RS} exceedances were observed for that constituent at concentrations in excess of background concentrations; and/or (3) an appreciable number of LBCL exceedances (DAF1) were observed for that constituent at concentrations in excess of background concentrations. For organochlorine pesticides, a single representative constituent (4,4-DDE) was selected for graphical display. 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 BCL_{RS} or $LBCL_{DAF1}$:

Constituent	Soil Depth	Figure No.
Arsenic	0 to 2 feet bgs	Figure C-1
	3 to 10 feet bgs	Figure C-2
Barium	0 to 2 feet bgs	Figure C-3
	3 to 10 feet bgs	Figure C-4
Cadmium	0 to 2 feet bgs	Figure C-5
	3 to 10 feet bgs	Figure C-6
Chromium	0 to 2 feet bgs	Figure C-7
	3 to 10 feet bgs	Figure C-8
Lead	0 to 2 feet bgs	Figure C-9
	3 to 10 feet bgs	Figure C-10
Mercury	0 to 2 feet bgs	Figure C-11
	3 to 10 feet bgs	Figure C-12

Constituent	Soil Depth	Figure No.
Silver	0 to 2 feet bgs	Figure C-13
	3 to 10 feet bgs	Figure C-14
Vanadium	0 to 2 feet bgs	Figure C-15
	3 to 10 feet bgs	Figure C-16
4,4-DDE	0 to 2 feet bgs	Figure C-17
	3 to 10 feet bgs	Figure C-18
1,2,4-Trichloro-benzene	0 to 2 feet bgs	Figure C-19
Hexachlorobenzene	0 to 2 feet bgs	Figure C-20
	3 to 10 feet bgs	Figure C-21

These figures also include all results within 1,000 feet of the Site from the adjacent sub-areas 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 BCL_{RS}. In addition, to assess the potential for impacts to groundwater quality, chemical detections at the Site were also compared to the LBCL (DAF 1; $LBCL_{DAF1}$) established for each chemical. However, it should be noted that the maximum reported background concentrations[16] for several metals (for example, arsenic) are appreciably higher than the comparison levels. In these cases, the evaluations focused on those BCL_{RS} and $LBCL_{DAF1}$ exceedances that were higher than the maximum background concentrations 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.

2.7.1 Arsenic

Of the 32 Site soil samples in which arsenic was analyzed (15 surface[17] and 17 subsurface samples; Table B-1), arsenic was detected in approximately 34 percent (11 samples). All of the detections were higher than the 0.39 mg/kg BCL_{RS} and the 1 mg/kg $LBCL_{DAF1}$. Six samples had reported arsenic concentrations in excess of the maximum shallow soil background level (7.2 mg/kg; from BRC/TIMET 2007). These background exceedances are associated with the following samples:

[16] Values used are the maximum from the shallow soils background dataset presented in the *Background Shallow Soil Summary Report, BMI Complex and Common Area Vicinity* (BRC/TIMET 2007).
[17] Surface samples are defined as those collected from the surface to 2 feet bgs; subsurface samples are defined as those collected from depths greater than 2 feet bgs.

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
SC-1	0	7.3
ROW-04	5	7.5
ROW-04	0	19
BDB-09	0	61.3 J-
BDB-09	5	77.5 J-
BDB-11	0	104 J-

The reporting limits for the non-detections were sufficiently low such that detections greater than background, if present, would have been reported. The distribution of arsenic for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-1 and C-2, respectively.

2.7.2 Barium

Barium was detected in all of the 32 Site soil samples in which barium was analyzed (15 surface and 17 subsurface samples; Table B-1). One of the detections was higher than the 15,300 mg/kg BCL_{RS} (17,600 mg/kg in the surface sample from BDB-11); all of the barium detections exceeded the 82 mg/kg $LBCL_{DAF1}$. Only four detections were higher than the maximum background concentration of 836 mg/kg. The four samples with barium detections greater than background were as follows:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
DA-T2	0	920
BDB-09	5	1490 J
BDB-09	0	8510 J
BDB-11	0	17600 J

The distribution of barium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-3 and C-4, respectively.

2.7.3 Cadmium

Of the 31 Site soil samples in which cadmium was analyzed 14 surface and 17 subsurface samples; Table B-1), it was detected in approximately 10 percent (3 samples). None of the detections were higher than the 38.9 mg/kg BCL_{RS}, but two results exceeded the 0.4 mg/kg $LBCL_{DAF1}$. These two cadmium results are also higher than the 0.16 mg/kg maximum background concentration, and are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-11	5	0.92
ADB-01	5	2.1 J-

It should be noted that many of the reporting limits employed during the historical sampling events are higher than the $LBCL_{DAF1}$ and the maximum background concentration, and it is unknown whether cadmium is also present in those samples at concentrations in excess of the $LBCL_{DAF1}$/maximum background concentration. The reporting limits were sufficiently low such that concentrations in excess of the BCL_{RS}, if present, would have been reported. The distribution of cadmium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-5 and C-6, respectively.

2.7.4 Chromium

Chromium (Total) was detected in 94 percent of the 32 Site soil samples in which it was analyzed (15 surface and 17 subsurface samples; Table B-1). Three detections were higher than the 243 mg/kg BCL_{RS}. In addition, all of the chromium detections were higher than the 2 mg/kg $LBCL_{DAF1}$. Approximately half of these detections (14 detections) were higher than the 16.7 mg/kg maximum background detection. These 14 chromium exceedances higher than background are associated with the following locations:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
DA-T1	3	17
SC-1	0	18
ROW-02	3	19
SC-1	5	19
DA-T2	5	23
BDB-11	5	30.1 J
ADB-01	0	32

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ADB-01	5	36
ROW-04	0	41
DA-T2	0	60
ROW-04	5	240
BDB-09	5	498 J
BDB-09	0	817 J
BDB-11	0	1500 J

The distribution of chromium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-7 and C-8, respectively.

2.7.5 Iron

Iron was detected in all three of the Site soil samples in which it was analyzed (one surface and two subsurface sample; Table B-1). None of the detections were higher than the 54,800 mg/kg BCL_{RS}. However, all three detections were higher than the 7.56 mg/kg $LBCL_{DAF1}$ as well as the 19,700 mg/kg maximum background detection. The three background exceedances are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
SC-1	5	20000
SC-1	10	20000
SC-1	0	22000

2.7.6 Lead

Lead was detected in all 32 of the Site soil samples in which it was analyzed (15 surface and 17 subsurface samples; Table B-1). Three of these detections were higher than the 400 mg/kg BCL_{RS} and the maximum background concentration for lead (35.1 mg/kg); a $LBCL_{DAF1}$ has not been established for this constituent. These three exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-04	5	640
BDB-09	0	2600 J
BDB-11	0	3920 J

The distribution of lead for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-9 and C-10, respectively.

2.7.7 Magnesium

Magnesium was detected in all three of the Site soil samples in which it was analyzed (two surface and one subsurface samples; Table B-1). None of the detections were higher than the 100,000 mg/kg BCL_{RS}. However, all of the detections were higher than the 649 mg/kg $LBCL_{DAF1}$. All of the detections were lower than the 17,500 mg/kg maximum background detection.

2.7.8 Manganese

Manganese was detected in all three of the Site soil samples in which it was analyzed (two surface and one subsurface samples; Table B-1). No detections were higher than the 1,080 mg/kg $BCL_{RS.}$ All three detections were higher than the 3.26 mg/kg $LBCL_{DAF1}$. However, all of the detections were lower than the 1,090 mg/kg maximum background detection.

2.7.9 Mercury

Of the 32 Site soil samples in which mercury was analyzed (15 surface and 17 subsurface samples; Table B-1), it was detected in 7 samples. No detection was higher than the 12.5 mg/kg BCL_{RS}, but all seven results exceeded the 0.105 mg/kg $LBCL_{DAF1}$. Six of these detections were higher than the 0.11 mg/kg maximum background detection. These 6 mercury exceedances higher than background are associated with the following locations:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-11	5	0.14 J+
DA-T2	0	0.17
BDB-09	5	0.2 J+
ROW-04	5	0.2
BDB-09	0	1.1 J+
BDB-11	0	1.9 J+

The reporting limits for non-detections were all lower than BCL_{RS}, and most were sufficiently low such that concentrations in excess of the $LBCL_{DAF1}$, if present, would have been reported. The distribution of mercury for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-11 and C-12, respectively

2.7.10 Silver

Of the 32 Site soil samples in which it was analyzed (15 surface and 17 subsurface samples; Table B-1), silver was reported in only three. None of the detections were higher than the 391 mg/kg BCL_{RS}; however, all three of the detections were higher than the 2 mg/kg $LBCL_{DAF1}$. These exceedances were also higher than the 0.2609 mg/kg maximum background concentration for silver. The three exceedances are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-09	5	3.4 J+
BDB-09	0	4 J+
BDB-11	0	17.2 J+

The reporting limits for non-detections were all lower than BCL_{RS}, and most were sufficiently low such that concentrations in excess of the $LBCL_{DAF1}$, if present, would have been reported. The distribution of silver for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-13 and C-14, respectively.

2.7.11 Vanadium

Vanadium was detected in all twelve of the Site soil samples in which it was analyzed (5 surface and 7 subsurface samples; Table B-1). Three of these detections were higher than the 391 mg/kg BCL_{RS} and the 300 mg/kg $LBCL_{DAF1}$. These exceedances were also higher than the 59.1 mg/kg maximum background detection, and are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-09	5	698 J
BDB-09	0	1680 J
BDB-11	0	2950 J

The distribution of vanadium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-15 and C-16, respectively.

2.7.12 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. None of these additional inorganic constituents were detected at concentrations in excess of either the BCL_{RS} or the $LBCL_{DAF1}$. The reporting limits for these additional inorganic constituents were sufficiently low such that concentrations in excess of the BCL_{RS} or $LBCL_{DAF1}$, if present, would have been reported.

2.7.13 Organochlorine Pesticides

A total of 33 Site soil samples were analyzed for organochlorine pesticides (16 surface and 17 subsurface samples; Table B-2). The most commonly detected analytes were: 4,4-DDE, 4,4-DDT, and beta-BHC; these three constituents were detected in more than 30 percent of the samples in which they were analyzed. 2,4-DDD and 2,4-DDE were detected in 50 percent and 100 percent, respectively, of the samples in which they were analyzed, but were only included in the analyses for two samples. The few detections that exceeded the BCL_{RS} and/or $LBCL_{DAF1}$ comparison levels are discussed below:

- 4,4-DDD was detected in only one of the 33 Site soil samples in which was analyzed (16 surface and 17 subsurface samples; Table B-1), at a concentration of 4.1 mg/kg (5 foot bgs sample from ROW-04). The detection was in excess of both the 2.44 mg/kg BCL_{RS} and the 0.8 mg/kg $LBCL_{DAF1.}$

- 4,4-DDE was detected in 18 soil samples. Five of these detections were higher than the 1.72 mg/kg BCL_{RS} and the 3 mg/kg $LBCL_{DAF1}$. These five exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-04	5	6.5
WC-BD01	0	16
BDB-11	0	26
BDB-09	5	96
BDB-09	0	98

- 4,4-DDT was detected in 20 soil samples. Five of these detections were higher than the 1.72 mg/kg BCL_{RS} and the 2 mg/kg $LBCL_{DAF1}$. These five exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
WC-BD01	0	3.1
ROW-04	5	7
BDB-11	0	17
BDB-09	0	52
BDB-09	5	82

- alpha-BHC was detected in three soil samples. Two of these detections were higher than the 0.0902 mg/kg BCL_{RS}. Three detections were higher than the 0.00003 mg/kg $LBCL_{DAF1}$. These exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-11	5	0.0015
BDB-11	0	0.98
BDB-09	0	1.7

- beta-BHC was detected in 12 soil samples. None of these detections were higher than the 0.316 mg/kg BCL_{RS}; However, all 12 detections were higher than the 0.0001 mg/kg $LBCL_{DAF1}$. Those 12 $LBCL_{DAF1}$ exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ADB-01	5	0.0009
ADB-01	0	0.0013
WC-AD01	0	0.0021
DA-T2	5	0.007
ROW-02	3	0.0072
ROW-02	0	0.009

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-01	0	0.0176
BDB-08	0	0.018
ROW-04	0	0.02
DA-T2	0	0.022
DA-T3	0	0.033
ROW-04	5	0.22

- Dieldrin was detected in two soil samples: 0.28 mg/kg in a surface soil sample from WC-BD01 and 0.0072 mg/kg in a 3 ft bgs soil sample from ROW-02. The WC-BD01 detection was in excess of the 0.0304 mg/kg BCL_{RS}. Both detections were higher than the 0.0002 mg/kg $LBCL_{DAF1}$.

- Endosulfan I was detected in eight soil samples. None of these detections were higher than the 367 mg/kg BCL_{RS}. However, three detections were higher than the 0.9 mg/kg $LBCL_{DAF1}$. These three exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-04	5	2.8
BDB-11	0	24
BDB-09	5	69

With the exception of alpha-BHC, beta-BHC, dieldrin, and lindane, the reporting limits for organochlorine pesticides were generally sufficiently low such that concentrations in excess of the comparison levels, if present, would be reported. For these four exceptions, the reporting limits were routinely higher than the $LBCL_{DAF1}$, and it is unknown whether these constituents are also present in additional Site samples at concentrations in excess of those comparison levels. The distribution of 4,4-DDE for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-17 and C-18, respectively.

2.7.14 Volatile Organic Compounds

Twenty-six Site soil samples were analyzed for several VOCs (14 surface and 12 subsurface samples; Table B-3). As seen in Table 1 and Table B-3, the following seven VOCs were detected in at least one sample:

- 1,2,4-Trichlorobenzene
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Chloroform
- Methyl ethyl ketone
- Trichloroethylene

These detections were relatively low; the few detections that exceeded the BCL_{RS} and/or $LBCL_{DAF1}$ comparison levels are discussed below.

- Of the 25 Site soil samples analyzed, 1,2,4-Trichlorobenzene was detected in three soil samples. None of these detections were in excess of the 143 mg/kg BCL_{RS}, but two detections were higher than the 0.3 mg/kg $LBCL_{DAF1.}$ Those two $LBCL_{DAF1}$ exceedances were associated with surface soil samples from BDB-09 and BDB-11 (3.5 mg/kg and 1.5 mg/kg, respectively). The distribution of 1,2,4-trichlorobenzene for soil samples collected in the interval from 0 to 2 feet bgs is shown on Figure C-19.

- Trichloroethylene was detected in one soil sample (0.0069 mg/kg in a surface soil sample from WC-BD01). The detection was not in excess of the 1.06 mg/kg BCL_{RS}, but was higher than the 0.003 mg/kg $LBCL_{DAF1}$.

For VOCs, the standard reporting limits were lower than the BCL_{RS}, and concentrations in excess of the BCL_{RS}, if present, would have been reported in most cases. However, in some cases the standard reporting limits employed during the historical sampling events are higher than the $LBCL_{DAF1}$, and it is unknown whether these constituents are present in samples at concentrations in excess of the $LBCL_{DAF1.}$ These analytes with reporting limits routinely higher than the $LBCL_{DAF1}$ are as follows:

- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethylene
- 1,2,4-Trichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,3- Dichloropropane
- 1,4-Dichlorobenzene
- Benzene
- Carbon tetrachloride
- Dichloromethane
- Tetrachloroethylene
- Trans-1,3-Dichloropropylene
- Trichloroethylene
- Vinyl chloride

Otherwise, the reporting limits for VOCs were sufficiently low such that concentrations in excess of the $LBCL_{DAF1}$, if present, would be reported.

2.7.15 Semi-Volatile Organic Compounds

Twenty-one Site soil samples were analyzed for SVOCs (13 surface and 8 subsurface samples; Table B-4). As seen in Table 1 and Table B-4, the following five SVOCs were detected in at least one sample: 1,2,4,5-tetrachlorobenzene, bis(2-ethylhexyl)phthalate, flouranthene,

hexachlorobenzene, and pentachlorobenzene. Hexachlorobenzene was detected the most frequently, in 19 percent of the samples. 1,2,4,5-Tetrachlorobenzene and pentachlorobenzene were detected in 50 percent of the samples in which they were analyzed, but they were only included in the analyses for two samples. With the exception of hexachlorobenzene, all the SVOC detections were lower than the BCL_{RS} and the $LBCL_{DAF1}$. Hexachlorobenzene was detected in 4 samples; all four of the hexachlorobenzene detections exceeded the 0.304 mg/kg BCL_{RS} as well as the 0.1 mg/kg $LBCL_{DAF1.}$ These screening level exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
WC-BD01	0	1.1
BDB-09	5	3.5
BDB-11	0	7.9
BDB-09	0	9.7

The distribution of hexachlorobenzene for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-20 and C-21, respectively.

For SVOC non-detects, the standard reporting limits were lower than the BCL_{RS} in all cases except for 3,3'-dichlorobenzidine, bis(2-chloroethyl)ether, hexachlorobenzene, n-nitroso-diethylamine and n-nitrosodi-n-propylamine, which routinely had reporting limits higher than the BCL_{RS}. With the exception of these five compounds, concentrations in excess of the BCL_{RS}, if present, would have been reported for SVOCs in most cases. For these and several other SVOCs the reporting limits employed during the historical sampling events are higher than the $LBCL_{DAF1}$, and it is unknown whether these constituents are present in those samples at concentrations in excess of the $LBCL_{DAF1}$ The additional analytes with reporting limits routinely higher than the $LBCL_{DAF1}$ are as follows:

- 2,4,6-Trichlorophenol
- 2,4-Dichlorophenol
- 2,4-Dimethylphenol
- 2,4-Dinitrophenol
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- 2-Chlorophenol
- Carbazole
- Hexachloro-1,3-butadiene
- Hexachloroethane
- Isophorone
- Nitrobenzene
- n-Nitrosodiphenylamine
- p-Chloroaniline
- Pentachlorophenol

2.7.16 Dioxins and Furans

Two surface soil samples collected at the Site were analyzed for selected dioxins and furans (Table B-5). All of the individual dioxins and furans congeners analyzed were reported as detections in both samples (WC-AD01 and WC-BD01). 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) comparison value of 50 parts per trillion (ppt). None of the samples analyzed had calculated TEQ values in excess of this comparison level. $LBCL_{DAF1}$ 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 levels.

2.7.17 Chlorinated Herbicides

Two surface soil samples collected at the Site were analyzed for chlorinated herbicides (WC-AD01 and WC-BD01, Table B-6); there were no detections reported in these samples. The standard reporting limits were lower than the BCL_{RS}; thus concentrations in excess of the BCL_{RS}, if present, would have been reported. $LBCL_{DAF1}$ values have not been established for these compounds.

2.7.18 Organophosphorus Pesticides

Two surface soil samples collected at the Site were analyzed for organophosphorus pesticides (WC-AD01 and WC-BD01; Table B-7). Organophosphorus pesticides were not detected in either sample. The reporting limits were lower than the BCL_{RS}; thus concentrations in excess of the BCL_{RS}, if present, would have been reported. $LBCL_{DAF1}$ values have not been established for these compounds.

2.7.19 Polychlorinated Biphenyls

Thirty-one Site soil samples were analyzed for PCBs (Aroclors only) (14 surface, 17 subsurface; Table B-8). Aroclors 1254 and 1260 were the only compounds detected in any of these samples; the detections were each associated with a single sample (0.04 mg/kg for Aroclor 1254 in the 3 ft bgs sample from DA-T1, and 0.2 mg/kg for Aroclor 1260 in the ADB-01 surface soil sample). Both detections were lower than the 0.222 mg/kg BCL_{RS}. The reporting limits for other PCBs analyzed were lower than the $BCL_{RS,}$ thus concentrations in excess of the BCL_{RS}, if present,

would have been reported for PCBs. $LBCL_{DAF1}$ values have not been established for these compounds. It is noted that lack of PCB congener data is a data gap for the Site; congener analysis will be performed as part of this SAP to fill this data gap.

2.7.20 Radionuclides

As seen in Table B-9, radionuclides were only included in the analyses for samples collected during the IRM. Because those samples were over-excavated, no radionuclide data exist for current Site conditions.

2.7.21 Polynuclear Aromatic Hydrocarbons

Twenty-one Site soil samples were analyzed for PAHs (13 surface, 8 subsurface; Table B-10). The only detections were of benzo(a)anthracene, chrysene, phenanthrene, and pyrene; these detections were associated with surface soil samples collected at WC-AD01 and WC-BD01. The maximum detection was 0.19 J mg/kg of phenanthrene (WC-BD01). The analyses performed were standard USEPA Method 8270, and standard reporting limits for PAHs using that method were often higher than the BCL_{RS} and the $LBCL_{DAF1}$; thus concentrations in excess of these comparison levels, if present, would not necessarily have been identified. The practice for current and future sampling events is to use selective ion mode (SIM) analysis for PAHs, which should avoid this problem.

2.7.22 Summary of Soil Exceedances

As summarized above and in the associated data tables (Table 1 and Appendix B), sampling of Site soils has been limited, and the analyte list is incomplete. Based on the limited historical data, the BCL_{RS} and $LBCL_{DAF1}$ exceedances noted below were observed.

The following constituents were reported at concentrations higher than the BCL_{RS} and the maximum background concentration (where applicable):

- Arsenic
- Barium
- Chromium (Total)
- Lead
- Vanadium
- 4,4-DDD
- 4,4-DDE
- 4,4-DDT
- alpha-BHC
- Dieldrin
- Hexachlorobenzene

The following constituents were reported at concentrations higher than the $LBCL_{DAF1}$ and the maximum background concentration (where applicable):

- Arsenic
- Barium
- Cadmium
- Chromium (Total)
- Iron
- Mercury
- Silver
- Vanadium
- 4,4-DDD
- 4,4-DDE
- 4,4-DDT
- alpha-BHC
- beta-BHC
- Dieldrin
- Endosulfan I
- Hexachlorobenzene
- 1,2,4-Trichlorobenzene
- Trichloroethylene

2.8 CHEMICAL DISTRIBUTION WITHIN GROUNDWATER

For evaluating Shallow Zone groundwater quality at the Site, the following on-site wells were used: DM-1 and POU3 (Figure 2). The data associated with these wells from the most recent groundwater monitoring event (September/October 2009) are presented in Table 2. Data validation results are presented in the DVSR for dataset 58 (ERM 2010; approved by NDEP on January 16, 2010). 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 residential water BCL (BCL_W).

Exceedances of these comparison levels are summarized below.

Organic Compounds. The few organic compound detections during this groundwater monitoring event that were higher than the comparison levels are as follows:

- Bromodichloromethane was detected in the sample from POU3 at a reported concentration of 26 µg/L. The detection was higher than the VI SL and BCL_W (2.1 µg/L and 1.1 µg/L, respectively), but was lower than the MCL (80 µg/L).
- Bromoform was detected in the sample from POU3 at a reported concentration of 12 µg/L. The detection was higher than the VI SL and BCL_W (0.0083 µg/L and 8.5 µg/L, respectively), but was lower than the MCL (80 µg/L).

- Carbon tetrachloride was detected in the sample from POU3 at a reported concentration of 25 µg/L. The detection was higher than the VI SL, MCL, and BCL_W (5 µg/L for all three comparison levels).

- Chloroform was detected in the samples from both wells at concentrations above the comparison levels. The 2.9 µg/L detection in DM-1 was higher than the BCL_W (1.6 µg/L), but was lower than the VI SL and MCL (80 µg/L). The 440 µg/L detection in POU3 was higher than all three comparison levels.

- Dichloromethane was detected in the sample from POU3 at a reported concentration of 5.4 µg/L. The detection was higher than the MCL and BCL_W (5 µg/L for both comparison levels), but was lower than the 58 µg/L VI SL.

- Tetrachloroethylene was detected in both samples (0.16 µg/L in DM-1 and 9 µg/L in POU3). The DM-1 detection was lower than the MCL, BCL_W, and the VI SL (5 µg/L for each); the POU3 detection was higher than the three comparison levels.

- Total trihalomethanes were detected in both samples (3.1 µg/L in DM-1 and 478.1 µg/L in POU3). The DM-1 detection was lower than the 80 µg/L MCL; the POU3 detection was higher than this comparison level. BCL_W and VI SL values have not been established for this constituent.

The remaining detections of organic chemicals were lower than the applicable comparison levels. The standard 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[18]
Aldrin	0.01 µg/L	0.004 µg/L BCL_W adequately low for VI SL; no MCL
Dieldrin	0.01 µg/L	0.0042 µg/L BCL_W adequately low for VI SL; no MCL
1,2,3-Trichloropropane	0.23 µg/L	0.034 µg/L BCL_W adequately low for VI SL; no MCL
2-Nitropropane	1.1 µg/L	0.0063 µg/L BCL_W 0.18 µg/L VI SL; no MCL

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

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

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 and BCL_W[19] as summarized below:

- Chlorine is higher than the 4 mg/L MCL and BCL_W in samples collected from both wells. The maximum reported concentration was 5,060 mg/L (POU3).
- Nitrate is higher than the 10 mg/L MCL and BCL_W in samples collected from both wells. The maximum reported concentration was 19.1 mg/L (DM-1).
- Perchlorate is higher than the USEPA Drinking Water Equivalent Level and BCL_W[20] (24.5 µg/L and 18 µg/L, respectively) in samples collected from both wells; the maximum detection was 27,000 µg/L (POU3).
- Arsenic is higher than the MCL and BCL_W (10 µg/L for both) in both samples; the highest concentration is associated with POU3 (84.6 µg/L).
- Chromium (total) is higher than the MCL and BCL_W (100 µg/L for both) in the POU3 sample (462 µg/L). The DM-1 result was lower than these comparison levels.
- Chromium (VI) is higher than the MCL and BCL_W (100 µg/L for both) in the POU3 sample (420 µg/L). The DM-1 result was lower than these comparison levels.
- Lithium is higher than the 73 µg/L BCL_W in both samples; the highest concentration is associated with POU3 (207 µg/L).
- Magnesium is higher than the 207,000 µg/L BCL_W in the POU3 sample (378,000 µg/L). The DM-1 result is lower than this comparison level.
- Total Dissolved Solids (TDS) is higher than the 500 mg/L MCL in both samples; the maximum reported concentration was 7,600 mg/L (POU3).

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. A more detailed

[19] VI SLs have not been established for inorganic constituents.
[20] An MCL has not been established for this constituent.

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.

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 7 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 7-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 75.4 acre Site includes former unlined disposal ponds and ditches associated with historical BMI Complex operations and features associated with remediation activities (Section 2.1). In addition, impacted materials from other portions of the Eastside property were temporarily stored on the Site, in and along the Beta Ditch, pending their ultimate disposal in the CAMU. 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, residential (low, medium and high density), retail/commercial, and urban core land uses with roads, parks and trails interspersed, is currently planned for the Staging sub-area (Figure 4). Consequently, receptors that are considered for this problem include construction workers, residents (adult and child), 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 that acceptable human health risks have been attained. The risk assessments performed for Site closure will primarily use the data collected as part of this SAP, which has been designed to produce data representative of the conditions to which current (non-remediation workers) or future users would be exposed. The need for additional remediation will be primarily based on the SAP sampling results. The final Site conditions will include regrading 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 5.

Although the primary focus is human health risk assessment for residential and commercial use scenarios, 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 residential standards, risks to off-site receptors are expected to be minimal.

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 residential housing developments.

As noted in Section 3.1.1, risk assessments performed for Site closure will primarily use data collected as part of this SAP (*i.e.*, after remediation has been substantively performed). For the purposes of Site closure, it is these post-remediation/pre-development conditions that are most appropriate to evaluate in terms of potential exposures and risks to then-current (non-remediation workers) or future users.

Surface and shallow soil data will be used to evaluate both the 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 remediation activities consistent with the 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.

As noted in Section 1.0, the decontamination areas and haul roads within the Site will be remediated and sampled after all other activities have been completed for the project in general. Sampling in these areas will occur after the remediation is complete.

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. 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 in the risk assessment will comprise only those data collected in accordance with this SAP,[21] 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 *BRC Quality Assurance Project Plan* (QAPP; BRC and ERM 2009). Based on this QA/QC review, only those data determined 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 conditions[22] 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

[21] 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.

[22] "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.

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 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 (BCL_{RS}, NDEP 2009b).
- 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 data[23] collected according to this SAP.
- Identified locations/depth intervals, including elevations to adjust for use of fill material and regrading.
- Characterization data for imported fill if such fill is considered for use at the Site. At this point, it is not known whether imported fill materials will be used on Site.

[23] 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)

- 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
- 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 residential 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 timeframe 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 then-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 and SESOIL). 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 collected 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 residential housing. Other potential development interests in

addition to residential housing retail/commercial, and urban core land uses with roads, parks and trails interspersed (see Figure 4). 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 residential exposure scenario, the most protective scenario, will be consistent with a typical residential lot size, which is 1/8th acre. 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 an 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, the removal of materials from the TIMET Ponds sub-area that have been temporarily placed within the Site, and the removal of remediation construction support structures/activities, 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 (final and interim), soil vapor flux sampling,[24] 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 in 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. 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

[24] A study comparing soil gas sampling and surface flux sampling is currently underway for the project. The outcome of that study will determine whether soil flux data will continue to be collected for the project, or whether this data will be supplemented and/or replaced by soil gas data. The sampling for the Site will be revised accordingly. The sampling method does not affect the sample locations, number of samples, or the laboratory analysis in this SAP.

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 interest, including but not limited to former ditches, ponds, pond berms, the borrow pit/buried debris area, the TIMET Ponds construction support area, and the area used for temporary storage of materials from the TIMET Ponds. 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.

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:

Land Use	Number of Locations
Former Pond	21
Pond Berm	5
Ditches	25
Debris/Features/Unused Land	25

Figure 9 and accompanying Table 3 show the random and biased discrete sampling locations that are proposed to be collected within the Site.[25] In addition to the biased sampling locations noted above and on Figure 9, if currently unknown impacted areas are identified during on-going remediation, BRC will: 1) inform NDEP regarding the presence of these areas; 2) evaluate the need for additional biased sampling points to address those areas; and 3) modify the sampling program as needed, with NDEP concurrence.

At each selected location, multi-depth soil samples will be collected and analyzed for the project SRC list as follows. Proposed sample depths are 0 (surface) and 10 ft bgs at each sampling location. In addition, sample locations with grading greater than two ft bgs will also be sampled at the anticipated post-grading soil surface. Additionally, at three sample locations, soil physical

[25] As noted in Section 1.0, the decontamination areas and haul roads within the Site will be remediated and sampled after all other activities have been completed for the project in general. Therefore, these areas will be remediated and sampled at a later date from the other portions of the Site.

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 ft bgs) and 10 ft bgs for sample locations in relatively flat (un-graded) locations;

2. Existing surface (0 ft bgs), post-grading surface, and post-grade 10 ft bgs for sample locations with substantial grading (that is, cut depths greater than two feet[26]) and the uppermost sampled soil is expected to be used as surface fill;

3. Existing surface (0 ft bgs) and 10 ft bgs for sample locations with minimal grading (that is, cut depths less than two feet) and the uppermost sampled soil is expected to be used as surface fill; and

4. Existing surface (0 ft bgs) and 10 ft bgs for sample locations in an area expected to be covered by fill material.

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

- **Rule 1: IF** the sample is collected in a relatively flat (un-graded) 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 (0-2 ft 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 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 two feet, **THEN** the current surface soil sample will be

[26] 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.

classified as a fill material sample, a final (post-graded) surface sample will be classified as a surface (0-2 ft 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 two feet, **THEN** the current surface soil sample will be classified as both a fill material sample and as a surface (0-2 ft 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 5. 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 3.

All soil samples will be tagged in the database with numeric designations of their corresponding assigned soil layer grouping based on these rules. Initially, 179 soil samples will be collected from 76 soil boring locations (not including deep samples to be collected for soil physical parameter data). This includes 26 random and 50 biased sample locations; with the following number of samples representing each post-grade type of soil:

Post-Grade Sample Type	Number of Locations[27]
Fill material	38
Surface soil	103
Subsurface soil	76

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

[27] Note that in some cases a soil sample may be considered both a fill sample and a surface sample (as indicated in Table 3). 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.

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 1/10 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 1/10 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 background concentration distributions applicable to the Site. 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.

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 SAP[28] 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 Standard Operating Procedure (SOP) 16 for technical description of sampling and analytical methodology, QA/QC protocols, and project procedural description (see the *BRC Field Sampling and Standard Operating Procedures* [FSSOP]; BRC, ERM and MWH 2009). The sampling procedure for the effort includes the USEPA surface emission isolation flux chamber (flux

[28] 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.

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 have been preferentially selected to coincide with a biased sampling location in a given cell. In cases where a given cell contains no biased samples, the soil vapor flux sampling coincides with the grid-specific random sampling location. This approach results in 30 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 Plan[29] and Table 4, 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);

[29] 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 ppb, which coincides with the standard reporting limit for this analysis;

- USEPA Method 8141A for organophosphorus 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 the two soil samples collected within the Site that were analyzed for these compounds;

- 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 two soil samples collected within the Site. Detection limits are below the BCL_{RS};

- HPLC Method for organic acids (historically conducted using a proprietary method developed by Alpha Analytical) 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;

- USEPA Method 8015B for nonhalogenated organics will not be conducted. There have been only five detections of these compounds in 420 soil sample records (one percent) from throughout the Eastside;

- 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 (one 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; and

- 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 project SRC list may be back-quantitated; however, the main radionuclides listed above will likely provide information sufficient to perform a risk assessment. In addition, if the radionuclide activities 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 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 FSSOP; BRC, ERM and MWH 2009), including radon. This analyte list is provided in Table 5.

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 2009). In accordance with applicable federal regulation (Title 29, Code of Federal Regulations [CFR] 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 2009). 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 BRC QAPP (BRC and ERM 2009) and SOP-40.

Soil cuttings generated during soil sampling and Hollow Stem Auger (HSA) 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 current analyte list as approved by the NDEP is presented in Table 4 of the QAPP. Table 4 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 sampling depth-specific exclusion of a chemical for analysis is provided in Table 4 of this SAP. Section 4.5 contains the rationale for exclusion of various chemical analyses from the SAP program for the Site.

5.2.2 Soil Vapor Flux Analyses

As indicated in Table 5, 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). In addition, the samples will be collected and analyzed for radon. 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 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 and SESOIL). 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 (see Table 4). These soil physical parameters will be measured from each of the subsurface samples collected from the two deep sample locations at the Site (see 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. In addition, samples will be collected from two subsurface sample locations (see Figure 9 and Table 3) for conducting the synthetic precipitation leaching procedure (SPLP; USEPA Method 1312) with the extract analyzed for metals, organochlorine pesticides, SVOCs, radium-226, radium-228, and perchlorate. These analytes are considered those of greatest concern for potential migration and impacts to groundwater.

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 BRC QAPP (BRC and ERM 2009) and SOP-40 (BRC, ERM and MWH 2009). 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.

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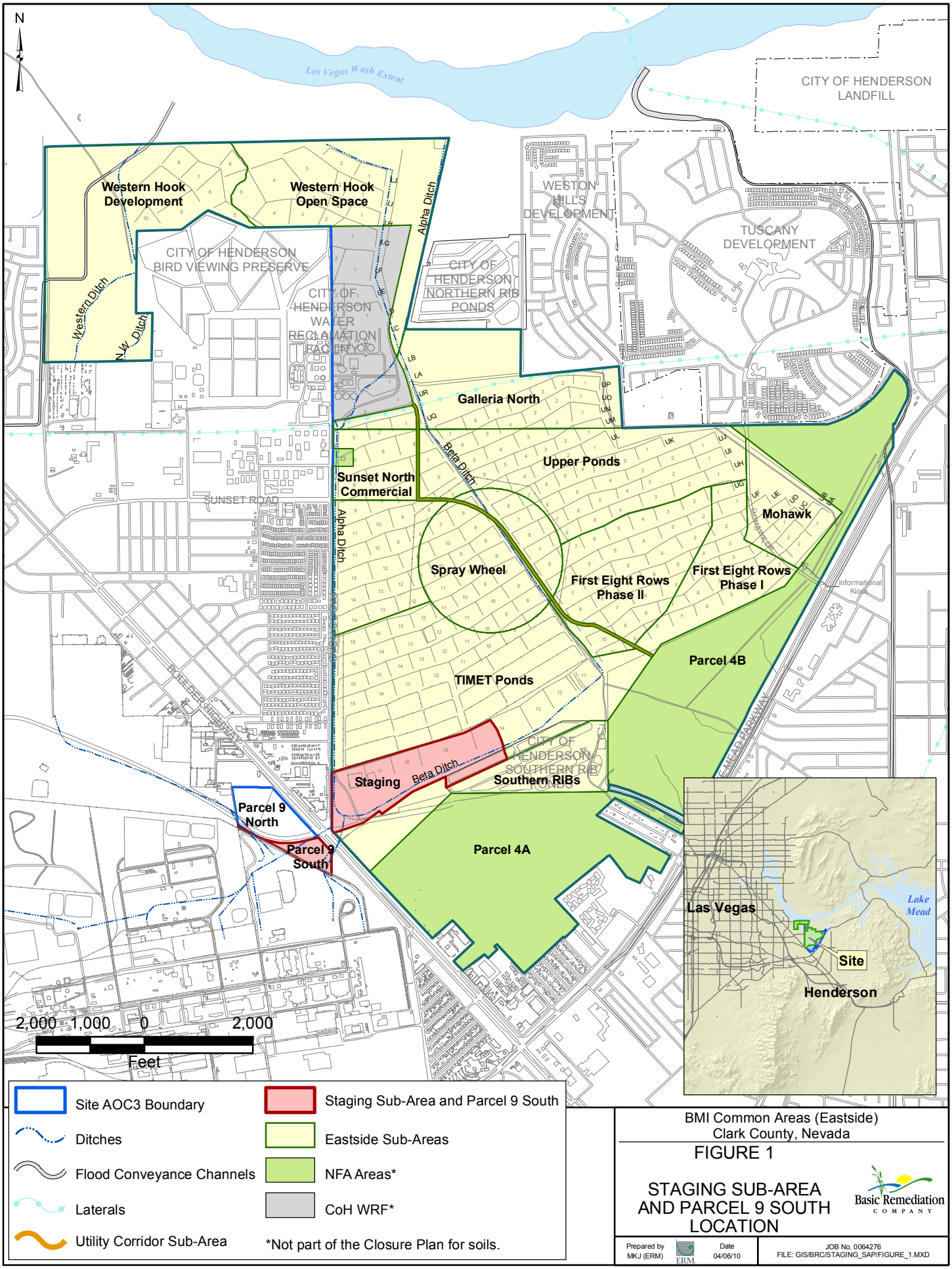
FIGURES



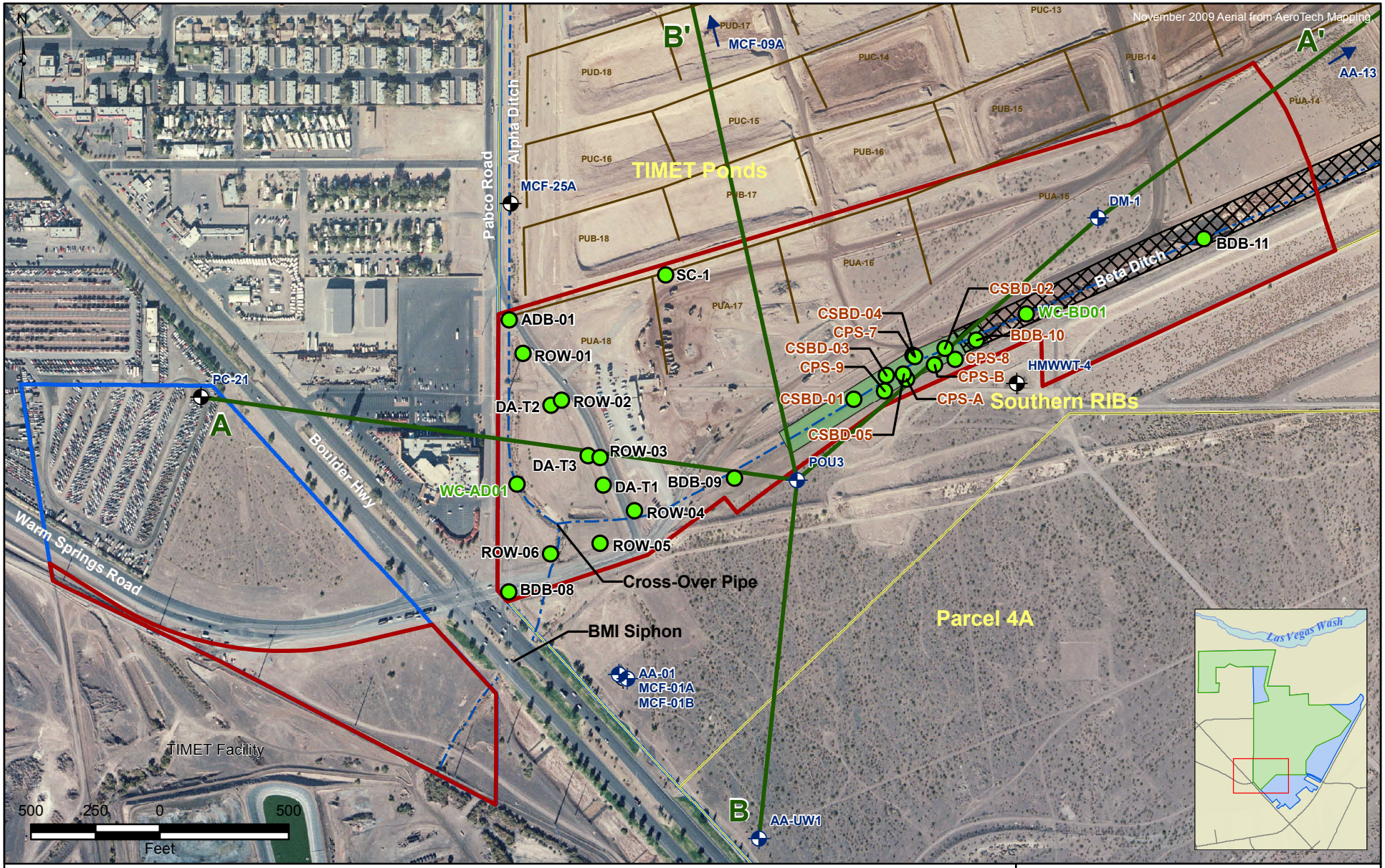
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 1

STAGING SUB-AREA AND PARCEL 9 SOUTH LOCATION

Basic Remediation COMPANY

Prepared by		Date	JOB No. 0064276
MKJ (ERM)	ERM	04/06/10	FILE: GIS/BRC/STAGING_SAP/FIGURE_1.MXD



Staging Sub-Area and Parcel 9 South
Site AOC3 Boundary
Eastside Soil Sub-Areas
Interim Remedial Measures (IRMs)
Excavated Material Temporary Storage Area

Historical Soil Sample Locations
Cross-Section Location
Historic BMI Ponds (Berms)

Monitoring Wells

Alluvial Wells with Groundwater Data
Other Monitoring Wells

ADB-03 - Discrete Sample
WC-AD01 - Composite Sample
CSBD-03 - Excavated Sample

Note: No historical samples have been collected from Parcel 9 South.

BMI Common Areas (Eastside)
Clark County, Nevada

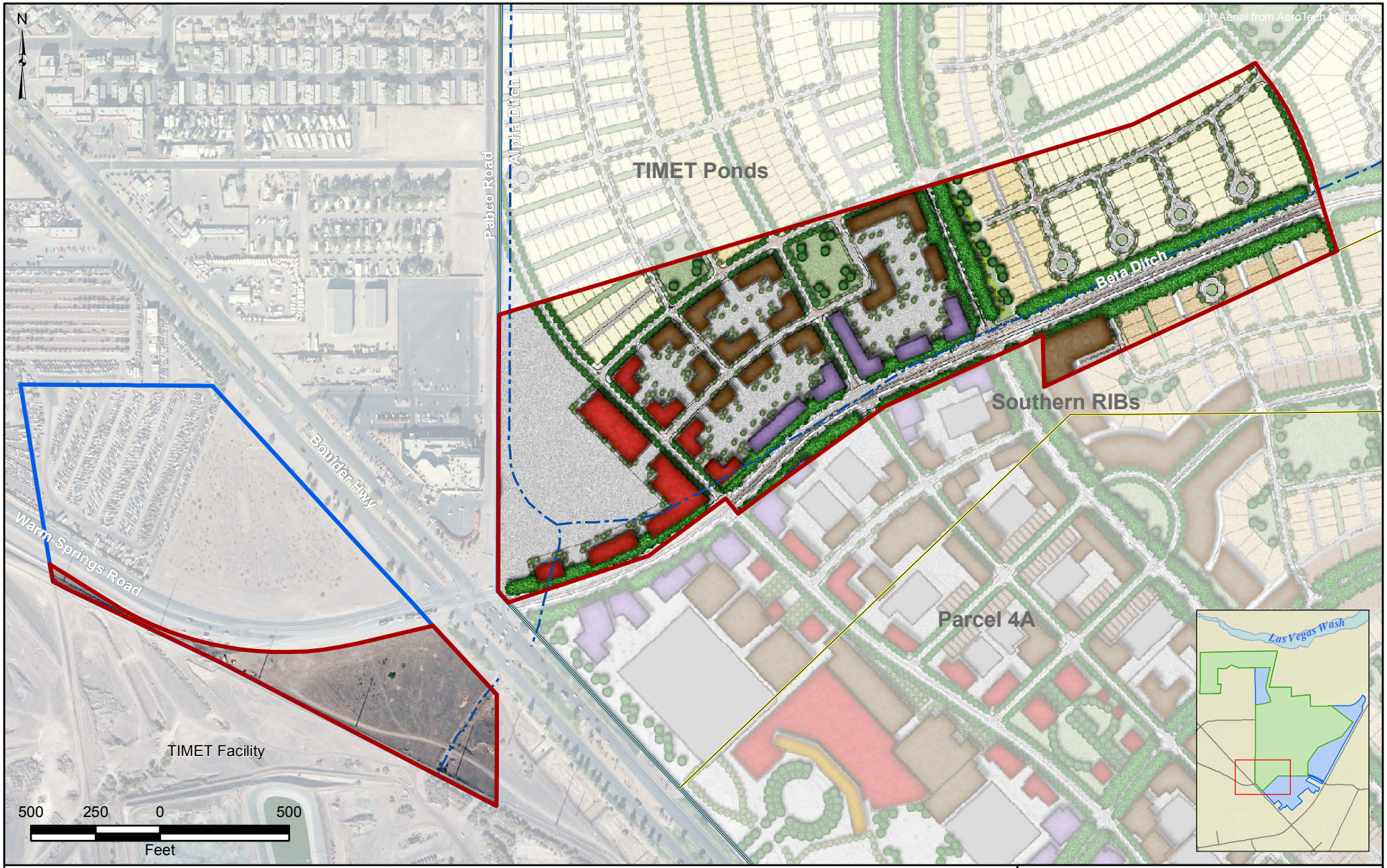
FIGURE 2

SITE PLAN WITH HISTORIC SOIL SAMPLE LOCATIONS AND MONITORING WELLS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/FIGURE_2.MXD


1950
1968
1974
1990
Aug. 2001
Jan. 2008
Nov. 2008
Aug. 2009
N
TIMET Ponds
Alpha Ditch
Beta Ditch
Southern RIBs
Parcel 4A
Boulder Hwy
Warm Springs Rd
Fenced Area
Pabco Rd
Pabco Road
Southern RIB within Staging Sub-Area
800 400 0 800
Feet
Staging Sub-Area (and Parcel 9 South)
Site AOC3 Boundary
Eastside Soil Sub-Areas
Southern RIBs
BMI Common Areas (Eastside)
Clark County, Nevada
FIGURE 3
STAGING SUB-AREA
AND PARCEL 9 SOUTH
HISTORICAL AERIALS
Basic Remediation Company
Prepared by
MKJ (ERM)
ERM
Date
04/06/10
JOB No. 0064276
FILE: GIS/BRC/STAGING_SAP/FIGURE_3.MXD



Staging Sub-Area and Parcel 9 South

Site AOC3 Boundary

Eastside Soil Sub-Areas

Note: A development plan, including cut/fill, has not been development for Parcel 9 South.

Current Development Plan

- High Density Residential
- Medium Density Residential
- Low Density Residential
- Commercial
- Urban Core
- Retail/Commercial
- Parks & Trails
- Roads/Parking

BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 4

CURRENT DEVELOPMENT PLAN

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/FIGURES_4-5.MXD

Staging Sub-Area and Parcel 9 South

Site AOC3 Boundary

Eastside Soil Sub-Areas

Note: A development plan, including cut/fill, has not been development for Parcel 9 South.

Development Cut/Fill Areas

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

BMI Common Areas (Eastside)
Clark County, Nevada

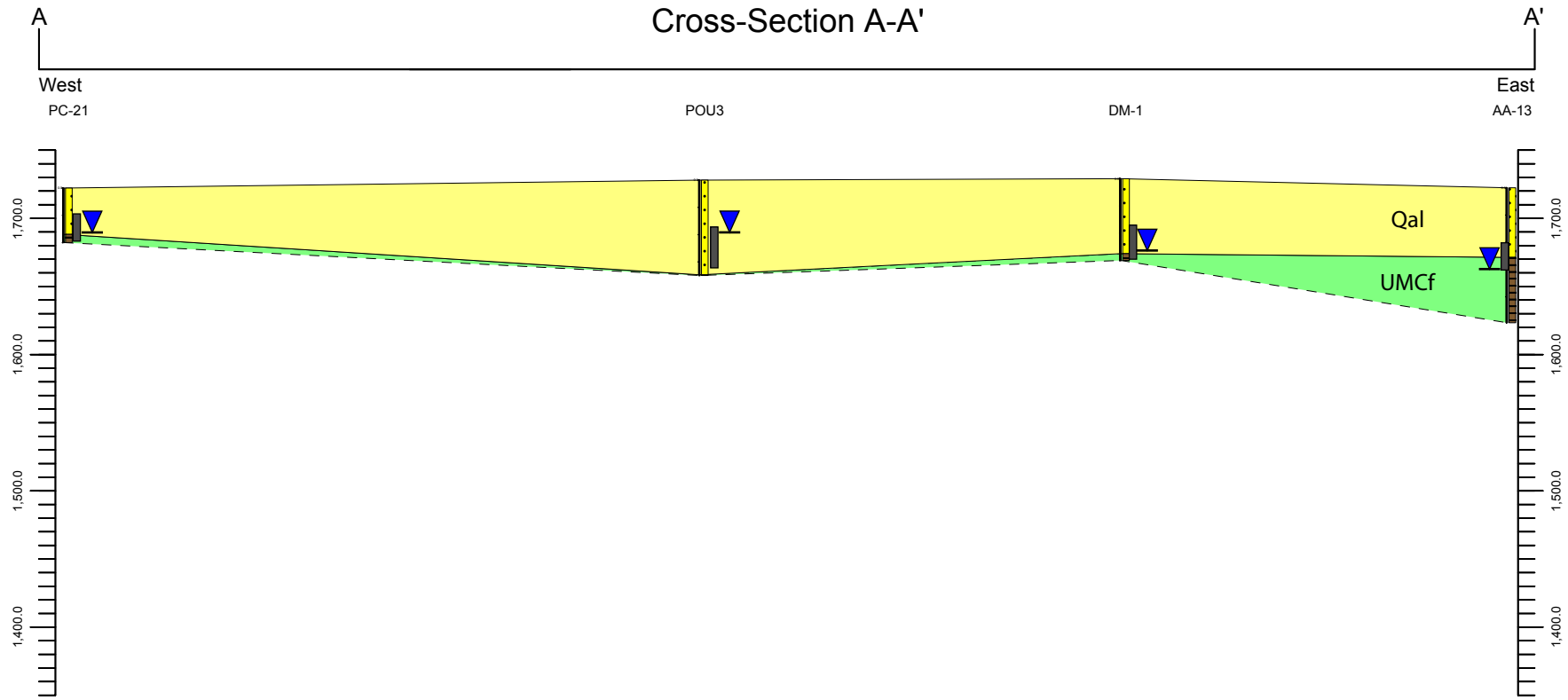
FIGURE 5

CURRENT GRADING PLAN

Basic Remediation Company

Prepared by MKJ (ERM) | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/FIGURES_4-5.MXD

Cross-Section A-A'



= Screen Interval
= Shallow Zone Water Level (August 2009)
= Qal = Quaternary alluvium
= UMCf = Upper Muddy Creek formation
Vertical Scale = 5x Horizonal 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

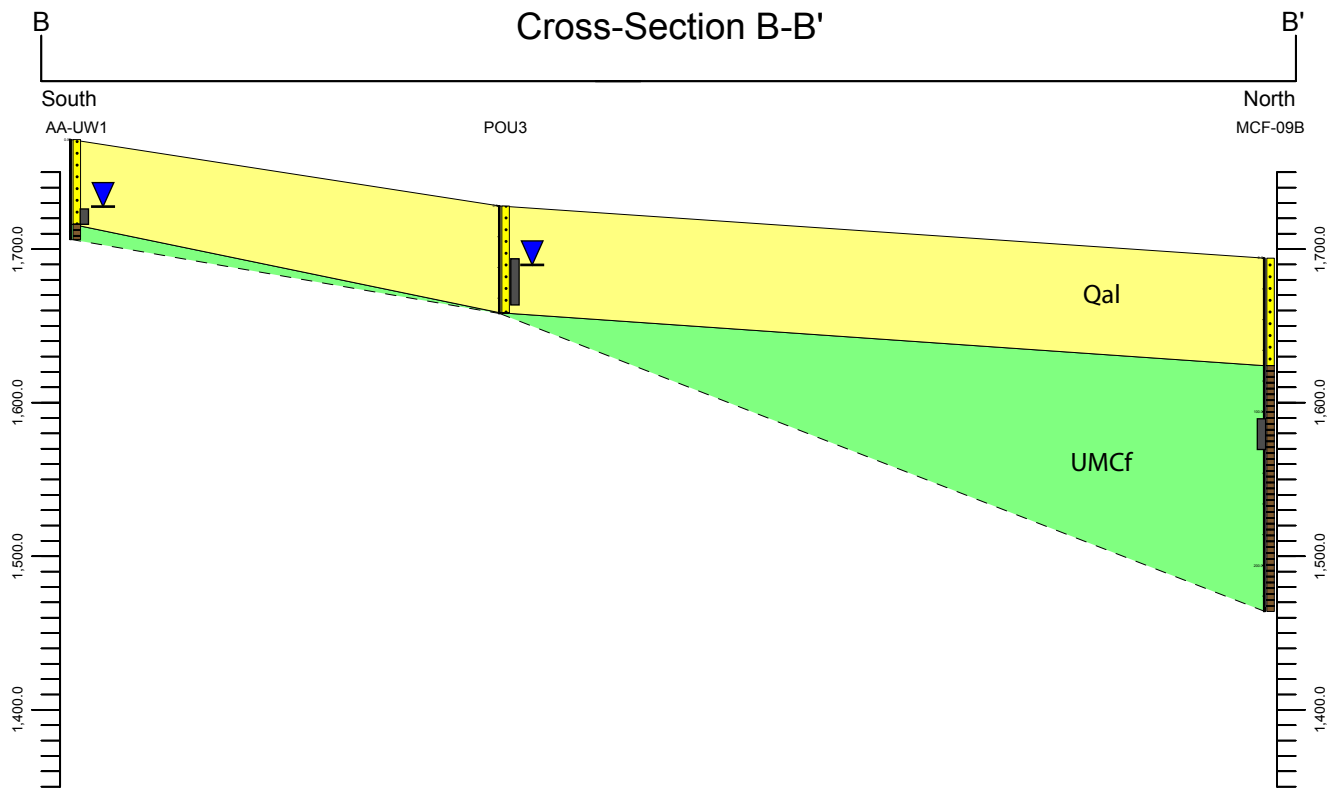
FIGURE 6

STAGING SUB-AREA
CROSS-SECTION A-A'

Basic Remediation COMPANY

Prepared by	Date	JOB No.
MKJ (ERM)	04/06/10	0064276

FILE: GIS/BRC/STAGING_SAP/FIGURE_6.AI



= Screen Interval
= Shallow Zone Water Level (August 2009)
= Qal = Quaternary alluvium
= UMCf = Upper Muddy Creek formation
Vertical Scale = 5x Horizonal Scale
For soil lithology details, please see the individual boring logs.
See Figure 2 for cross-section location.

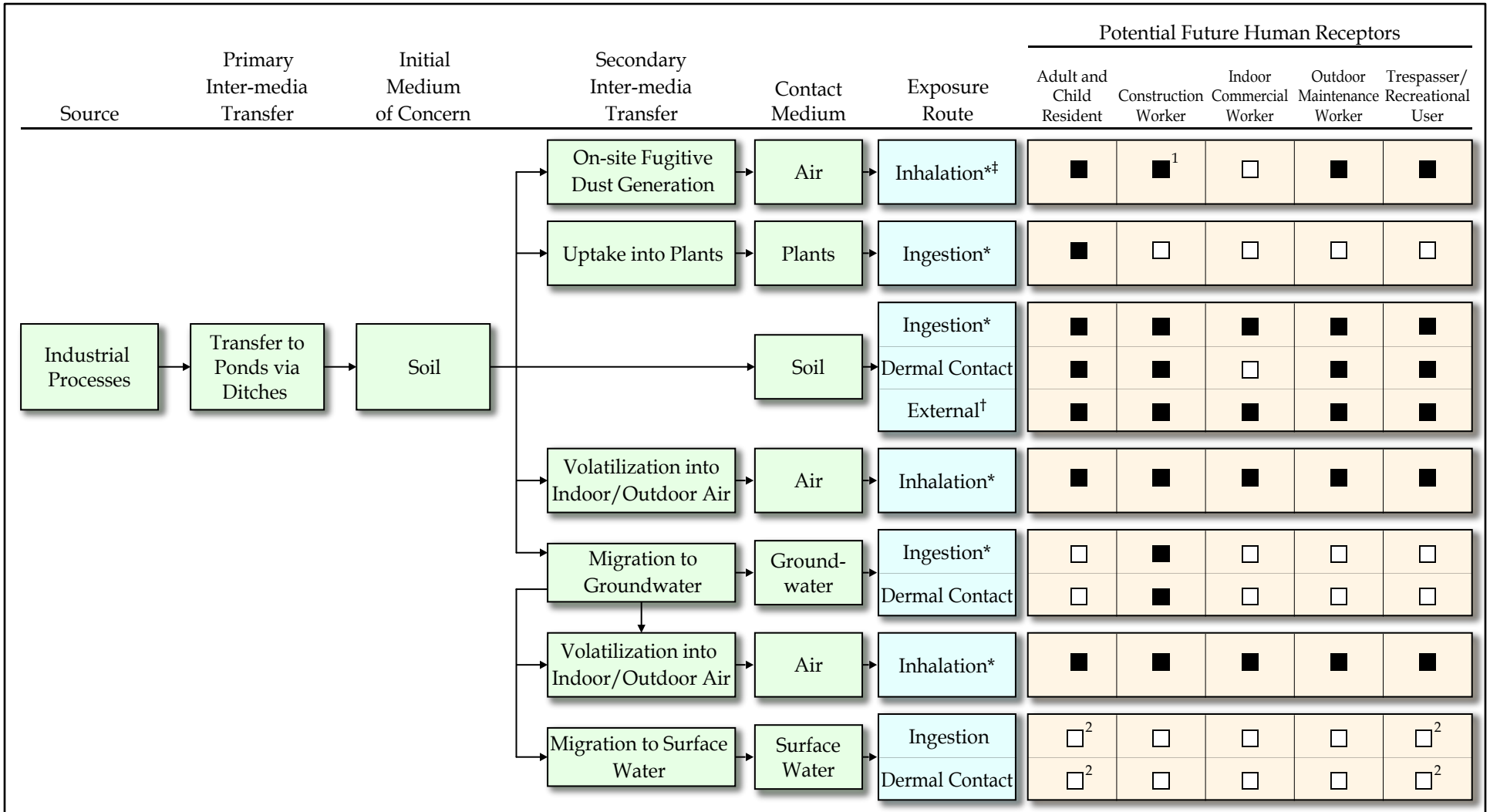
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 7

STAGING SUB-AREA
CROSS-SECTION B-B'

Basic Remediation COMPANY

Prepared by MKJ (ERM) | Date 04/06/10 | JOB No. 0064276
FILE: GIS/BRC/STAGING_SAP/FIGURE_7.AI



□ - Incomplete or insignificant exposure pathway.

■ - Complete or potentially complete exposure pathway.

[1]Although indirect exposures to off-site residents are possible, these receptors will not be quantitatively evaluated (see BRC Closure Plan).

[2]Potentially complete exposure pathway following discharge to Las Vegas Wash and Lake Mead.

*Includes radionuclide exposures.

†Only radionuclide exposures.

‡Includes asbestos exposures.

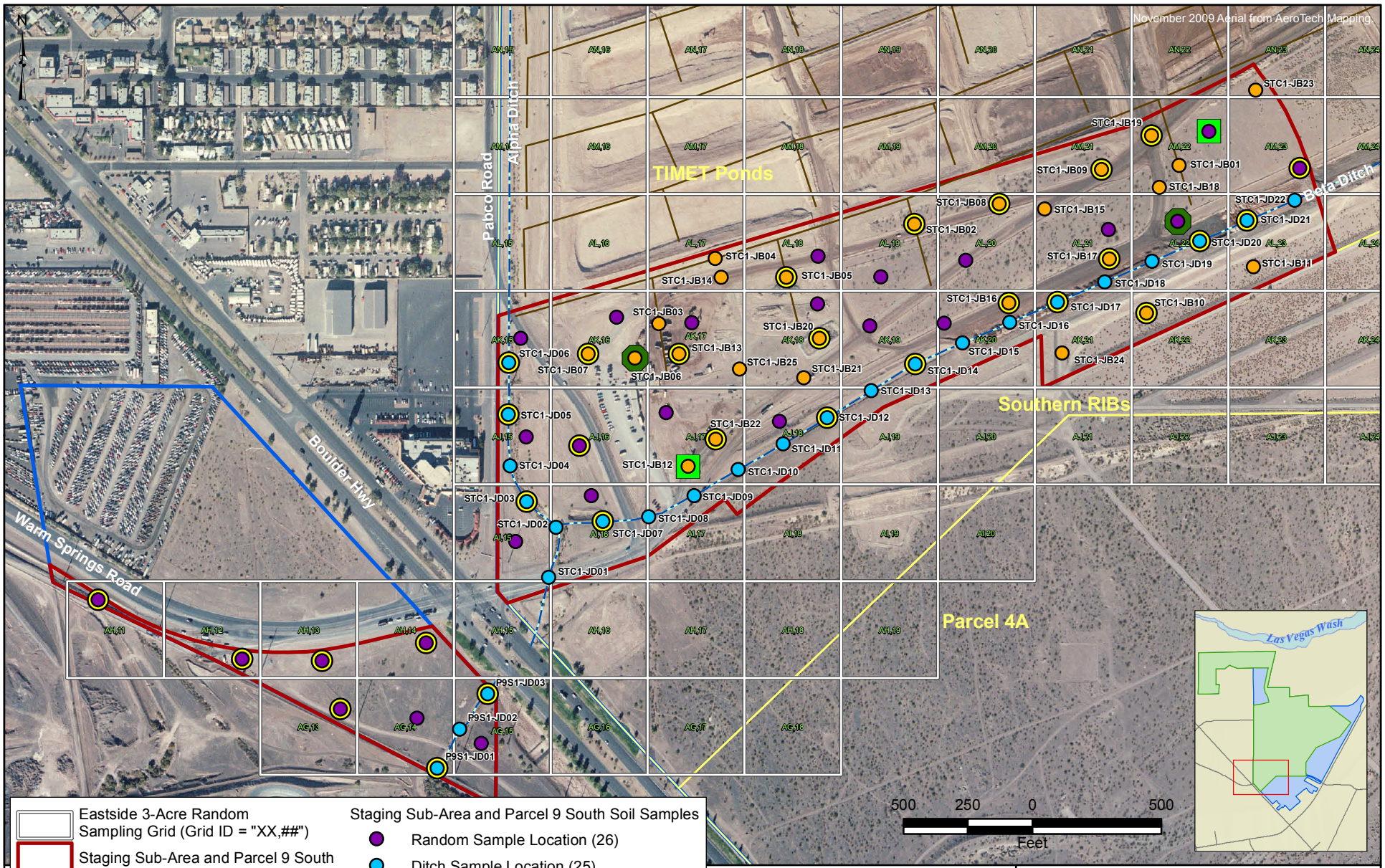
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 8

CONCEPTUAL SITE MODEL DIAGRAM FOR POTENTIAL HUMAN EXPOSURES

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/FIGURE_8.AI



Note: Sample ID's are shown for ditch, berm, and pond sample locations. Sample ID's for random samples correspond to the grid cell ID.

This sub-area currently has ongoing remediation activities, therefore, the aerial photo is not representative of current site conditions, and debris locations have not been identified.

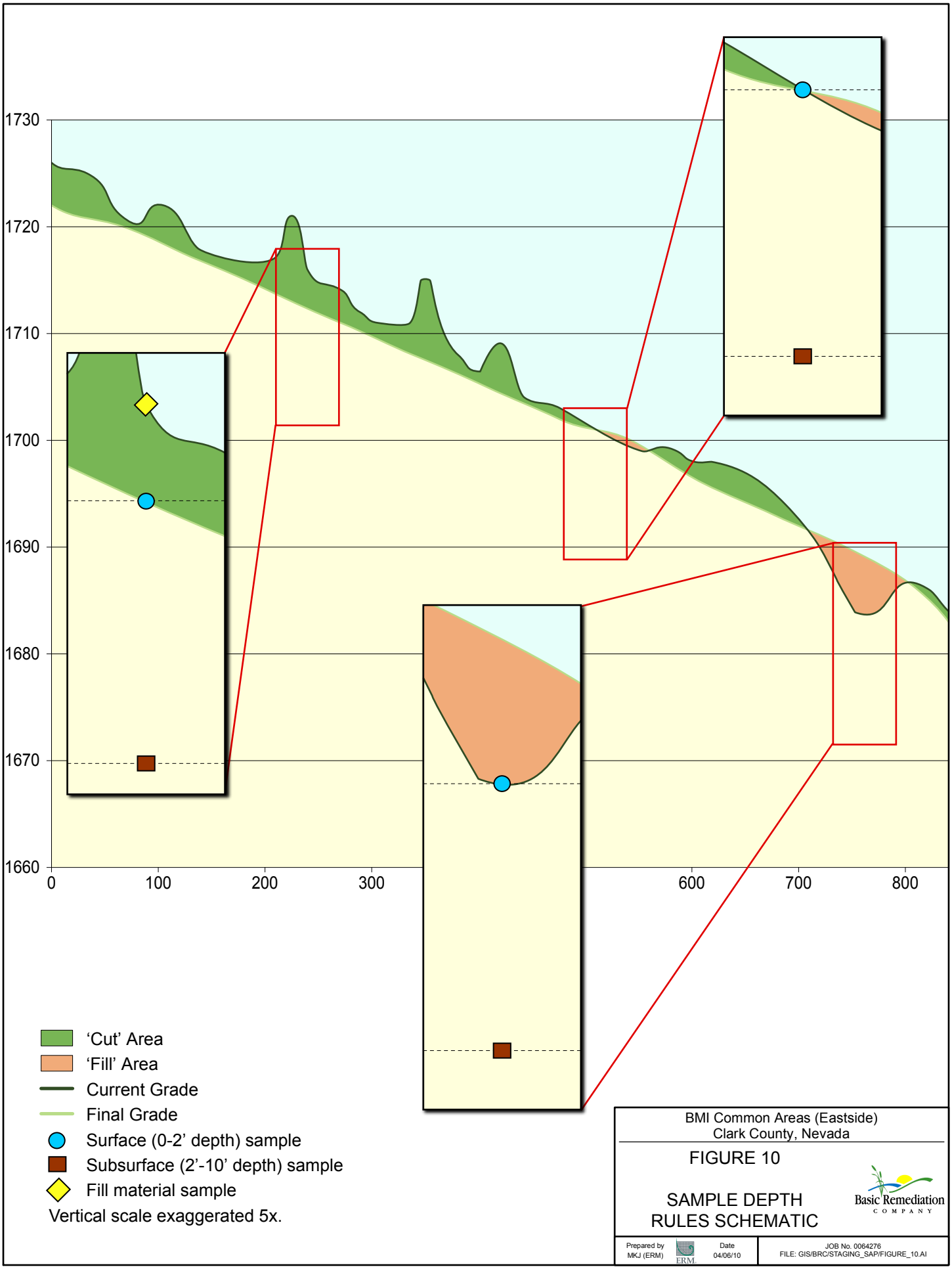
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 9

PROPOSED SOIL AND SOIL VAPOR FLUX SAMPLING LOCATIONS

Basic Remediation Company

Prepared by		Date	JOB No. 0064276
MKJ (ERM)	ERM	04/06/10	FILE: GIS/BRC/STAGING_SAP/FIGURE_9.MXD



BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE 10

SAMPLE DEPTH
RULES SCHEMATIC

Basic Remediation Company

Prepared by	Date	JOB No. 0064276
MKJ (ERM)	04/06/10	FILE: GIS/BRC/STAGING_SAP/FIGURE_10.AI

TABLES

TABLE 1
SUMMARY OF HISTORICAL SOIL CHEMICAL DATA AT THE STAGING SUB-AREA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 4)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[a]							Resident Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	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								
Dioxins/Furans	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	2	100%	0	--	--	--	--	--	--	2	200	--	1100	1100	--	2000	--	--	--	--	--	--	--	--
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	2	100%	0	--	--	--	--	--	--	2	34	--	380	380	--	720	--	--	--	--	--	--	--	--
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	2	100%	0	--	--	--	--	--	--	2	78	--	480	480	--	880	--	--	--	--	--	--	--	--
	Octachlorodibenzodioxin	pg/g	2	100%	0	--	--	--	--	--	--	2	170	--	8100	8100	--	16000	--	--	--	--	--	--	--	--
	Octachlorodibenzofuran	pg/g	2	100%	0	--	--	--	--	--	--	2	1400	--	7700	7700	--	14000	--	--	--	--	--	--	--	--
	TCDD TEQ	pg/g	2	--[c]	--	--	--	--	--	--	--	2	3.3	--	21	21	--	39	50	0	--	--	--	--	--	--
General Chemistry	Alkalinity	mg/kg	3	100%	0	--	--	--	--	--	--	3	97	97	170	150	170	170	--	--	--	--	--	--	--	--
	Bicarbonate alkalinity	mg/kg	3	100%	0	--	--	--	--	--	--	3	86	86	140	130	150	150	--	--	--	--	--	--	--	--
	Carbonate alkalinity	mg/kg	3	100%	0	--	--	--	--	--	--	3	11	11	17	19	28	28	--	--	--	--	--	--	--	--
	Chlorate	mg/kg	9	89%	100%	0.053	--	0.053	0.053	--	0.053	8	0.0073	0.021	2.1	3.1	6.1	10	--	--	--	--	--	--	--	--
	Chloride	mg/kg	3	100%	0	--	--	--	--	--	--	3	27	27	32	53	100	100	--	--	--	--	--	--	1110	0
	Cyanide (Total)	mg/kg	11	9%	10	0.12	0.78	1.1	0.9	1.1	1.2	1	0.99	--	0.99	0.99	--	0.99	1220	0	2	0	40	0	--	--
	Hydroxide alkalinity	mg/kg	3	0%	3	25	25	25	25	25	25	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrite (as N)	mg/kg	3	100%	0	--	--	--	--	--	--	3	2.1	2.1	2.4	3.7	6.6	6.6	--	--	--	--	--	--	0.21	3
	Sulfate	mg/kg	3	100%	0	--	--	--	--	--	--	3	20	20	240	260	510	510	--	--	--	--	--	--	4130	0
Chlorinated Herbicides	2,4,5-T	mg/kg	2	0%	2	0.0051	--	0.0052	0.0052	--	0.0052	0	--	--	--	--	--	--	611	--	--	--	--	--	--	--
	2,4,5-TP	mg/kg	2	0%	2	0.0033	--	0.0034	0.0034	--	0.0034	0	--	--	--	--	--	--	489	--	--	--	--	--	--	--
	2,4-D	mg/kg	2	0%	2	0.03	--	0.031	0.031	--	0.031	0	--	--	--	--	--	--	686	--	--	--	--	--	--	--
	Dinitrobutyl phenol	mg/kg	2	0%	2	0.0061	--	0.0062	0.0062	--	0.0062	0	--	--	--	--	--	--	61.1	--	--	--	--	--	--	--
Metals	Arsenic	mg/kg	32	34%	21	5	5	5	5.5	6	6.5	11	4.8	6.4	7.3	28	61	104	0.39	11	1	11	20	3	7.2	6
	Barium	mg/kg	32	100%	0	--	--	--	--	--	--	32	160	190	220	1100	250	17600	15300	1	82	32	1640	2	836	4
	Cadmium	mg/kg	31	10%	28	0.22	0.5	0.5	0.61	0.59	2.1	3	0.35	0.35	0.92	1.1	2.1	2.1	38.9	0	0.4	2	8	0	0.16	3
	Calcium	mg/kg	3	100%	0	--	--	--	--	--	--	3	17000	17000	22000	24000	32000	32000	--	--	--	--	--	--	82800	0
	Chromium (Total)	mg/kg	32	94%	2	21	--	21	21	--	21	30	8.9	13	16	120	33	1500	243	3	2	30	40	6	16.7	14
	Chromium (VI)	mg/kg	3	0%	3	0.01	0.01	0.01	0.01	0.01	0.01	0	--	--	--	--	--	--	229	--	2	--	40	--	0.251	--
	Iron	mg/kg	3	100%	0	--	--	--	--	--	--	3	20000	20000	20000	21000	22000	22000	54800	0	7.56	3	151	3	19700	3
	Lead	mg/kg	32	100%	0	--	--	--	--	--	--	32	6.7	8.3	12	260	27	3920	400	3	--	--	--	--	35.1	7
	Magnesium	mg/kg	3	100%	0	--	--	--	--	--	--	3	10000	10000	11000	11000	12000	12000	100000	0	649	3	13000	0	17500	0
	Manganese	mg/kg	3	100%	0	--	--	--	--	--	--	3	410	410	440	460	540	540	1080	0	3.26	3	65.2	3	1090	0
	Mercury	mg/kg	32	22%	25	0.089	0.1	0.1	0.1	0.11	0.13	7	0.11	0.14	0.2	0.55	1.1	1.9	12.5	0	0.105	7	2.09	0	0.11	6
Metals	Selenium	mg/kg	32	0%	32	0.62	5	5	4.9	6	7.2	0	--	--	--	--	--	--	391	--	0.3	--	6	--	0.6	--
	Silver	mg/kg	32	9%	29	0.21	1	1	1.1	1.2	2.1	3	3.4	3.4	4	8.2	17	17.2	391	0	2	3	40	0	0.2609	3
	Sodium	mg/kg	3	100%	0	--	--	--	--	--	--	3	580	580	790	820	1100	1100	--	--	--	--	--	--	1320	0
	Vanadium	mg/kg	12	100%	0	--	--	--	--	--	--	12	47	55	66	490	550	2950	391	3	300	3	6000	0	59.1	8
Organochlorine Pesticides	2,4-DDD	mg/kg	2	50%	1	0.00072	--	0.00072	0.00072	--	0.00072	1	0.38	--	0.38	0.38	--	0.38	--	--	--	--	--	--	--	--
	2,4-DDE	mg/kg	2	100%	0	--	--	--	--	--	--	2	0.01	--	7.5	7.5	--	15	--	--	--	--	--	--	--	--
	4,4-DDD	mg/kg	33	3%	32	0.0001	0.005	0.005	0.41	0.0059	5.4	1	4.1	--	4.1	4.1	--	4.1	2.44	1	0.8	1	16	0	--	--
	4,4-DDE	mg/kg	33	55%	15	0.0035	0.005	0.005	0.0052	0.006	0.0065	18	0.0015	0.011	0.036	13	8.9	98	1.72	5	3	5	60	2	--	--
	4,4-DDT	mg/kg	33	61%	13	0.0035	0.005	0.005	0.005	0.0055	0.0065	20	0.0067	0.012	0.026	8.1	2.4	82	1.72	5	2	5	40	2	--	--
	Aldrin	mg/kg	33	0%	33	0.0001	0.005	0.005	0.1	0.006	2	0	--	--	--	--	--	--	0.0286	--	0.02	--	0.4	--	--	--
	alpha-BHC	mg/kg	33	9%	30	0.00063	0.005	0.005	0.1	0.0056	2.8	3	0.0015	0.0015	0.98	0.89	1.7	1.7	0.0902	2	0.00003	3	0.0006	3	--	--
	alpha-Chlordane	mg/kg	33	6%	31	0.00012	0.005	0.005	0.23	0.006	2.8	2	0.0072	--	0.064	0.064	--	0.12	--	--	--	--	--	--	--	--
	beta-BHC	mg/kg	33	36%	21	0.0018	0.005	0.005	0.33	0.0063	2.8	12	0.0009	0.0033	0.013	0.03	0.022	0.22	0.316	0	0.0001	12	0.002	10	--	--
	Chlordane	mg/kg	13	0%	13	0.02	0.031	0.042	9	2.6	65	0	--	--	--	--	--	--	1.62	--	0.5	--	10	--	--	--
	delta-BHC	mg/kg	33	3%	32	0.00011	0.005	0.005	0.22	0.006	2.8	1	0.0019	--	0.0019	0.0019	--	0.0019	--	--	--	--	--	--	--	--
	Dieldrin	mg/kg	33	6%	31	0.00028	0.005	0.005	0.43	0.0055	5.4	2	0.0072	--	0.14	0.14	--	0.28	0.0304	1	0.0002	2	0.004	2	--	--
	Endosulfan I	mg/kg	33	24%	25	0.00013	0.005	0.005	0.16	0.0058	3.9	8	0.0019	0.0064	0.041	12	19	69	367	0	0.9	3	18	2	--	--
	Endosulfan II	mg/kg	33	0%	33	0.0001	0.005	0.005	0.4	0.006	5.4	0	--	--	--	--	--	--	367	--	0.9	--	18	--	--	--
	Endosulfan sulfate	mg/kg	33	0%	33	0.00024	0.005	0.005	0.4	0.006	5.4	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin	mg/kg	33	3%	32	0.0002	0.005	0.005	0.42	0.006	5.4	1	0.036	--	0.036	0.036	--	0.036	18.3	0	0.05	0	1	0	--	--
	Endrin aldehyde	mg/kg	33	0%	33	0.00017	0.005	0.005	0.4	0.006	5.4	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin ketone	mg/kg	22	0%	22	0.005	0.005	0.005	0.0095	0.0056	0.1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	gamma-Chlordane	mg/kg	33	21%	26	0.0018	0.005	0.005	0.0085	0.0051	0.1	7	0.0022	0.003	0.006	1.4	3.1	5	--	--	--	--	--	--	--	--
	Heptachlor	mg/kg	33	0%	33	0.0001	0.005	0.005	0.21	0.006	2.8	0	--	--	--	--	--	--	0.108	--	1	--	20	--	--	--
	Heptachlor epoxide	mg/kg	33	0%	33	0.00014	0.005	0.005	0.21	0.006	2.8	0	--	--	--	--	--	--	0.0535	--	0.03	--	0.6	--	--	--
	Lindane	mg/kg	33	0%	33	0.00026	0.005	0.005	0.21	0.006	2.8	0	--	--	--	--	--	--	0.437	--	0.0005	--	0.01	--	--	--
	Methoxychlor	mg/kg	33	0%	33	0.00018	0.02	0.02	2.1	0.023	28	0	--	--	--	--	--	--	306	--	8	--	160	--	--	--
	Toxaphene	mg/kg	33	0%	33	0.0068	0.016	0.06	0.1	0.063	1.2	0	--	--	--	--	--	--	0.442	--	2	--	40	--	--	--
Organo-phosphorus Pesticides	Disulfoton	mg/kg	2	0%	2	0.0079	--	0.008	0.008	--	0.0081	0	--	--	--	--	--	--	2.44	--	--	--	--	--	--	--
	Famphur	mg/kg	2	0%	2	0.0033	--	0.0034	0.0034	--	0.0034	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Methyl parathion	mg/kg	2	0%	2	0.0065	--	0.0066	0.0066	--	0.0067	0	--	--	--	--	--	--	15.3	--	--	--	--	--	--	--
	Parathion	mg/kg	2	0%	2	0.0054	--	0.0055	0.0055	--	0.0055	0	--	--	--	--	--	--	367	--	--	--	--	--	--	--
	Phorate	mg/kg	2	0%	2	0.0059	--	0.006	0.006	--	0.006	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF HISTORICAL SOIL CHEMICAL DATA AT THE STAGING SUB-AREA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 2 of 4)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[a]							Resident Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	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								
Polynuclear Aromatic Hydrocarbons	Acenaphthene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	4690	--	29	--	580	--	--	--
	Acenaphthylene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	147	--	--	--	--	--	--	--
	Anthracene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	23500	--	590	--	11800	--	--	--
	Benzo(a)anthracene	mg/kg	21	10%	19	0.5	0.5	0.7	1.7	1.6	6	2	0.035	--	0.043	0.043	--	0.05	0.622	0	0.08	0	1.6	0	--	--
	Benzo(a)pyrene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	0.0622	--	0.4	--	8	--	--	--
	Benzo(b)fluoranthene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	0.622	--	0.2	--	4	--	--	--
	Benzo(g,h,i)perylene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	2350	--	--	--	--	--	--	--
	Benzo(k)fluoranthene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	6.21	--	2	--	40	--	--	--
	Chrysene	mg/kg	21	10%	19	0.5	0.5	0.7	1.7	1.6	6	2	0.035	--	0.088	0.088	--	0.14	62.1	0	8	0	160	0	--	--
	Dibenzo(a,h)anthracene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	0.0622	--	0.08	--	1.6	--	--	--
	Indeno(1,2,3-cd)pyrene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	0.622	--	0.7	--	14	--	--	--
	Phenanthrene	mg/kg	21	10%	19	0.5	0.5	0.7	1.7	1.6	6	2	0.064	--	0.13	0.13	--	0.19	24.5	0	--	--	--	--	--	--
	Pyrene	mg/kg	21	10%	19	0.5	0.5	0.7	1.7	1.6	6	2	0.061	--	0.068	0.068	--	0.074	2350	0	210	0	4200	0	--	--
Polychlorinated Biphenyls	Aroclor 1016	mg/kg	31	0%	31	0.013	0.02	0.02	0.84	0.024	15	0	--	--	--	--	--	--	3.93	--	--	--	--	--	--	--
	Aroclor 1221	mg/kg	31	0%	31	0.013	0.02	0.02	0.84	0.024	15	0	--	--	--	--	--	--	0.222	--	--	--	--	--	--	--
	Aroclor 1232	mg/kg	31	0%	31	0.013	0.02	0.02	0.84	0.024	15	0	--	--	--	--	--	--	0.222	--	--	--	--	--	--	--
	Aroclor 1242	mg/kg	31	0%	31	0.013	0.02	0.02	0.84	0.024	15	0	--	--	--	--	--	--	0.222	--	--	--	--	--	--	--
	Aroclor 1248	mg/kg	31	0%	31	0.013	0.02	0.02	0.84	0.024	15	0	--	--	--	--	--	--	0.222	--	--	--	--	--	--	--
	Aroclor 1254	mg/kg	31	3%	30	0.013	0.02	0.02	0.87	0.024	15	1	0.04	--	0.04	0.04	--	0.04	0.222	0	--	--	--	--	--	--
	Aroclor 1260	mg/kg	31	3%	30	0.014	0.02	0.02	0.87	0.024	15	1	0.2	--	0.2	0.2	--	0.2	0.222	0	--	--	--	--	--	--
Semi-Volatile Organic Compounds	1,2,4,5-Tetrachlorobenzene	mg/kg	2	50%	1	0.034	--	0.034	0.034	--	0.034	1	0.068	--	0.068	0.068	--	0.068	18.3	0	--	--	--	--	--	--
	1,4-Dioxane	mg/kg	2	0%	2	0.034	--	0.035	0.035	--	0.035	0	--	--	--	--	--	--	44.2	--	--	--	--	--	--	--
	2,4,5-Trichlorophenol	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	6110	--	14	--	280	--	--	--
	2,4,6-Trichlorophenol	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	44.2	--	0.008	--	0.16	--	--	--
	2,4-Dichlorophenol	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	183	--	0.05	--	1	--	--	--
	2,4-Dimethylphenol	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	1220	--	0.4	--	8	--	--	--
	2,4-Dinitrophenol	mg/kg	21	0%	21	0.34	2.5	3.5	7.6	7.8	30	0	--	--	--	--	--	--	122	--	0.01	--	0.2	--	--	--
	2,4-Dinitrotoluene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	1.57	--	0.00004	--	0.0008	--	--	--
	2,6-Dinitrotoluene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	61.1	--	0.00003	--	0.0006	--	--	--
	2-Chloronaphthalene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	6260	--	--	--	--	--	--	--
	2-Chlorophenol	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	391	--	0.2	--	4	--	--	--
	2-Methylnaphthalene	mg/kg	19	0%	19	0.5	0.5	0.7	1.7	1.6	6	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Nitroaniline	mg/kg	21	0%	21	0.034	2.5	3.5	7.6	7.8	30	0	--	--	--	--	--	--	183	--	--	--	--	--	--	--
	2-Nitrophenol	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3,3'-Dichlorobenzidine	mg/kg	19	0%	19	1	1	1.4	3.4	3.1	12	0	--	--	--	--	--	--	1.08	--	0.0003	--	0.006	--	--	--
	3-Methylphenol & 4-Methylphenol	mg/kg	2	0%	2	0.068	--	0.069	0.069	--	0.07	0	--	--	--	--	--	--	3060	--	--	--	--	--	--	--
	3-Nitroaniline	mg/kg	19	0%	19	2.5	2.5	3.5	8.4	7.8	30	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4,6-Dinitro-o-cresol	mg/kg	19	0%	19	2.5	2.5	3.5	8.4	7.8	30	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Bromophenyl phenyl ether	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chloro-3-methyl phenol	mg/kg	21	0%	21	0.034	1	1.4	3	3.1	12	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Chlorophenyl phenyl ether	mg/kg	19	0%	19	0.5	0.5	0.7	1.7	1.6	6	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Nitrophenol	mg/kg	21	0%	21	0.34	2.5	3.5	7.6	7.8	30	0	--	--	--	--	--	--	489	--	--	--	--	--	--	--
	Acetophenone	mg/kg	2	0%	2	0.034	--	0.035	0.035	--	0.035	0	--	--	--	--	--	--	1740	--	--	--	--	--	--	--
	Aniline	mg/kg	2	0%	2	0.034	--	0.035	0.035	--	0.035	0	--	--	--	--	--	--	85.3	--	--	--	--	--	--	--
	Azobenzene	mg/kg	1	0%	1	0.034	--	0.034	0.034	--	0.034	0	--	--	--	--	--	--	3.91	--	--	--	--	--	--	--
	Benzoic acid	mg/kg	19	0%	19	2.5	2.5	3.5	8.4	7.8	30	0	--	--	--	--	--	--	100000	--	20	--	400	--	--	--
	Benzyl alcohol	mg/kg	19	0%	19	1	1	1.4	3.4	3.1	12	0	--	--	--	--	--	--	30600	--	--	--	--	--	--	--
	Benzyl butyl phthalate	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	240	--	810	--	16200	--	--	--
	bis(2-Chloroethoxy) methane	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	bis(2-Chloroethyl) ether	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	0.244	--	0.00002	--	0.0004	--	--	--
	bis(2-Chloroisopropyl) ether	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	3.38	--	--	--	--	--	--	--
	bis(2-Ethylhexyl) phthalate	mg/kg	19	5%	18	0.5	0.5	0.7	1.7	2.4	6	1	0.75	--	0.75	0.75	--	0.75	34.7	0	180	0	3600	0	--	--
	Carbazole	mg/kg	19	0%	19	0.5	0.5	0.7	1.7	1.6	6	0	--	--	--	--	--	--	24.3	--	0.03	--	0.6	--	--	--
	Dibenzofuran	mg/kg	19	0%	19	0.5	0.5	0.7	1.7	1.6	6	0	--	--	--	--	--	--	156	--	--	--	--	--	--	--
	Dibutyl phthalate	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	6110	--	270	--	5400	--	--	--
	Diethyl phthalate	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	48900	--	--	--	--	--	--	--
	Dimethyl phthalate	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	100000	--	--	--	--	--	--	--
	Di-n-octyl phthalate	mg/kg	21	0%	21	0.015	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	mg/kg	21	14%	18	0.5	0.5	0.7	1.7	2.5	6	3	0.065	0.065	0.18	0.23	0.45	0.45	2290	0	210	0	4200	0	--	--
	Fluorene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	3130	--	28	--	560	--	--	--
	Hexachloro-1,3-butadiene	mg/kg	21	0%	21	0.005	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	6.24	--	0.1	--	2	--	--	--
	Hexachlorobenzene	mg/kg	21	19%	17	0.034	0.5	0.67	1.7	2.9	6	4	1.1	1.7	5.7	5.6	9.3	9.7	0.304	4	0.1	4	2	3	--	--

TABLE 1
SUMMARY OF HISTORICAL SOIL CHEMICAL DATA AT THE STAGING SUB-AREA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 3 of 4)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[a]							Resident Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	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								
Semi-Volatile Organic Compounds	Hexachlorocyclopentadiene	mg/kg	21	0%	21	0.34	0.5	0.69	1.6	1.6	6	0	--	--	--	--	--	--	366	--	20	--	400	--	--	--
	Hexachloroethane	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	34.7	--	0.02	--	0.4	--	--	--
	Isophorone	mg/kg	19	0%	19	0.5	0.5	0.7	1.7	1.6	6	0	--	--	--	--	--	--	512	--	0.03	--	0.6	--	--	--
	Naphthalene	mg/kg	21	0%	21	0.005	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	3.1	--	4	--	80	--	--	--
	Nitrobenzene	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	2.69	--	0.007	--	0.14	--	--	--
	N-nitrosodiethylamine	mg/kg	11	0%	11	0.5	0.5	0.5	2.2	5	6	0	--	--	--	--	--	--	0.00324	--	--	--	--	--	--	--
	N-nitrosodi-n-propylamine	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	0.0695	--	0.000002	--	0.00004	--	--	--
	N-nitrosodiphenylamine	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	99.3	--	0.06	--	1.2	--	--	--
	o-Cresol	mg/kg	21	0%	21	0.035	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	3060	--	0.8	--	16	--	--	--
	p-Chloroaniline	mg/kg	21	0%	21	0.034	1	1.4	3	3.1	12	0	--	--	--	--	--	--	244	--	0.03	--	0.6	--	--	--
	p-Cresol	mg/kg	19	0%	19	0.5	0.5	0.7	1.7	1.6	6	0	--	--	--	--	--	--	306	--	--	--	--	--	--	--
	Pentachlorobenzene	mg/kg	2	50%	1	0.034	--	0.034	0.034	--	0.034	1	0.15	--	0.15	0.15	--	0.15	48.9	0	--	--	--	--	--	--
	Pentachlorophenol	mg/kg	21	0%	21	0.34	2.5	3.5	7.6	7.8	30	0	--	--	--	--	--	--	2.98	--	0.001	--	0.02	--	--	--
	Phenol	mg/kg	21	0%	21	0.034	0.5	0.69	1.5	1.6	6	0	--	--	--	--	--	--	18300	--	5	--	100	--	--	--
	Phthalic acid	mg/kg	2	0%	2	0.26	--	0.26	0.26	--	0.26	0	--	--	--	--	--	--	100000	--	--	--	--	--	--	--
	p-Nitroaniline	mg/kg	21	0%	21	0.34	1	3.5	4.1	7.8	12	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyridine	mg/kg	2	0%	2	0.034	--	0.19	0.19	--	0.35	0	--	--	--	--	--	--	61.1	--	--	--	--	--	--	--
Volatile Organic Compounds	1,1,1,2-Tetrachloroethane	mg/kg	15	0%	15	0.00023	0.005	0.005	0.0048	0.005	0.01	0	--	--	--	--	--	--	3.69	--	--	--	--	--	--	--
	1,1,1-Trichloroethane	mg/kg	24	0%	24	0.00015	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	1390	--	0.1	--	2	--	--	--
	1,1,2,2-Tetrachloroethane	mg/kg	24	0%	24	0.00014	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	0.472	--	0.0002	--	0.004	--	--	--
	1,1,2-Trichloroethane	mg/kg	24	0%	24	0.00029	0.0021	0.005	0.0038	0.005	0.01	0	--	--	--	--	--	--	1.05	--	0.0009	--	0.018	--	--	--
	1,1-Dichloroethane	mg/kg	24	0%	24	0.00098	0.0011	0.005	0.0035	0.005	0.01	0	--	--	--	--	--	--	4.19	--	1	--	20	--	--	--
	1,1-Dichloroethylene	mg/kg	24	0%	24	0.00056	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	285	--	0.003	--	0.06	--	--	--
	1,1-Dichloropropene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichlorobenzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2,3-Trichloropropane	mg/kg	15	0%	15	0.00057	0.005	0.005	0.0048	0.005	0.01	0	--	--	--	--	--	--	0.32	--	--	--	--	--	--	--
	1,2,4-Trichlorobenzene	mg/kg	25	12%	22	0.00075	0.005	0.0053	0.25	0.68	0.72	3	0.0034	0.0034	1.5	1.7	3.5	3.5	143	0	0.3	2	6	0	--	--
	1,2,4-Trimethylbenzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	144	--	--	--	--	--	--	--
	1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	15	0%	15	0.00091	0.005	0.005	0.0049	0.005	0.01	0	--	--	--	--	--	--	0.0104	--	--	--	--	--	--	--
	1,2-Dibromoethane	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	0.0335	--	--	--	--	--	--	--
	1,2-Dichlorobenzene	mg/kg	26	8%	24	0.00015	0.005	0.0051	0.053	0.0055	0.65	2	0.0012	--	0.011	0.011	--	0.021	373	0	0.9	0	18	0	--	--
	1,2-Dichloroethane	mg/kg	24	0%	24	0.00045	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	0.433	--	0.001	--	0.02	--	--	--
	1,2-Dichloropropane	mg/kg	24	0%	24	0.00038	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	0.82	--	0.001	--	0.02	--	--	--
	1,3,5-Trimethylbenzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	49.8	--	--	--	--	--	--	--
	1,3-Dichlorobenzene	mg/kg	26	4%	25	0.00013	0.005	0.005	0.05	0.0054	0.65	1	0.0013	--	0.0013	0.0013	--	0.0013	235	0	--	--	--	--	--	--
	1,3-Dichloropropane	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	1130	--	0.001	--	0.02	--	--	--
	1,4-Dichlorobenzene	mg/kg	26	8%	24	0.00011	0.005	0.0051	0.053	0.0055	0.65	2	0.0017	--	0.015	0.015	--	0.029	2.59	0	0.1	0	2	0	--	--
	2,2-Dichloropropane	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Chloroethyl vinyl ether	mg/kg	22	0%	22	0.001	0.0011	0.005	0.0037	0.005	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Chlorotoluene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	511	--	--	--	--	--	--	--
	2-Phenylbutane	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	223	--	--	--	--	--	--	--
	4-Chlorotoluene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acetone	mg/kg	24	0%	24	0.0032	0.01	0.025	0.019	0.025	0.05	0	--	--	--	--	--	--	60000	--	0.8	--	16	--	--	--
	Acetonitrile	mg/kg	2	0%	2	0.002	--	0.0021	0.0021	--	0.0021	0	--	--	--	--	--	--	1470	--	--	--	--	--	--	--
	Benzene	mg/kg	24	0%	24	0.00017	0.005	0.005	0.0046	0.0053	0.01	0	--	--	--	--	--	--	0.81	--	0.002	--	0.04	--	--	--
	Bromobenzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	63.5	--	--	--	--	--	--	--
	Bromodichloromethane	mg/kg	24	0%	24	0.00034	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	10.3	--	0.03	--	0.6	--	--	--
	Bromomethane	mg/kg	24	0%	24	0.00032	0.005	0.005	0.0047	0.0053	0.01	0	--	--	--	--	--	--	8.7	--	0.01	--	0.2	--	--	--
	Carbon disulfide	mg/kg	24	0%	24	0.00057	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	721	--	2	--	40	--	--	--
	Carbon tetrachloride	mg/kg	24	0%	24	0.00093	0.005	0.005	0.0047	0.0053	0.01	0	--	--	--	--	--	--	0.3	--	0.003	--	0.06	--	--	--
	CFC-11	mg/kg	24	0%	24	0.00052	0.005	0.005	0.0047	0.0053	0.01	0	--	--	--	--	--	--	883	--	--	--	--	--	--	--
	CFC-12	mg/kg	15	0%	15	0.00038	0.005	0.005	0.0048	0.005	0.01	0	--	--	--	--	--	--	218	--	--	--	--	--	--	--
	Chlorinated fluorocarbon (Freon 113)	mg/kg	2	0%	2	0.00055	--	0.00056	0.00056	--	0.00056	0	--	--	--	--	--	--	5550	--	--	--	--	--	--	--
	Chlorobenzene	mg/kg	24	0%	24	0.00013	0.005	0.005	0.0046	0.0053	0.01	0	--	--	--	--	--	--	273	--	0.07	--	1.4	--	--	--
	Chlorobromomethane	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chlorodibromomethane	mg/kg	24	0%	24	0.0003	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	1.12	--	0.02	--	0.4	--	--	--
	Chloroethane	mg/kg	24	0%	24	0.00036	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	221	--	--	--	--	--	--	--
	Chloroform	mg/kg	24	4%	23	0.00015	0.005	0.005	0.0046	0.0053	0.01	1	0.0015	--	0.0015	0.0015	--	0.0015	0.306	0	0.03	0	0.6	0	--	--
	Chloromethane	mg/kg	24	0%	24	0.00046	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--
	cis-1,2-Dichloroethylene	mg/kg	22	0%	22	0.001	0.0011	0.005	0.0037	0.005	0.01	0	--	--	--	--	--	--	782	--	0.02	--	0.4	--	--	--
	cis-1,3-Dichloropropylene	mg/kg	24	0%	24	0.00075	0.0021	0.005	0.0038	0.005	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cymene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibromomethane	mg/kg	15	0%	15	0.00036	0.005	0.005	0.0048	0.005	0.01	0	--	--	--	--	--	--	782	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF HISTORICAL SOIL CHEMICAL DATA AT THE STAGING SUB-AREA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 4 of 4)

Parameter of Interest	Compound List	Units	Total Count	Detect Freq.	Censored (Non-Detect) Data							Detected Data[a]							Resident Soil BCL	Count of Detects > BCL	LBCL (DAF 1)	Count of Detects > DAF 1	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								
Volatile Organic Compounds	Dichloromethane	mg/kg	24	0%	24	0.0011	0.005	0.005	0.0048	0.0053	0.01	0	--	--	--	--	--	--	11	--	0.001	--	0.02	--	--	--
	Ethylbenzene	mg/kg	24	0%	24	0.00019	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	3.79	--	0.7	--	14	--	--	--
	Isopropylbenzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	371	--	--	--	--	--	--	--
	m,p-Xylene	mg/kg	22	0%	22	0.0021	0.0021	0.005	0.0041	0.005	0.01	0	--	--	--	--	--	--	214	--	10	--	200	--	--	--
	Methyl ethyl ketone	mg/kg	24	8%	22	0.0014	0.01	0.018	0.018	0.025	0.05	2	0.029	--	0.03	0.03	--	0.03	32100	0	--	--	--	--	--	--
	Methyl iodide	mg/kg	15	0%	15	0.00026	0.005	0.005	0.0048	0.005	0.01	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Methyl isobutyl ketone	mg/kg	24	0%	24	0.0017	0.0053	0.015	0.016	0.025	0.05	0	--	--	--	--	--	--	5800	--	--	--	--	--	--	--
	Methyl n-butyl ketone	mg/kg	22	0%	22	0.0031	0.0032	0.025	0.018	0.025	0.05	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MTBE (Methyl tert-butyl ether)	mg/kg	13	0%	13	0.005	0.005	0.005	0.007	0.0058	0.025	0	--	--	--	--	--	--	39.2	--	--	--	--	--	--	--
	n-Butyl benzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	237	--	--	--	--	--	--	--
	n-Propyl benzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	237	--	--	--	--	--	--	--
	o-Xylene	mg/kg	22	0%	22	0.001	0.0011	0.005	0.0037	0.005	0.01	0	--	--	--	--	--	--	282	--	9	--	180	--	--	--
	Styrene (monomer)	mg/kg	22	0%	22	0.001	0.0011	0.005	0.0037	0.005	0.01	0	--	--	--	--	--	--	1730	--	0.2	--	4	--	--	--
	tert-Butyl benzene	mg/kg	13	0%	13	0.005	0.005	0.005	0.0055	0.0053	0.01	0	--	--	--	--	--	--	393	--	--	--	--	--	--	--
	Tetrachloroethylene	mg/kg	24	0%	24	0.00028	0.005	0.005	0.0046	0.0053	0.01	0	--	--	--	--	--	--	0.624	--	0.003	--	0.06	--	--	--
	Toluene	mg/kg	24	0%	24	0.00013	0.005	0.005	0.0047	0.0053	0.01	0	--	--	--	--	--	--	521	--	0.6	--	12	--	--	--
	trans-1,2-Dichloroethylene	mg/kg	24	0%	24	0.00023	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	122	--	0.03	--	0.6	--	--	--
	trans-1,3-Dichloropropylene	mg/kg	24	0%	24	0.00021	0.0021	0.005	0.0038	0.005	0.01	0	--	--	--	--	--	--	0.858	--	0.0002	--	0.004	--	--	--
	Tribromomethane	mg/kg	24	0%	24	0.00025	0.0011	0.005	0.0034	0.005	0.01	0	--	--	--	--	--	--	61.6	--	0.04	--	0.8	--	--	--
	Trichloroethylene	mg/kg	24	4%	23	0.00037	0.005	0.005	0.0048	0.0053	0.01	1	0.0069	--	0.0069	0.0069	--	0.0069	1.06	0	0.003	1	0.06	0	--	--
	Vinyl acetate	mg/kg	9	0%	9	0.001	0.0011	0.0011	0.0011	0.0011	0.0011	0	--	--	--	--	--	--	988	--	8	--	160	--	--	--
	Vinyl chloride	mg/kg	24	0%	24	0.00024	0.0021	0.005	0.0038	0.005	0.01	0	--	--	--	--	--	--	0.349	--	0.0007	--	0.014	--	--	--
	Xylenes (total)	mg/kg	2	0%	2	0.00088	--	0.00089	0.00089	--	0.0009	0	--	--	--	--	--	--	214	--	10	--	200	--	--	--

Notes:

BCL = Basic Comparison Levels (BCLs) from NDEP 2009b. Values used are residential soil BCLs.
LBCL = Leaching-based BCLs from NDEP 2009b.
Max = Maximum
Min = Minimum
Q1 = 1st quartile (25th percentile)
Q3 = 3rd quartile (75th percentile)
This table includes data only to 10 feet bgs and data associated with soil samples that have not been remediated. 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 and status.
Values for Q1, median, mean, and Q3 are rounded to 2 significant figures. BCLs are rounded to 3 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, the number of detects and non-detects, and a frequency of detection for TCDD TEQ are not presented.
-- = Not applicable or no value has been established.

TABLE 2
SUMMARY OF 2009 EASTSIDE ALLUVIAL AQUIFER GROUNDWATER DATA FROM MONITORING WELLS DM-1 AND POU3
STAGING SUB-AREA AND PARCEL 9 SOUTH

Class	Chemical	Units	USEPA 2002 VI SL[1]	USEPA MCL	NDEP Water BCL	DM-1 On-Site 10/1/2009	POU3 Adjacent to Site 9/22/2009
General Chemistry	Ammonia	µg/L	--	--	200	15.6 J	< 8.1 U
	Bromide	mg/L	--	--	--	0.73	< 0.026 U
	Bromine	mg/L	--	--	--	1.5	< 50 U
	Chlorate	mg/L	--	--	--	0.68	299
	Chloride	mg/L	--	--	--	346 J-TDS	2530 J-CAB&TDS
	Chlorine	mg/L	--	4	4	**692 J-TDS**	**5060 J-CAB&TDS**
	Chlorite	µg/L	--	1000	--	< 40 U	< 80 U
	Cyanide, Total	µg/L	--	200	200	< 3.5 U	R
	Fluoride	mg/L	--	4	4	0.77 J-TDS	< 0.2 U
	Iodide	mg/L	--	--	--	< 0.3 U	< 0.3 U
	Ion Balance Difference	Pct	--	--	--	4.6	9.4
	Nitrate	mg/L	--	10	10	**19.1 J-TDS**	**12.2**
	Nitrite	mg/L	--	1	1	< 0.06 U	< 0.06 U
	Orthophosphate	mg/L	--	--	--	< 1 U	< 1 U
	Perchlorate	µg/L	--	18/24.5[2]	18	**270**	**27000**
	Sulfate	mg/L	--	--	--	2310 J-TDS	2460 J-CAB&TDS
	Sulfide	mg/L	--	--	--	< 0.083 U	< 0.083 U
	Total Kjeldahl Nitrogen	mg/L	--	--	--	< 0.12 U	0.14 J-CAB&TDS
Metals	Aluminum	µg/L	--	--	36500	< 36.2 U	< 36.2 U
	Antimony	µg/L	--	6	6	< 0.7 U	< 0.7 U
	Arsenic	µg/L	--	10	10	**21.8 J**	**84.6 J**
	Barium	µg/L	--	2000	2000	16.4 J	33
	Beryllium	µg/L	--	4	4	< 0.8 UJ	< 0.8 U
	Boron	µg/L	--	--	7300	3270	4400
	Cadmium	µg/L	--	5	5	< 0.4 U	< 0.4 U
	Calcium	µg/L	--	--	--	570000 J-TDS	806000 J-CAB&TDS
	Chromium (Total)	µg/L	--	100	100	30.2 J	**462**
	Chromium (VI)	µg/L	--	100	100	27	**420**
	Cobalt	µg/L	--	--	11	< 0.1 U	< 0.1 U
	Copper	µg/L	--	1300	1360	< 5.6 U	< 5.6 U
	Iron	µg/L	--	--	25600	3710	3340
	Lead	µg/L	--	15	15	< 1.8 U	< 1.8 U
	Lithium	µg/L	--	--	73	**197 J**	**207**
	Magnesium	µg/L	--	--	207000	168000 J-TDS	**378000 J-CAB&TDS**
	Manganese	µg/L	--	--	510	< 3.1 U	17.4 J
	Mercury	µg/L	--	2	10.95	0.036 J-	< 0.027 U
	Molybdenum	µg/L	--	--	180	< 1.4 U	98
	Nickel	µg/L	--	--	730	14.7 J	8.5 J
	Potassium	µg/L	--	--	--	13800 J-TDS	33700 J-CAB&TDS
	Selenium	µg/L	--	50	50	9.7 J	< 7 U
	Silver	µg/L	--	--	180	< 0.15 U	< 0.15 U
	Sodium	µg/L	--	--	--	570000 J-TDS	1740000 J-CAB&TDS
	Strontium	µg/L	--	--	21900	10000	19500
	Thallium	µg/L	--	2	2	< 0.2 U	< 0.2 U
	Tin	µg/L	--	--	21900	< 1.7 U	< 1.7 U
	Titanium	µg/L	--	--	146000	4 J	9.7
	Tungsten	µg/L	--	--	270	< 0.22 U	< 0.22 U
	Uranium	µg/L	--	30	30	27.7	10.2
	Vanadium	µg/L	--	--	180	8.9 J	11.5 J
	Zinc	µg/L	--	--	11000	< 20 U	< 20 U

TABLE 2
SUMMARY OF 2009 EASTSIDE ALLUVIAL AQUIFER GROUNDWATER DATA FROM MONITORING WELLS DM-1 AND POU3
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 2 of 4)

Class	Chemical	Units	USEPA 2002 VI SL[1]	USEPA MCL	NDEP Water BCL	DM-1 On-Site 10/1/2009	POU3 Adjacent to Site 9/22/2009
Organochlorine Pesticides	2,4'-DDD	µg/L	--	--	--	< 0.01 U	< 0.01 U
	2,4'-DDE	µg/L	--	--	--	< 0.01 U	< 0.01 U
	4,4'-DDD	µg/L	--	--	0.28	< 0.01 U	< 0.01 U
	4,4'-DDE	µg/L	29	--	0.2	< 0.02 U	< 0.02 U
	4,4'-DDT	µg/L	--	--	0.2	< 0.01 U	< 0.01 U
	Aldrin	µg/L	0.071	--	0.004	*< 0.01 U*	*< 0.01 U*
	alpha-BHC	µg/L	3.1	--	0.011	< 0.01 U	< 0.01 U
	alpha-Chlordane	µg/L	--	--	--	< 0.02 U	< 0.02 U
	beta-BHC	µg/L	--	--	0.037	< 0.01 U	< 0.01 U
	Chlordane	µg/L	12	2	2	< 0.04 U	< 0.04 U
	delta-BHC	µg/L	--	--	--	< 0.01 U	< 0.01 U
	Dieldrin	µg/L	0.86	--	0.0042	*< 0.01 U*	*< 0.01 U*
	Endosulfan I	µg/L	--	--	--	< 0.02 U	< 0.02 U
	Endosulfan II	µg/L	--	--	--	< 0.01 U	< 0.01 U
	Endosulfan sulfate	µg/L	--	--	--	< 0.01 U	< 0.01 U
	Endrin	µg/L	--	2	2	< 0.01 U	< 0.01 U
	Endrin aldehyde	µg/L	--	--	--	< 0.01 U	< 0.01 U
	Endrin ketone	µg/L	--	--	--	< 0.02 U	< 0.02 U
	gamma-BHC (Lindane)	µg/L	11	0.2	0.2	< 0.003 U	< 0.003 U
	gamma-Chlordane	µg/L	--	--	--	< 0.01 U	< 0.01 U
	Heptachlor	µg/L	0.4	0.4	0.4	< 0.003 U	< 0.003 U
	Heptachlor epoxide	µg/L	--	0.2	0.2	< 0.01 U	< 0.01 U
	Methoxychlor	µg/L	--	40	40	< 0.01 U	< 0.01 U
	Toxaphene	µg/L	--	3	3	< 0.66 U	< 0.66 U
Radionuclides	Radium-226	pCi/L	--	--	--	0.3 U	1.98
	Radium-226/228	pCi/L	--	5[3]	--	2.29 U	3.32
	Radium-228	pCi/L	--	--	--	1.99 UJ	1.34
	Thorium-228	pCi/L	--	--	--	0.262 U	-0.167 U
	Thorium-230	pCi/L	--	--	--	0.69	-0.0838 U
	Thorium-232	pCi/L	--	--	--	0.351 U	-0.0515 U
	Uranium-233/234	pCi/L	--	--	--	12.9	5.18
	Uranium-235/236	pCi/L	--	--	--	0.469	0.386
	Uranium-238	pCi/L	--	--	--	9.65	3.14
VOCs	1,1,1,2-Tetrachloroethane	µg/L	3.3	--	2.3	< 0.16 U	< 0.16 U
	1,1,1-Trichloroethane	µg/L	3,100	200	200	< 0.088 U	< 0.088 U
	1,1,2,2-Tetrachloroethane	µg/L	3	--	0.3	< 0.11 U	< 0.11 U
	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	1,500	--	876000	< 0.12 U	< 0.12 U
	1,1,2-Trichloroethane	µg/L	5	5	5	< 0.071 U	0.12 J
	1,1-Dichloroethane	µg/L	2,200	--	12	< 0.083 U	0.84 J
	1,1-Dichloroethene	µg/L	190	7	7	< 0.11 U	1.7
	1,1-Dichloropropene	µg/L	--	--	--	< 0.068 U	0.32 J
	1,2,3-Trichlorobenzene	µg/L	--	--	--	< 0.16 U	< 0.16 U
	1,2,3-Trichloropropane	µg/L	290	--	0.034	*< 0.23 U*	*< 0.23 U*
	1,2,4-Trichlorobenzene	µg/L	3,400	70	70	< 0.16 U	< 0.16 U
	1,2,4-Trimethylbenzene	µg/L	24	--	51	< 0.062 U	< 0.062 U
	1,2-Dibromo-3-chloropropane (DBCP)	µg/L	33	0.2	0.2	< 0.2 U	< 0.2 U
	1,2-Dichlorobenzene	µg/L	2,600	600	600	< 0.11 U	5.5
	1,2-Dichloroethane	µg/L	5	5	5	< 0.05 U	< 0.05 U
	1,2-Dichloroethene (total)	µg/L	--	--	--	< 0.21 U	1 J
	1,2-Dichloropropane	µg/L	35	5	5	< 0.054 U	1.2
	1,3,5-Trichlorobenzene	µg/L	--	--	--	< 0.12 U	< 0.12 U
	1,3,5-Trimethylbenzene	µg/L	25	--	590	< 0.11 U	< 0.11 U

TABLE 2
SUMMARY OF 2009 EASTSIDE ALLUVIAL AQUIFER GROUNDWATER DATA FROM MONITORING WELLS DM-1 AND POU3
STAGING SUB-AREA AND PARCEL 9 SOUTH

Class	Chemical	Units	USEPA 2002 VI SL[1]	USEPA MCL	NDEP Water BCL	DM-1 On-Site 10/1/2009	POU3 Adjacent to Site 9/22/2009
VOCs	1,3-Dichlorobenzene	µg/L	830	--	110	< 0.081 U	0.6 J
	1,3-Dichloropropane	µg/L	0.84	--	730	< 0.053 U	< 0.053 U
	1,4-Dichlorobenzene	µg/L	8,200	75	75	< 0.11 U	1.1
	2,2,3-Trimethylbutane	µg/L	--	--	--	< 0.23 U	< 0.23 U
	2,2-Dichloropropane	µg/L	--	--	--	< 0.1 U	< 0.1 U
	2,2-Dimethylpentane	µg/L	--	--	--	< 0.16 U	< 0.16 U
	2,3-Dimethylpentane	µg/L	--	--	--	< 0.18 U	< 0.18 U
	2,4-Dimethylpentane	µg/L	--	--	--	< 0.19 U	< 0.19 U
	2-Chlorotoluene	µg/L	--	--	730	< 0.11 U	< 0.11 U
	2-Hexanone	µg/L	--	--	--	< 1.3 U	< 1.3 U
	2-Methylhexane	µg/L	--	--	--	< 0.15 U	< 0.15 U
	2-Nitropropane	µg/L	0.18	--	0.0063	*< 1.1 U*	*< 1.1 U*
	3,3-Dimethylpentane	µg/L	--	--	--	< 0.2 U	< 0.2 U
	3-Ethylpentane	µg/L	--	--	--	< 0.089 U	< 0.089 U
	3-Methylhexane	µg/L	--	--	--	< 0.17 U	< 0.17 U
	4-Chlorotoluene	µg/L	--	--	--	< 0.095 U	< 0.095 U
	4-Methyl-2-pentanone	µg/L	14,000	--	2900	< 0.32 U	< 0.32 U
	Acetone	µg/L	220,000	--	32600	< 0.42 U	< 0.42 U
	Acetonitrile	µg/L	42,000	--	440	< 4.2 UJ	< 4.2 UJ
	Benzene	µg/L	5	5	5	< 0.06 U	0.16 J
	Bromobenzene	µg/L	--	--	490	< 0.084 U	< 0.084 U
	Bromodichloromethane	µg/L	2.1	80[4]	1.1	< 0.098 U	**26**
	Bromoform	µg/L	0.0083	80[4]	8.5	< 0.15 U	**12**
	Bromomethane	µg/L	--	--	48	< 0.096 U	< 0.096 U
	Carbon disulfide	µg/L	560	--	3520	< 0.52 U	< 0.52 U
	Carbon tetrachloride	µg/L	5	5	5	< 0.073 U	**25**
	Chlorobenzene	µg/L	390	100	100	< 0.06 U	0.7 J
	Chlorobromomethane	µg/L	3.2	--	--	< 0.12 U	< 0.12 U
	Chlorodibromomethane	µg/L	--	80[4]	0.7	< 0.21 U	< 0.21 U
	Chloroethane	µg/L	28,000	--	23	< 0.085 U	< 0.085 U
	Chloroform	µg/L	80	80[4]	1.6	**2.9**	**440 J**
	Chloromethane	µg/L	--	--	81	0.12 J+	< 0.086 U
	cis-1,2-Dichloroethene	µg/L	210	70	70	< 0.14 U	0.88 J
	cis-1,3-Dichloropropene	µg/L	--	--	--	< 0.099 U	< 0.099 U
	Cymene (Isopropyltoluene)	µg/L	--	--	--	< 0.11 U	< 0.11 U
	Dibromomethane	µg/L	990	--	370	< 0.095 U	< 0.095 U
	Dichlorodifluoromethane (Freon-12)	µg/L	14	--	5840	< 0.058 U	< 0.058 U
	Dichloromethane	µg/L	58	5	5	< 0.1 U	**5.4**
	Dimethyl disulfide	µg/L	--	--	--	< 0.27 U	< 0.27 U
	Ethanol	µg/L	--	--	--	< 85 UJ	< 85 U
	Ethylbenzene	µg/L	700	700	700	< 0.11 U	< 0.11 U
	Isopropylbenzene	µg/L	8.4	--	3440	< 0.096 U	< 0.096 U
	m,p-Xylene	µg/L	--	--	42600	< 0.19 U	< 0.19 U
	Methyl ethyl ketone	µg/L	440,000	--	21300	< 0.83 U	< 0.83 U
	Methyl iodide	µg/L	--	--	--	< 0.091 U	< 0.091 U
	MTBE (Methyl tert-butyl ether)	µg/L	120,000	--	35	< 0.098 U	< 0.098 U
	n-Butylbenzene	µg/L	260	--	370	< 0.12 U	< 0.12 U
	n-Heptane	µg/L	--	--	--	< 0.12 U	< 0.12 U
	Nonanal	µg/L	--	--	--	< 1.2 UJ	< 1.2 U
	n-Propylbenzene	µg/L	320	--	370	< 0.093 U	< 0.093 U
	o-Xylene	µg/L	--	--	42600	< 0.055 U	< 0.055 U
	sec-Butylbenzene	µg/L	--	--	370	< 0.085 U	< 0.085 U

TABLE 2
SUMMARY OF 2009 EASTSIDE ALLUVIAL AQUIFER GROUNDWATER DATA FROM MONITORING WELLS DM-1 AND POU3
STAGING SUB-AREA AND PARCEL 9 SOUTH

Class	Chemical	Units	USEPA 2002 VI SL[1]	USEPA MCL	NDEP Water BCL	DM-1 On-Site 10/1/2009	POU3 Adjacent to Site 9/22/2009
VOCs	Styrene	µg/L	8,900	100	100	< 0.042 U	< 0.042 U
	tert-Butylbenzene	µg/L	290	--	370	< 0.11 U	< 0.11 U
	Tetrachloroethene	µg/L	5	5	5	0.16 J	**9**
	Toluene	µg/L	1,500	1000	1000	< 0.07 U	< 0.07 U
	Total Trihalomethanes	µg/L	--	80[4]	--	3.1	**478.1**
	trans-1,2-Dichloroethene	µg/L	180	100	100	< 0.081 U	0.13 J
	trans-1,3-Dichloropropene	µg/L	--	--	--	< 0.23 U	< 0.23 U
	Trichloroethene	µg/L	5	5	5	< 0.091 U	3.8
	Trichlorofluoromethane (Freon-11)	µg/L	180	--	9890	< 0.11 U	< 0.11 U
	Vinyl acetate	µg/L	9,600	--	16200	< 0.23 U	< 0.23 U
	Vinyl chloride	µg/L	2	2	2	< 0.091 U	< 0.091 U
	Xylenes (total)	µg/L	22,000	10000	10000	< 0.22 U	< 0.22 U
Water Quality Parameters	Bicarbonate alkalinity	mg/L	--	--	--	273	64.8
	Carbonate alkalinity	mg/L	--	--	--	< 0.31 U	< 0.31 U
	Conductivity	umhos/cm	--	--	--	5020	11200
	Hardness	mg/L	--	--	--	2120	2010
	Hydroxide alkalinity	mg/L	--	--	--	< 0.31 U	< 0.31 U
	pH	none	--	6.5-9[5]	--	5.8 J	7.4 J
	Total Alkalinity	mg/L	--	--	--	273 J-TDS	64.8 J-CAB&TDS
	Total Dissolved Solids	mg/L	--	500	--	**2400 J-TDS**	**7600 J-CAB&TDS**
	Total Inorganic Carbon	mg/L	--	--	--	159	16.5
	Total Organic Carbon	mg/L	--	--	--	1.3	1.4
	Total Suspended Solids	mg/L	--	--	--	28	27

[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).
[2]A MCL for perchlorate has not been promulgated. The USEPA Drinking Water Equivalent Level of 24.5 ug/L was used.
[3]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.
[4]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.
[5]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.
Bold values indicate value exceeds lowest comparison level; *italicized* values indicate detection limit exceeds lowest comparison level.

TABLE 3
SAMPLE-SPECIFIC COLLECTION DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Sample Location	Sample Type	Grading Plan[(1)]		Sample Depth 1	Sample Depth 2[(1)]	Sample Depth 3[(1)]
P9S1-AG13	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-AG14	Random	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-AG15	Random	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-AH11	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-AH12	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-AH13	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-AH14	Random with Flux	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-JD01	Ditch with Flux	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-JD02	Ditch	--	0	0 (Surface)	10 (Subsurface)	--
P9S1-JD03	Ditch with Flux	--	0	0 (Surface)	10 (Subsurface)	--
STC1-AI15	Random	--	0	0 (Surface)	10 (Subsurface)	--
STC1-AI16	Random	Fill	+4	0 (Surface)	10 (Subsurface)	--
STC1-AJ15	Random	Fill	+2	0 (Surface)	10 (Subsurface)	--
STC1-AJ16	Random with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
STC1-AJ17	Random	Fill	+3	0 (Surface)	10 (Subsurface)	--
STC1-AJ18	Random	Cut	-2	0 (Fill/Surface)	12 (Subsurface)	--
STC1-AK15	Random	Cut	-3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
STC1-AK16	Random	Fill	+1	0 (Surface)	10 (Subsurface)	--
STC1-AK17	Random	--	0	0 (Surface)	10 (Subsurface)	--
STC1-AK18	Random	Cut	-5	0 (Fill/Surface)	5 (Surface)	15 (Subsurface)
STC1-AK19	Random	Cut	-5	0 (Fill/Surface)	5 (Surface)	15 (Subsurface)
STC1-AK20	Random	Cut	-6	0 (Fill/Surface)	6 (Surface)	16 (Subsurface)
STC1-AL18	Random	Cut	-4	0 (Fill/Surface)	4 (Surface)	14 (Subsurface)
STC1-AL19	Random	Cut	-6	0 (Fill/Surface)	6 (Surface)	16 (Subsurface)
STC1-AL20	Random	Cut	-8	0 (Fill/Surface)	8 (Surface)	18 (Subsurface)
STC1-AL21	Random	Cut	-4	0 (Fill/Surface)	4 (Surface)	14 (Subsurface)
STC1-AL22	Random	Cut	-2	0 (Fill/Surface)	12 (Subsurface)	--
STC1-AM22	Random	Cut	-1	0 (Fill/Surface)	11 (Subsurface)	--
STC1-AM23	Random with Flux	Cut	-1	0 (Fill/Surface)	11 (Subsurface)	--
STC1-JB01	Biased	--	0	0 (Surface)	10 (Subsurface)	--
STC1-JB02	Biased with Flux	Cut	-6	0 (Fill/Surface)	6 (Surface)	16 (Subsurface)
STC1-JB03	Biased	Fill	+1	0 (Surface)	10 (Subsurface)	--
STC1-JB04	Biased	Cut	-2	0 (Fill/Surface)	12 (Subsurface)	--
STC1-JB05	Biased with Flux	Cut	-4	0 (Fill/Surface)	4 (Surface)	14 (Subsurface)
STC1-JB06	Biased	Fill	+2	0 (Surface)	10 (Subsurface)	--
STC1-JB07	Biased with Flux	--	0	0 (Surface)	10 (Subsurface)	--
STC1-JB08	Biased with Flux	Cut	-4	0 (Fill/Surface)	4 (Surface)	14 (Subsurface)
STC1-JB09	Biased with Flux	Cut	-3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
STC1-JB10	Biased with Flux	Cut	-2	0 (Fill/Surface)	12 (Subsurface)	--
STC1-JB11	Biased	Cut	-1	0 (Fill/Surface)	11 (Subsurface)	--
STC1-JB12	Biased	Fill	+5	0 (Surface)	10 (Subsurface)	--
STC1-JB13	Biased with Flux	Fill	+1	0 (Surface)	10 (Subsurface)	--
STC1-JB14	Biased	Cut	-2	0 (Fill/Surface)	12 (Subsurface)	--
STC1-JB15	Biased	Cut	-4	0 (Fill/Surface)	4 (Surface)	14 (Subsurface)
STC1-JB16	Biased with Flux	Cut	-8	0 (Fill/Surface)	8 (Surface)	18 (Subsurface)
STC1-JB17	Biased with Flux	Cut	-5	0 (Fill/Surface)	5 (Surface)	15 (Subsurface)

TABLE 3
SAMPLE-SPECIFIC COLLECTION DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 2 of 2)

Sample Location	Sample Type	Grading Plan[(1)]	Sample Depth 1	Sample Depth 2[(1)]	Sample Depth 3[(1)]
STC1-JB18	Biased	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
STC1-JB19	Biased with Flux	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
STC1-JB20	Biased with Flux	Cut -4	0 (Fill/Surface)	4 (Surface)	14 (Subsurface)
STC1-JB21	Biased	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
STC1-JB22	Biased with Flux	Fill +2	0 (Surface)	10 (Subsurface)	--
STC1-JB23	Biased	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
STC1-JB24	Biased	Cut -1	0 (Fill/Surface)	11 (Subsurface)	--
STC1-JB25	Biased	Fill +2	0 (Surface)	10 (Subsurface)	--
STC1-JD01	Ditch	Fill +1	0 (Surface)	10 (Subsurface)	--
STC1-JD02	Ditch	Fill +1	0 (Surface)	10 (Subsurface)	--
STC1-JD03	Ditch with Flux	Fill +3	0 (Surface)	10 (Subsurface)	--
STC1-JD04	Ditch	Fill +2	0 (Surface)	10 (Subsurface)	--
STC1-JD05	Ditch with Flux	Fill +1	0 (Surface)	10 (Subsurface)	--
STC1-JD06	Ditch with Flux	Fill +3	0 (Surface)	10 (Subsurface)	--
STC1-JD07	Ditch with Flux	Cut -4	0 (Fill/Surface)	4 (Surface)	14 (Subsurface)
STC1-JD08	Ditch	Fill +1	0 (Surface)	10 (Subsurface)	--
STC1-JD09	Ditch	Fill +2	0 (Surface)	10 (Subsurface)	--
STC1-JD10	Ditch	Fill +3	0 (Surface)	10 (Subsurface)	--
STC1-JD11	Ditch	-- 0	0 (Surface)	10 (Subsurface)	--
STC1-JD12	Ditch with Flux	Fill +6	0 (Surface)	10 (Subsurface)	--
STC1-JD13	Ditch	Fill +4	0 (Surface)	10 (Subsurface)	--
STC1-JD14	Ditch with Flux	Fill +3	0 (Surface)	10 (Subsurface)	--
STC1-JD15	Ditch	Cut -6	0 (Fill/Surface)	6 (Surface)	16 (Subsurface)
STC1-JD16	Ditch	Cut -8	0 (Fill/Surface)	8 (Surface)	18 (Subsurface)
STC1-JD17	Ditch with Flux	Cut -5	0 (Fill/Surface)	5 (Surface)	15 (Subsurface)
STC1-JD18	Ditch	Cut -6	0 (Fill/Surface)	6 (Surface)	16 (Subsurface)
STC1-JD19	Ditch	Cut -5	0 (Fill/Surface)	5 (Surface)	15 (Subsurface)
STC1-JD20	Ditch with Flux	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (Subsurface)
STC1-JD21	Ditch with Flux	Cut -2	0 (Fill/Surface)	12 (Subsurface)	--
STC1-JD22	Ditch	Cut -3	0 (Fill/Surface)	3 (Surface)	13 (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.

[(1)]The cut/fill depths are based on the difference between the original, pre-remediation grade and the proposed development plan grade.

Yellow shaded locations (STC1-AM22 and STC1-JB12) indicates deep soil samples will be collected for physical parameter analyses.

Green shaded locations (STC1-AL22 and STC1-JB06) indicates subsurface soil samples will also include synthetic precipitation leaching procedure (SPLP) sampling and analysis.

Depths are in feet bgs (current grade).

TABLE 4
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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 Dibenzodioxins/ 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-Tetrachlororodibenzo-p-dioxin	1746-01-6	✓	(e)	(e)	(h)
Asbestos	**Elutriator/TEM**	Asbestos	1332-21-4	✓	(f)	(f)	(h)

TABLE 4
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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 4
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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 4
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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)
		Stirophos (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)	✓

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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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)

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Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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 3)			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 3)			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 3)			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)

TABLE 4
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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)

TABLE 4
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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 4
SITE-RELATED CHEMICALS LIST AND PROPOSED SAMPLE ANALYSES AND DEPTHS
STAGING SUB-AREA AND PARCEL 9 SOUTH

Parameter of Interest	Analytical Method	Compound List	CAS Number	Sample Depth (from Table 3)			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 three sample locations (see Table 3).
h - Rationale provided in text for analyte list for synthetic precipitation leaching procedure (SPLP); from three subsurface sample locations (see Table 3).
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.
[1]For polynuclear aromatic hydrocarbons, either Method 8310 or Method 8270SIM is the primary analytical method.
[4]Method 3540 for extraction and Method 3640 for cleanup are to be used as appropriate.

TABLE 5
PROPOSED SOIL VAPOR FLUX SAMPLE ANALYSES
STAGING SUB-AREA AND PARCEL 9 SOUTH

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 5
PROPOSED SOIL VAPOR FLUX SAMPLE ANALYSES
STAGING SUB-AREA AND PARCEL 9 SOUTH

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m^3	RL µg/m^3
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 5
PROPOSED SOIL VAPOR FLUX SAMPLE ANALYSES
STAGING SUB-AREA AND PARCEL 9 SOUTH

Compound	CAS Number	MDL ppbv	RL ppbv	MDL µg/m^3	RL µg/m^3
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/m^3 - microgram per cubic meter

APPENDIX A

NDEP COMMENTS AND BRC'S RESPONSE TO COMMENTS

Response to NDEP Comments Received March 16, 2010 on the Sampling and Analysis Plan for the Staging Sub-Area and Parcel 9 South dated February 2010

1. General comment, it is not clear that this sampling and analysis plan (SAP) should be prepared at this time. There appear to be uncertainties that will be addressed only through action taken at surrounding sub-areas, and missing information that will only be found after action is taken at the surrounding sub-areas. In addition, the continued existence of the decontamination facilities and on-going remediation seem contrary to conducting sampling at this time. Examples are provided below in the specific comments.

Response: *As with other sub-area SAPs, BRC intends to implement the SAP following remediation of this and other surrounding sub-areas. As agreed in a March 18, 2010 meeting between NDEP and BRC, a discussion concerning the existing (and continued) decontamination areas and haul roads within the Staging sub-area that will be remediated and sampled last has been added on page 1-2, with additional references to this discussion added on pages 3-4 and 4-2.*

2. General comment, this SAP was difficult to review given the exclusion of data from the Table 1 summary statistics table in addition to the improper referencing to various tables and figures throughout the document. Specific comments are provided below.

Response: *The figure and tables references have been revised as noted in the responses to specific comments below. As with all other SAPs prepared for the project, Table 1 only includes those analytes that remain in soil following previous interim remedial measures (IRMs), and only data from 1 to 10 feet bgs. There are two worksheets provided in the SAP dataset, one that provides the data used to develop Table 1, and a second that provides all data, regardless of status and depth, that was used to develop the tables in Appendix B. These worksheets are labels as 'Table 1' and 'Appendix B.' There are several analytes that were only analyzed for in data that were subsequently removed during the IRMs, which is why these data appear in Appendix B, but not in Table 1. This is consistent with how each of the previous SAPs were prepared, submitted, and approved by NDEP.*

3. Page 1-1, 1st sentence. Parcel 9 South is introduced here, which implies the existence of other parts of Parcel 9. Please clarify.

Response: *A footnote has been added on page1-1 to explain that the northern portion of Parcel 9 was granted an NFAD on September 27, 1999.*

4. Page 1-1, 2nd paragraph. It's not totally clear why these two areas are being addressed together. Some discussion of the appropriateness of this, including how and why the risk assessments will be performed across both areas (if this is the case), since the areas are completely separated physically (by a road).

Response: *This SAP represents the last of the SAPs that is planned for the Eastside properties. Parcel 9 South is a very small parcel that has no associated historical data. To avoid generation and submittal of a separate SAP for that parcel alone, BRC chose to include the two areas together in a single SAP. This grouping is appropriate given the close proximity of the two parcels, despite the presence of Boulder Highway between them. BRC has not determined whether the two parcels will be addressed as part of the same risk assessment. The SAP has been revised on page 1-1 to reflect this information.*

5. Page 1-1, last paragraph, 1st sentence. Depending on the timing of the completion of this SAP, the reference to the *Closure Plan* should be updated to 2010.

Response: *Because the Closure Plan as a whole has not been formally resubmitted since the 2007 version, this reference remains unchanged.*

6. Page 1-1, 3rd paragraph, last sentence. It seems that activities related to construction of these parts of Pabco Road and Warm Springs Road could have had some influence on soil characteristics, possibly including contamination, of the Staging Area and Parcel 9 South. Some discussion of this might help.

Response: *The text that is the subject of this comment identifies the primary on-site features and does not address potential impacts. The bullet discussing these two roads in Section 2.1 (page 2-3) has been expanded in response to NDEP's comment.*

7. Page 1-3, 1st full paragraph, 1st sentence. This is a comment that applies to several parts of this SAP. This sentence implies remediation will be done, however, on Page 1-2, 1st paragraph under the bullets, 3rd line, it is stated that no remediation is planned for this Site. Some clarification is needed throughout the SAP.

Response: *The sentence on page 1-3 has been removed from the revised report, and clarification has been added to the subject text on page 1-3. If impacts are encountered during the sampling conducted under this SAP, it may be necessary to perform remediation at the Site; it was not the intent of this SAP to suggest otherwise.*

8. Page 1-4; Section 1.1, 1st paragraph, last sentence. The current sentence implies that remediation will be conducted prior to sampling, but earlier in the document (Page 2) it states that remediation will not be conducted prior to sampling. Please clarify.

Response: *The subject sentence has been revised to omit the reference of remediation being performed in advance of the SAP.*

9. Page 2-2, 1st paragraph. It would be helpful if the features described here could be shown on a figure. This is a comment that applies to several features that are described in this SAP.

Response: *The locations of these features have been added to Figures 2 and 3.*

10. Page 2-3; 1st bullet. Please indicate the square fenced area feature on Figure 3 or another figure.

Response: *The location of this feature has been added to Figure 3.*

11. Page 2-3; 2nd bullet. Please indicate the Pabco Road feature on Figure 3 or another figure.

Response: *The location of this feature has been added to Figure 3.*

12. Page 2-3; 3rd bullet. Please indicate these specific RIBs on Figure 3 or another figure.

Response: *The location of this feature has been added to Figure 3.*

13. Page 2-3; last bullet. Please write out "decon water" as "decontamination water". This occurs in two places.

Response: *The wording has been changed as suggested on page 2-3.*

14. Page 2-4; 3rd paragraph, 3rd sentence. Please change "Figure 4" to "Figure 5".

Response: *The figure reference has been revised as suggested.*

15. Page 2-4; footnote 7. This is an indication that information necessary for this SAP is not complete.

Response: *Given the characteristics of Parcel 9 South, BRC does not consider the lack of development and grading plans as a significant data gap that would affect the sampling program for that area. In addition, it is not known when such plans may be developed for this parcel.*

16. Page 2-4; footnote 8. This footnote does not appear to be fully consistent. The 2nd sentence seems to discuss sending fill material off-site, and the parenthetical seems to address receiving fill material. Since this is probably the last area that will be remediated and developed, it seems unlikely that fill material from this Site will be used at other sub-areas.

Response: *This footnote is consistent with that used in other sub-areas. Because this will be the last sub-area to be remediated does not necessary mean that fill from this sub-area won't be used elsewhere. In addition, the majority of the footnote addresses fill material that may be used at the Site, which is applicable to the SAP. No changes have been made in response to this comment.*

17. Page 2-5; 2nd full paragraph, 1st sentence. Please indicate Parcel 9 North on Figure 1.

Response: *Figure 1 has been revised as noted.*

18. Page 2-5; last sentence. Please change "Section 2.1" to the appropriate section. The current reference is referencing itself.

Response: *The reference has been changed to Section 2.7 on page 2-6, in which the comparison levels are discussed.*

19. Page 2-6, Section 2.1, last 4 paragraphs. It is not exactly clear what the intent is of these four paragraphs. Is the intention to say that none of these activities affect sampling at this Site? What's the chronology? That is, won't this Site be sampled and evaluated after all the others anyway? That is, what is the effect of the activities that are described in these paragraphs on this SAP?

Response: *While remediation has been initiated at the adjacent sites, given the iterative nature of the risk assessment and remediation, remediation at those sub-areas may not be complete before much of the SAP sampling is performed at the Staging sub-area and Parcel 9 South. As noted above, a discussion has been added regarding the decontamination areas and haul roads within the Site that will be remediated and sampled last. Granted, this text would not apply to these areas, but would for the Site in general.*

20. Page 2-7; 1st sentence. Please change "within of the Site" to read "within the Site".

Response: *The subject text has been modified as suggested.*

21. Page 2-7; Section 2.3, 3rd paragraph, last sentence. Please change "Figures 5 and 6" to "Figures 6 and 7".

Response: *The figure references have been changed as suggested.*

22. Page 2-8; 2nd paragraph, last sentence. Please change "Section 2.9" to "Section 2.8".

Response: *The section reference has been changed as suggested.*

23. Page 2-8; Section 2.4, first sentence. Please indicate that historical sampling only characterizes the Staging Area and not Parcel 9 south as indicated by Figure 2. (Note that this is noted in the next section, but should be noted here as well.)

Response: *The subject text has been expanded on page 2-9 to clarify that historical sampling was not performed within Parcel 9 South.*

24. Page 2-10; Section 2.5. Similar to previous SAPs, the IRM areas should be identified on Figure 2, or on another figure.

Response: *The IRM areas have been denoted on Figure 2.*

25. Page 2-10; Section 2.5, 2nd paragraph. Please clarify when this IRM was performed.

Response: *The subject text has been expanded to identify the date of the IRM.*

26. Page 2-11; Section 2.6. Again, this makes it seem that this Site is not ready for a SAP. The SAP might need to be revised depending on the results of the activities in the surrounding areas.

Response: *See response to comment #1 above, except for the decontamination areas and haul roads, all other features and stockpiled soils will be removed prior to implementation of the SAP.*

27. Page 2-11; Section 2.7, 2nd and 3rd sentences. It would be helpful to indicate where the TIMET Pond materials were stored at the Staging sub-area. Please clarify in the text and on Figure 2.

Response: *The subject text has been expanded to clarify where the stockpile areas were located, and these areas have been denoted on Figure 2.*

28. Page 2-12; 1st bullet. Please incorporate a soils map that shows the dominant soil types for the Parcel 9 South and Staging sub-areas.

Response: *The text, as is, is consistent with all other SAPs prepared for the project. Discussions of the soil types in the Site vicinity, including graphic presentations, are provided in the various background reports prepared for the Common Areas, most recently the Background Soil Compilation Report – BMI Complex and Common Areas, Clark County, Nevada (April 2010).*

29. Page 2-13; Footnote 15. Please change "great" to "greater".

Response: *The text has been revised on page 2-13 as suggested.*

30. Page 2-14; Section 2.7.2, 2nd sentence. Appendix B and the table that accompanies this section indicate that sample BDB-11 is not a subsurface sample as is reported in the current text. Please clarify.

Response: *The subject text has been revised to instead refer to this sample as a surface soil sample.*

31. Page 2-15; Section 2.7.5, 1st sentence. Please change the text to read "1 surface and 2 subsurface samples" as is suggested by the sample depths reported in the table in this section.

Response: *The subject text has been revised as suggested.*

32. Page 2-18; Section 2.7.12, 1st sentence. Please clarify where Table 1A is in this document.

Response: *The reference has been changed to reflect Table 1, as was intended by the text.*

33. Page 2-19; 4th bullet. Please change "0072 mg/kg" to "0.0072 mg/kg".

Response: *The subject text has been modified as suggested.*

34. Page 2-21; bullet list. Please add 1,4-Dichlorobenzene to the bulleted list.

Response: *1,4-Dichlorobenzene has been added to the bullet list as suggested.*

35. Page 2-22; 2nd full sentence. Please add N-nitrosodiethylamine to this sentence as it also had a reporting limit that is lower than the BCL_{RS}. Also in this sentence, please change "3,3-dichlorobenzidine" to "3,3'-dichlorobenzidine".

Response: *The subject text has been revised as suggested.*

36. Page 2-22; bulleted list. Please add bis(2-Chloroethyl ether), 3,3'-Dichlorobenzidine, and n-Nitrosodi-n-propylamine to the bulleted list.

Response: *The sentence preceding the bullets states that the bullet list consists of those <u>additional</u> analytes (beyond those with routine BCL_{RS} exceedances) that also had reporting limits routinely higher than the $LBCL_{DAF1}$. Because the three compounds listed in NDEP's comment were already identified as BCL_{RS} exceedances, it is not appropriate to list them in the bullets.*

37. Page 2-24; Section 2.7.21, 4th sentence. Please reword this sentence.

Response: *The subject sentence has been reworded on page 2-24.*

38. Page 2-24; Section 2.7.22, second bulleted list. Please remove magnesium and manganese from this list as the detections for these analytes are both below background.

Response: *These two metals have been removed from the bullet list as suggested.*

39. Page 2-25; Section 2.8, 1st sentence. Please change "DM-01" to "DM-1" to be consistent with Figure 2.

Response: *The well reference has been changed on page 2-25 as suggested.*

40. Page 3-2, Section 3.1.1, 1st paragraph, 10th line. The stated goal is to remediate the Site to acceptable risk levels. However, on Page 1-2, remediation is not planned for this Site. Please clarify.

Response: *As noted on page 1-2, remediation is not planned prior to performing the SAP sampling – however, the SAP allows for the possibility that some remediation may be warranted if the SAP sampling indicates that there are elevated chemical concentrations.*

41. Page 3-2; last paragraph, 4th sentence. Please change "Residential" to "residential". In addition, please also change "Figure 3" to "Figure 4" and remove the period that precedes this reference.

Response: *The subject text has been revised on page 3-2 as suggested.*

42. Page 3-3, Section 3.1.1, 1st paragraph on page. Remediation is again discussed, whereas, on Page 1-2, remediation is not planned for this Site. Please clarify.

Response: *See response to comment #40.*

43. Page 3-3; 1st paragraph, 5th sentence. Please change "site" to "Site". There are several instances of this issue throughout the text. This is a global comment and will not be repeated.

Response: *The subject text has been revised as suggested, and a global document search has been performed to find and revise similar references specific to the Site that is the subject of this SAP.*

44. Page 3-3; 1st paragraph, last sentence. Please change "Figure 4" to "Figure 5".

Response: *The figure reference has been changed as suggested.*

45. Page 3-5; footnote 19. It seems from the discussion in Section 2 that there are no such data. Please clarify in Section 2 and in this footnote and DQO section.

Response: *As noted in Section 2, there are historical data associated with the Staging sub-area; however, those data are limited and do not fully characterize the Site. The sampling proposed in this SAP is intended to provide the dataset necessary for risk assessment purposes. As noted throughout the SAP, BRC does not anticipate using the historical data in risk assessments, given the limitations of those data. As such, the discussions in Section 2, the subject text, and the DQO section are adequate as written and have not been revised.*

46. Page 3-6; Section 3.3, 2nd bullet. Please change "inputs" to "input".

Response: *The subject text has been modified on page 3-6 as suggested.*

47. Page 3-9; Section 3.4.5, 3rd sentence. Please change "Figure 3" to "Figure 4".

Response: *The figure reference has been changed as suggested.*

48. Page 4-4; 1st paragraph under bullet, 1st sentence. Please change "Figure 4" to "Figure 5".

Response: *The figure reference has been changed as suggested.*

49. Page 5-2; Section 5.2.3, 3rd sentence. Please change "Soil" to "soil" in this sentence.

Response: *The subject text has been modified as suggested.*

50. Table 1; Comparing the metals list with the metals data that are presented in the electronic dataset indicates that various metals are missing from this summary table (e.g., Antimony, Aluminum, etc.). Please address this issue.

Response: *See response to comment #2 above.*

51. Table 1, Footnotes. The eighth footnote of this table indicates that "...1/10 of the RBSL in the text on 4-4 is proposed..." does not link with the main text. Please remove this sentence or clarify the footnote. In addition to this comment, all footnotes that refer to radionuclides should be removed as radionuclide data are not presented in this table.

Response: *Footnotes on Table 1 have been corrected as suggested in this comment.*

REDLINE/STRIKEOUT TEXT

1.0 INTRODUCTION

Basic Remediation Company (BRC) has prepared this Sampling and Analysis Plan (SAP) for the Staging sub-area and a portion of Parcel 9 (hereinafter, "Parcel 9 South").[1]~~.~~ The SAP describes tasks for performance of confirmation sampling of soils and soil vapor flux in order to obtain a no further action determination (NFAD) for these areas. 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~~initial version~~ of the SAP, Revision 1, incorporates comments received from the NDEP, dated March 16, 2010, on Revision 0 of the Staging Sub-Area and Parcel 9 South SAP, dated February 2010~~all previously submitted BMI Common Areas (Eastside) sub-area SAPs~~. The NDEP comments and BRC's response to these comments are ~~not~~ included in Appendix A. Also included in~~; however,~~ Appendix A is a redline/strikeout version of the text showing the revisions from the February 2010 version of the SAP~~provided as a placeholder for consistency with these previous sub-area SAPs~~. 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 Staging sub-area represents one of several sub-areas of the BMI Common Areas (Eastside) and Parcel 9 South is located to the west and across Boulder Highway from the Eastside property. Both parcels are located in Clark County, Nevada (Figure 1).

The Staging sub-area encompasses an area of approximately 65.9 acres[2] and Parcel 9 South is approximately 9.5 acres in size[3] (Figure 2). For the purpose of this SAP, the area associated with both parcels (a total of approximately 75.4 acres) will hereinafter be referred to collectively as the "Site," and distinctions between the portions of the Site will be made when appropriate. The Site is transected by portions of Pabco Road and Warm Springs Road, which are not considered part of the Site.

[1] The northern portion of Parcel 9 was granted an NFAD on September 27, 1999; accordingly, this SAP does not include sampling in that area, This SAP represents the last of the SAPs that is planned for the Eastside properties. Parcel 9 South is a very small parcel for which there are no validated historical data. To avoid generation and submittal of a separate SAP for that parcel alone, BRC chose to include Parcel 9 South with the Staging sub-area in a single SAP. This grouping is appropriate given the close proximity of the two parcels, despite the presence of Boulder Highway between them. BRC will determined whether the two parcels will be addressed as part of the same risk assessment at a later time.

[2] This acreage estimate reflects a change from that presented in the Closure Plan (115 acres) that has resulted from the revision of site boundaries that occurred subsequent to Closure Plan finalization.

[3] This parcel was formerly referred to as Exclusion Area 9, for which exclusion status was previously requested but not granted by NDEP.

The primary on-site structures consist of (1) unlined wastewater effluent evaporation/infiltration ponds that were built and into which various plant wastewaters were discharged from 1942 through 1976 (Staging sub-area only); (2) conveyance ditches associated with the historical effluent discharge (primarily unlined, but including a culverted section of the Beta Ditch in Parcel 9 South); and (3) miscellaneous structures associated with remediation of Eastside soils. These include management/engineering trailers; staging area for trucks; excavation and hauling vehicle parking area; and vehicular and personnel decontamination areas. As agreed in a March 18, 2010 meeting between NDEP and BRC, the decontamination areas and haul roads within the Site will be remediated and sampled after all other activities have been completed for the project in general. That is, these areas will be remediated (with the remainder of the haul roads) last. Sampling in these areas will occur after the remediation is complete. ~~The Site is transected by portions of Pabco Road and Warm Springs Road, which are not considered part of the Site.~~

This SAP relies upon information provided in the *BRC Closure Plan* for the BMI Common Areas (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);
- 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 (DQA; Closure Plan Section 5).

For certain areas within the BMI Common Areas remediation is planned and/or ongoing based on existing Site data, and will be performed prior to conducting the Sitesite characterization activities such as proposed under this SAP for Sitesite closure; however, no remediationnone is planned for this Site prior to conducting the sampling in accordance with this SAP, other than (1) clearing of obvious contamination (*e.g.*, burn pits, stained soil, abandoned vehicles, and other debris, if determined to be present on the Site) and (2) the removal of materials from other sub-areas that have been temporarily placed within the Staging sub-area pending their ultimate disposal. These clearing activities will occur prior to implementing the procedures described in this SAP.

Because of the various factors discussed below, 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 than employed during the historical sampling events and can thus be more reliably used to delineate areas requiring remediation. Validated, reliable historical data associated with areas or depth intervals not affected by the remediation will be used as appropriate to augment the dataset derived from the SAP activities.[4] However, the following data gaps associated with the existing Site characterization have been identified: the previous soil samples from within the uppermost 10 feet below ground surface (bgs) were collected at least ten 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 vapor flux samples have been collected; and spatial coverage of the Site is incomplete (for example, no historical data are available for Parcel 9 South).

TheMuch of the historical data is associated with soil intervals that will be excavated during remediation and will not represent conditions to which future Site users would be exposed.

[4] Only those historical data that are representative of the conditions to which current (non-remediation workers) or future users would be exposed (*i.e.*, excluding data associated with soils removed from the Site prior to the risk assessment) and that pass a data usability evaluation will be included in the risk assessment for the Site.

Furthermore, the historical data represent incomplete coverage for certain constituents and will be redundant for others after implementation of this SAP. Therefore, 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 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* (NewFields 2006). 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 conditions in soils and soil vapor flux at the Site after remediation has been performed. As described in the Closure Plan, this information will be used to determine potential impacts to current (non-remediation workers) or future Site users from chemicals present in Site soils and whether additional remediation is needed to achieve cleanup goals. In this SAP, as recommended in the Statistical Methodology Report, soil samples will be collected throughout the Site on a systematic sampling basis. This random sampling consists of a regular 3-acre grid overlay across the property with a randomly placed sample within each grid cell. The goal of this sampling is to provide enough samples for 1) completion of a statistically robust assessment of contaminant distribution, and subsequently; 2) 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 interest, including but not limited to previous debris locations, construction-related activity areas, ponds, berm walls, and conveyance ditches. Soil vapor flux samples will be collected from a subset of the soil sampling locations (that is, one sample within each grid cell).

1.1 PURPOSE OF THE SAP

The purpose of this SAP is to develop a sampling program for the Site that will provide an understanding of *pre-development* soil and soil vapor conditions (including any indirect impacts from underlying groundwater) at the Site.[5] Portions of the Site are known to be impacted with

[5] This SAP includes summaries of chemical data associated with historical sampling events at the Site. These summaries document the known nature and extent of chemical occurrence at the Site, which was used to identify the need for additional biased sampling locations to augment the sample locations proposed as part of the SAP (Section

chemicals as a result of historical Site operations, and without performing a formal risk assessment; BRC assumes that remediation would be required for protection of human health and the environment. BRC expects that risk assessments for Site closure will primarily use the data collected as part of this SAP, which has been designed to produce data representative of the conditions to which current or future (post-development) users would be exposed. Data collected under this SAP will also be used to assess the need for additional remediation beyond any performed in advance of Site soilsthe SAP sampling.

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 (SRCs) such that the potential impacts from chemicals present in Site soils to current (non-remediation workers) and 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, 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), such that all potential source areas are addressed. This SAP includes a process for adding sampling locations in response to the discovery of currently unknown impacted areas, if any, that may be identified during remediation.

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, including a summary of the historical investigations performed at the Site.

2.1 SITE DESCRIPTION

The Site (Figure 2) is approximately 75.4 acres in size[6], and is gently sloping to the northeast. The Site was undeveloped desert land until the construction of various effluent evaporation/infiltration ponds[7] and associated conveyance ditches once associated with historical conveyance and/or disposal of operations effluent and cooling water by companies operating at the BMI Complex. The wastewater effluent evaporation/infiltration ponds were unlined; various plant wastewaters were discharged into these ponds from 1942 through 1976. One row of these ponds, which were defined by berms along the north, east, and west sides, traversed the Staging sub-area; evaporation/infiltration ponds were not historically present in Parcel 9 South. Remnants of the evaporation/infiltration ponds are visible in historical aerial photographs of the Site (Figure 3). Historical aerial photographs do not show evidence of fluids within the ponds, with the exception of the easternmost edge of the Staging sub-area, into which the City Rapid Infiltration Basins (RIBs) to the south appear to have directed effluent. Darkened discoloration in that area that is presumed to reflect effluent discharge is observed in aerial photographs taken during the 1960s (Figure 3; see 1968 aerial photograph); by 1974, this practice appears to have ended, based on aerial photographs taken at that time and subsequently.

[6] This delineation of the Site boundaries and the associated acreage estimate reflect a change from the Closure Plan that has resulted from the revision of site boundaries that occurred subsequent to Closure Plan finalization. The Staging area combined acreage has decreased from the 115 acres presented in the Closure Plan

[7] The Closure Plan and historical documents associated with the BMI Common Areas distinguish two primary sets of ponds in the BMI Common Areas that are associated with historical conveyance and/or disposal operations: the "Upper Ponds" and the "Lower Ponds". The pond row labels shown on Figure 1 distinguish between the two; the 18 rows of Upper Ponds are labeled with a "U" followed by a letter (A through R) and the ten rows of Lower Ponds are labeled with an "L" followed by a letter (A through J). The Upper Ponds are the basis of the name applied to the Upper Ponds sub-area; but the Upper Ponds sub-area does not encompass all of the Upper Ponds, rather only the northern half of the Upper Ponds, which had little to no historical usage (the southern portion of the Upper Ponds are within the First Eight Rows [Phases I and II], TIMET Ponds, and Spray Wheel sub-areas). The Lower Ponds are located further north on the BMI Common Areas, within the Western Hook-Development and Western Hook-Open Space sub-areas, and were previously located within the footprint of the City of Henderson WRF prior to its construction, during which they were regraded.

In addition to the unlined, open air drainage ditches typical of those observed elsewhere on Eastside, the Site contains other associated features that are unique to this Site (see Figures 2 and 3), specifically (1) a subsurface, culverted extension to the Beta Ditch (historically known as the BMI Siphon) that traverses Parcel 9 South, passes beneath Boulder Highway, and terminates at an outlet on the other side within the Staging sub-area; and (2) a cross-over pipe within the Staging sub-area that allowed operators of ditch effluent to divert flows between the Alpha and Beta Ditches, as desired. In addition to effluent conveyance and discharge, other historical activities at the Site are as follows, and are evident in several of the historical aerial photographs provided on Figure 3:

- Borrow pits are noted in historical topographic maps (1970; photorevised 1983) as being present in the southwest corner of the Staging sub-area, near the intersection of the Alpha and Beta Ditches. The project team has found no documentation of use of this area for borrow pits; however, surface expressions of disturbances in this area are apparent in aerial photographs through the 1980s. Aerial photographs show a history of soil disturbance in this area (Figure 3, 1950 photograph, light colored patches relative to the surrounding ground surface), followed by dark discoloration suggesting the presence of topographic depressions in two separate features (most obvious in photographs representing the period from 1969 through 1976). The discoloration could be associated with various conditions (*e.g.*, surface water ponding, stained soils, disposal of materials darker in color than the native soils, vegetative growth), which cannot now be determined with certainty. Subsequent aerial photographs suggest that these depressions were filled in over time, and current aerial photographs show no obvious surface expressions of these features. An area of buried debris was observed in 1998 in this area during site walks conducted in preparation for the then-proposed Warm Springs/Pabco Road realignment. Trenches were dug in this area prior to the realignment construction activities to evaluate environmental conditions within the then-proposed realignment. Demolition debris (*e.g.*, primarily soil, concrete, glass, asphalt, rebar, and piping) was observed to depths of approximately 7 feet bgs in those trenches. The source of this debris is unknown. Because debris tends to be preferentially placed into depressions, it is plausible that borrow pits once existed in this area.

- According to the Montrose Phase II report (Montrose 1997), demolition debris from the former Montrose facility was disposed of in the Staging sub-area, south of the TIMET Active Ponds. That report included a review of historical aerial photographs (from select years between 1964 and 1992) to attempt to identify the location of the demolition disposal area for the former Montrose facility, as no information on the exact location of the disposal area was

available. As presented in that report, the aerial photograph review indicated the potential disposal of materials in an area immediately south of the Pabco Road ponds from the early 1970s to 1982. However, the timeline of these observations is not consistent with disposal of debris from the Montrose facility, because the Montrose facility was reportedly not in the process of being demolished until 1984, after activities in this apparent debris area appear to have ceased. Therefore, even though the nature of the debris in the area, as described in the prior bullet, is consistent with demolition debris, the disposal operations in this area are presumed to be associated with activities other than the demolition of the Montrose facility.

- Miscellaneous objects are observable within what appears to be a square fenced area in the northwestern corner of the Staging sub-area, immediately south of the Upper Ponds, in aerial photographs taken from the mid 1970s to the 1990s (see 1990 aerial photograph on Figure 3). The exact nature of these objects is unknown, but the fenced area appears to be related to construction and management of the TIMET Ponds.

- As noted above, in the late 1990s, the Pabco Road/Warm Springs Road intersection was shifted eastward onto the Site (Figure 3). A portion of Pabco Road currently transects the Site, and Warm Springs Road has been extended across Boulder Highway along the southern boundary of the Staging sub-area. These roadways are paved and in use at the time of this report. The road rights-of-way are excluded from the Site property proper, as the footprints of these roads were granted an NFAD on October 6, 1998. Activities related to construction of these parts of Pabco Road and Warm Springs Road could have had some influence on soil characteristics within the Site, possibly including contamination.

- In the early 1990s, the RIBs south of the TIMET Ponds were appreciably expanded; a portion of the RIB located furthest to the northwest falls within the Staging sub-area boundaries (Figure 3). These RIBs were in use from approximately 1992 to 2002 by the City of Henderson for municipal wastewater treatment (see 2001 aerial photograph on Figure 3).

- Starting in 2008, staging activities associated with the excavation of soils from other Eastside areas were conducted at the Staging sub-area. Activities conducted in the Staging sub-area included: (1) construction management, including construction trailers that provided storage of supplies and offices for management and field personnel; (2) equipment decontamination, including paved pads for rinsing off vehicles and miscellaneous field equipment, decontamination water tanks, and ponds for storage of decontamination rinse water; (3) vehicle and excavation equipment storage, service and refueling; (4) designated haul roads for transport of impacted materials to the off-site Corrective Action Management Unit

(CAMU); and (5) employee/visitor parking. At the time of this SAP submittal, the contents of the lined ponds in the TIMET Ponds sub-area have been excavated and transported to the CAMU for disposal in accordance with the *Corrective Action Plan* (CAP; BRC 2006). For certain ponds, dewatering was performed to reduce the moisture content to a level appropriate for placement into the CAMU. A portion of the Beta Ditch within the Staging sub-area has been used as a temporary staging area for certain materials removed from the TIMET Ponds prior to transportation of these materials to the CAMU. Details regarding the dewatering and staging process will be provided in the Closure Report for the TIMET Ponds sub-area.

Most of the former effluent ponds in the Staging sub-area have been disturbed by Site activities undertaken after their use was discontinued. The native soils are compacted, poorly-sorted, non-plastic, light brown to red silty sand with varying amounts of gravel.

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 may be used for a variety of potential purposes. Residential (low, medium and high density), retail/commercial, and urban core land uses with roads, parks and trails interspersed, is currently planned for the Staging sub-area.[8] The entire Site will be enhanced by restoration and redevelopment once remediation is complete. Therefore, exposures to ecological receptors will be mitigated or removed (see Section 10 of the Closure Plan). 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 4. To construct commercial facilities, the land will be cut and/or filled, paved with roads or foundations, and nurtured with imported soils from other areas within the BMI Common Areas[9] as needed. Figure 54 shows the current grading plan for the Site, indicating which areas will be filled and which areas will be cut.

[8] A development and grading plan has not yet been developed for Parcel 9 South.
[9] 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 the fill was obtained).

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 compounds (VOCs) and radon from soil and groundwater to indoor air. 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.

Parcel 9 South is not directly adjacent to any Eastside sub-areas; it is bounded by Boulder Highway to the east, Parcel 9 North to the north (former BMI Common Areas property granted NFA status in September 1999), and the BMI Complex to the south and west. The Staging sub-area is bounded by the Pittman area to the west, and is surrounded on the other three sides by Eastside sub-areas as follows (Figure 1):

- The TIMET Ponds sub-area (approximately 269.5 acres[10]) to the north and east; and
- The Southern RIBs sub-area (approximately 84.2 acres[11]) to the south and east.

Chemicals historically detected in these sub-areas are similar to those found at the Site.

The phased remediation schedule for Eastside calls for the TIMET Ponds and Southern RIBs sub-areas to be remediated prior to the Site. Human health risk assessments will be conducted for these sub-areas to determine whether an NFAD is warranted after sampling is performed in accordance with the SAPs for those areas (BRC 2010, approved by NDEP on January 29, 2010; and BRC 2008a, approved by NDEP in September 11, 2008, respectively) to delineate locations requiring remediation.

[10] Subsequent to Closure Plan finalization, the boundaries of the TIMET Ponds sub-area were revised; as a result, the acreage specified in this sub-section for that sub-area is not consistent with that specified in the Closure Plan.
[11] Subsequent to Closure Plan finalization, the boundaries of the Southern RIBs sub-area were revised, including the establishment of a separate Staging sub-area from within the original Southern RIBs sub-area; as a result, the acreage specified in this sub-section for that sub-area is not consistent with that specified in the Closure Plan.

Remediation of the adjacent sub-areas may occur after sampling is performed at the Site in accordance with this SAP. Based on historical sampling, and as presented in the SAPs for those sub-areas, soils in those sub-areas contain chemicals at concentrations greater than applicable comparison levels for protection of human health and groundwater protection (see Section 2.71). Remediation at this adjacent sub-area involves major earth-moving activities and could result in a significant amount of airborne dispersion and/or overland runoff that could adversely affect Site conditions (thus potentially rendering the SAP Site sampling results unrepresentative) if mitigation measures were not employed. However, potential impacts from these off-site areas to the Site are considered negligible because dust suppression/mitigation measures and storm water pollution prevention controls will be implemented at each sub-area undergoing remediation[12]. These dust suppression controls are implemented to comply with applicable air quality regulations and to impede the generation of airborne dust due to intrusive on-site activities. These control measures are discussed in detail in the CAP (BRC 2006). In addition, emissions of particulate matter from the Site will be monitored by BRC as described in the *Perimeter Air Monitoring Plan* (BRC 2008b) to assess the effectiveness of these dust control measures.

At the time of this SAP submittal, the contents of the lined ponds in the TIMET Ponds sub-area have been excavated and transported to the CAMU for disposal in accordance with the CAP. For certain ponds, dewatering was performed to reduce the moisture content to a level appropriate for placement into the CAMU. The First Eight Rows, Spray Wheel, and Staging sub-areas have been used as temporary staging areas for these activities prior to the soils being transported to the CAMU. Details regarding the above activities will be provided in the Closure Report for the TIMET Ponds sub-area.

2.2 SURFACE WATER

Surface water flow occurs for brief periods of time during periodic precipitation events. The unlined wastewater effluent evaporation/infiltration ponds within and topographically downgradient of the Site currently serve to reduce overland transport of surface waters collected within the former Ponds area. Under current conditions, it is unlikely that contaminants in surface waters generated within the Site will migrate via overland transport to the Las Vegas

[12] The possibility exists that airborne dispersion and/or overland transport of surface soils/sediments from adjacent sub-areas could have historically resulted in contamination at the Staging sub-area. However, if this was in fact the case, the nature and extent of associated impacts would be evident from historical surface soil data, and/or the data to be collected under this SAP. The need for remediation of the Staging sub-area will be based on current chemical concentrations in Site soils regardless of the source of contamination, and including airborne dispersion and overland transport, if any.

Wash from the Site due to (1) the distance to the Wash (approximately 2 miles); and (2) the intervening presence of developed areas (including the Pittman area, the City of Henderson bird viewing preserve and water reclamation facility, Weston Hills and Tuscany developments and northern RIBs) between the Site and the Wash. However, the presence of the drainage ditches within of the Site suggests the current potential for rainfall to be carried from the Site to the Wash.

After development there will continue to be a low likelihood that contaminants in surface waters generated within the Site will migrate via overland transport to the Las Vegas Wash from the Site, because of (1) the removal of the conveyance ditches during remediation; (2) the large distance to the Wash; (3) the intervening presence of other developed properties; and (4) storm water features as part of the future development of the Site.

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 from the River Mountains and from the volcanic source rocks in the McCullough Range, located to the southeast and southwest 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 55 to 60 feet thick at the Site with variations due, in part, to the non-uniform contact between the Qal and the underlying Upper Muddy Creek Formation (UMCf).

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. 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 at depths ranging from 55 feet to 60 ft bgs, and

extending to the maximum explored depth of 400 feet bgs. Lithologic cross sections using Site-specific stratigraphic information are shown on Figures 65 and 76.

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[13]), 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. Based on recent groundwater monitoring performed in 2009, the depth from the surface to first groundwater at the Site is approximately 40 to 50 feet bgs. 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 2.89.[14]

Groundwater seeps currently exist at various locations within the BMI Common Areas near the Las Vegas Wash. However, an evaluation of historical aerial photos taken between 1964 and 1970 indicates that seeps have historically appeared to the north of the Site (in the Western Hook-Open Space, Galleria North, and Sunset North Commercial sub-areas), and at nearby off-site locations, but not in the Site itself. 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.

[13] Note: hydrogeologic and lithologic nomenclature is based on NDEP (2009a).

[14] 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.

2.4 HISTORICAL SITE INVESTIGATIONS

Shallow soil samples were collected within the Site during the following separate events (see Figure 2 for sample locations in the Staging sub-area;[15]; 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 accordance with a work plan approved by NDEP in February 1996 (ERM 1996a). The soil sampling results for the investigation activities were 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;

- An investigation conducted in 1998 in the rights-of way for the Pabco Road realignment and Warm Springs Road extension (dataset 2). The soil investigation activities were performed in accordance with a March 26, 1998, work plan. The soil sampling results for the investigation activities were presented in a July 9, 1998 letter report that was submitted to NDEP (ERM 1998). NDEP granted a No Further Action Status of the rights-of-way on October 6, 1998. Data validation results are presented in the DVSR for dataset 2 (ERM 2006b), which was approved by NDEP on October 25, 2006;

- A TIMET Ponds investigation conducted in 2000 (dataset 9) to evaluate the nature and volume of (1) pond materials that could require dewatering and/or disposal, and (2) impacted soils adjacent to and beneath the ponds. The soil investigation activities were performed in accordance with an internal work plan that was not approved in advance by NDEP. The soil sampling results for the investigation activities have not been presented in an NDEP-approved report. Data validation results are presented in the DVSR for dataset 9 (MWH 2006a), which was approved by NDEP on November 3, 2006;

- An investigation conducted during December 2000/January 2001 (dataset 14) to assess conditions in this area to support potential transfer of the property for educational uses. The soil investigation activities were not performed in accordance with an NDEP-approved work plan and the soil sampling results have not been formally presented to NDEP prior to

[15] As seen in Figure 2, no historical sampling locations are associated with Parcel 9 South.

this SAP. Data validation results are presented in the DVSR for dataset 14 (MWH, 2006b), which was approved by NDEP on 8 November 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 2006c), which was approved by NDEP on November 3, 2006.

During these investigations, soil samples at various depths were collected and analyzed for VOCs, semi-volatile organic compounds (SVOCs), organochlorine pesticides, organophosphorus pesticides, polychlorinated biphenyls (PCBs), chlorinated herbicides, dioxins/furans, polynuclear aromatic hydrocarbon (PAHs), metals, general chemistry, perchlorate, and/or radionuclides. The data associated with these investigations are included in the database excerpt provided in Appendix B.

2.5 INTERIM REMEDIAL MEASURES (IRMs)

This section is intended to describe the various on-site and off-site IRMs affecting the Site that have been performed to date by BRC as part of the overall Eastside remediation effort. By definition, IRMs are "interim" remedial activities conducted at a given site, performed in advance of: (1) longer-term evaluations of applicable remedial options, (2) selection of a final remedy to address conditions at that site, and (3) implementation of that remedy. As previously noted, a final remedy for the Site has been selected and the CAP has been approved by NDEP.

In 2000, aA localized IRM was initiated in the Beta Ditch (Figure 2) to address elevated detections of metals, hexachlorobenzene and dioxins, but BRC elected to pursue further remediation, as needed, in accordance with the standard closure process set forth in the Closure Plan. The initial IRM was not performed in accordance with an NDEP-approved work plan. Sample data collected prior to and during the IRM are presented in the data tables in Appendix B.

Starting in Summer 2008, the TIMET ponds were dewatered, and their contents were removed and transported to the off-site CAMU for disposal. In some cases, pond contents were temporarily staged in secured locations within the First Eight Rows, Spray Wheel, and Staging

sub-areas for further dewatering to reduce the moisture content to a level appropriate for placement into the CAMU. The stockpile locations were near the southern boundary of the Staging sub-area, along the Beta Ditch, as evidenced by dark coloration in Figure 2. As of the date of this report submittal, these stockpiled soils have been removed to the CAMU. During soil handling, the soils were treated to prevent generation of wind-blown dusts and runoff. Activities associated with stockpile management and disposal in the CAMU are documented in daily progress reports and monthly Interim Status Reports that are regularly submitted to NDEP. As specified in the CAP, remedial activities for a given sub-area will be documented in the Closure Report prepared at the conclusion of remediation at that sub-area. As such, interim stockpile storage, removal, and disposal in the CAMU will be discussed in the TIMET Ponds Closure Report.

2.6 IRM-RELATED CONFIRMATION SAMPLING

The results of confirmation sampling performed during the activities associated with excavation of the former pond contents will be provided in the Closure Report for the TIMET Ponds sub-area. Given the impending sampling that will be conducted in accordance with this SAP, no confirmation sampling has been performed in either the localized IRM area within the Beta Ditch or the temporary stockpile area within the Staging sub-area since removal of those materials.

2.7 CHEMICAL DISTRIBUTION WITHIN SOILS

This section provides summaries of chemical data associated with historical sampling events conducted by BRC at the Site, all of which are associated with the Staging sub-area. It should be noted that because no sampling has been subsequently conducted in the areas affected by the IRM and temporary storage of TIMET Ponds materials noted above, the summary tables and chemical distribution figures and summaries presented later in this section do not reflect current conditions (*i.e.*, conditions at the time of this SAP submittal). The historical data were used to assess the need for biased sampling locations to augment the sample locations proposed as part of the SAP (Section 4), such that all potential source areas are addressed in the SAP sampling program. The historical data summaries are accordingly provided in this SAP to present the known nature of impacts at the Site such that the adequacy of the sampling program in this SAP can be demonstrated. Recognizing that the historical data summaries do not reflect current conditions, this SAP includes a process for adding sampling locations in response to the discovery of currently unknown impacted areas, if any, that may be identified during remediation (Section 4).

A summary of historic, compound-specific soil chemical data for the Site from surface to 10 feet bgs is presented in Table 1. Location-specific historical sampling results associated with the Site, including depth intervals deeper than 10 feet bgs, are provided in Appendix B, Tables B-1 through B-10, and included electronically in Appendix B. Sample locations are shown on Figure 2. Various applicable constituent-specific comparison levels are provided on the tables for reference, specifically:

- NDEP Basic Comparison Levels (BCLs) for residential soil (NDEP 2009b), hereinafter "BCL_{RS}",
- NDEP BCLs for protection of groundwater (LBCL), assuming dilution attenuation factors (DAF) of 1 and 20 (NDEP 2009b), hereinafter "LBCL", and
- The maximum background concentration (for metals and radionuclides only), derived from the background soil dataset for the BMI Common Areas presented in *Background Shallow Soil Summary Report, BMI Complex and Common Areas Vicinity* (BRC/TIMET 2007), which was approved by NDEP on July 26, 2007. Establishment of background conditions for the BMI Common Areas project is complicated by the unique geologic conditions in the area, specifically, the BMI Common Areas location at the confluence of alluvial fan deposits from the McCullough Range to the southwest and the River Mountains to the east. The Staging sub-area and Parcel 9 South both appear to be underlain by sediments that are derived from the McCullough Range, and background conditions associated with soils in this area are expected to be comparable to those used as comparison levels in this report, which are primarily associated with alluvial fan deposits derived from the McCullough Range.

Figures showing the 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 BCL_{RS} exceedances were observed for that constituent at concentrations in excess of background concentrations; and/or (3) an appreciable number of LBCL exceedances (DAF1) were observed for that constituent at concentrations in excess of background concentrations. For organochlorine pesticides, a single representative constituent (4,4-DDE) was selected for graphical display. 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 BCL_{RS} or $LBCL_{DAF1}$:

Constituent	Soil Depth	Figure No.
Arsenic	0 to 2 feet bgs	Figure C-1
	3 to 10 feet bgs	Figure C-2
Barium	0 to 2 feet bgs	Figure C-3
	3 to 10 feet bgs	Figure C-4
Cadmium	0 to 2 feet bgs	Figure C-5
	3 to 10 feet bgs	Figure C-6
Chromium	0 to 2 feet bgs	Figure C-7
	3 to 10 feet bgs	Figure C-8
Lead	0 to 2 feet bgs	Figure C-9
	3 to 10 feet bgs	Figure C-10
Mercury	0 to 2 feet bgs	Figure C-11
	3 to 10 feet bgs	Figure C-12

Constituent	Soil Depth	Figure No.
Silver	0 to 2 feet bgs	Figure C-13
	3 to 10 feet bgs	Figure C-14
Vanadium	0 to 2 feet bgs	Figure C-15
	3 to 10 feet bgs	Figure C-16
4,4-DDE	0 to 2 feet bgs	Figure C-17
	3 to 10 feet bgs	Figure C-18
1,2,4-Trichloro-benzene	0 to 2 feet bgs	Figure C-19
Hexachlorobenzene	0 to 2 feet bgs	Figure C-20
	3 to 10 feet bgs	Figure C-21

These figures also include all results within 1,000 feet of the Site from the adjacent sub-areas 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 BCL_{RS}. In addition, to assess the potential for impacts to groundwater quality, chemical detections at the Site were also compared to the LBCL (DAF 1; $LBCL_{DAF1}$) established for each chemical. However, it should be noted that the maximum reported background concentrations[16] for several metals (for example, arsenic) are appreciably higher than the comparison levels. In these cases, the evaluations focused on those BCL_{RS} and $LBCL_{DAF1}$ exceedances that were higher than the maximum background concentrations 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.

2.7.1 Arsenic

Of the 32 Site soil samples in which arsenic was analyzed (15 surface[17] and 17 subsurface samples; Table B-1), arsenic was detected in approximately 34 percent (11 samples). All of the detections were higher than the 0.39 mg/kg BCL_{RS} and the 1 mg/kg $LBCL_{DAF1}$. Six samples had reported arsenic concentrations in excess of the maximum shallow soil background level (7.2 mg/kg; from BRC/TIMET 2007). These background exceedances are associated with the following samples:

[16] Values used are the maximum from the shallow soils background dataset presented in the *Background Shallow Soil Summary Report, BMI Complex and Common Area Vicinity* (BRC/TIMET 2007).
[17] Surface samples are defined as those collected from the surface to 2 feet bgs; subsurface samples are defined as those collected from depths greater than 2 feet bgs.

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
SC-1	0	7.3
ROW-04	5	7.5
ROW-04	0	19
BDB-09	0	61.3 J-
BDB-09	5	77.5 J-
BDB-11	0	104 J-

The reporting limits for the non-detections were sufficiently low such that detections greater than background, if present, would have been reported. The distribution of arsenic for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-1 and C-2, respectively.

2.7.2 Barium

Barium was detected in all of the 32 Site soil samples in which barium was analyzed (15 surface and 17 subsurface samples; Table B-1). One of the detections was higher than the 15,300 mg/kg BCL_{RS} (17,600 mg/kg in the subsurface sample from BDB-11); all of the barium detections exceeded the 82 mg/kg $LBCL_{DAF1}$. Only four detections were higher than the maximum background concentration of 836 mg/kg. The four samples with barium detections greater than background were as follows:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
DA-T2	0	920
BDB-09	5	1490 J
BDB-09	0	8510 J
BDB-11	0	17600 J

The distribution of barium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-3 and C-4, respectively.

2.7.3 Cadmium

Of the 31 Site soil samples in which cadmium was analyzed 14 surface and 17 subsurface samples; Table B-1), it was detected in approximately 10 percent (3 samples). None of the detections were higher than the 38.9 mg/kg BCL_{RS}, but two results exceeded the 0.4 mg/kg $LBCL_{DAF1}$. These two cadmium results are also higher than the 0.16 mg/kg maximum background concentration, and are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-11	5	0.92
ADB-01	5	2.1 J-

It should be noted that many of the reporting limits employed during the historical sampling events are higher than the $LBCL_{DAF1}$ and the maximum background concentration, and it is unknown whether cadmium is also present in those samples at concentrations in excess of the $LBCL_{DAF1}$/maximum background concentration. The reporting limits were sufficiently low such that concentrations in excess of the BCL_{RS}, if present, would have been reported. The distribution of cadmium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-5 and C-6, respectively.

2.7.4 Chromium

Chromium (Total) was detected in 94 percent of the 32 Site soil samples in which it was analyzed (15 surface and 17 subsurface samples; Table B-1). Three detections were higher than the 243 mg/kg BCL_{RS}. In addition, all of the chromium detections were higher than the 2 mg/kg $LBCL_{DAF1}$. Approximately half of these detections (14 detections) were higher than the 16.7 mg/kg maximum background detection. These 14 chromium exceedances higher than background are associated with the following locations:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
DA-T1	3	17
SC-1	0	18
ROW-02	3	19
SC-1	5	19
DA-T2	5	23
BDB-11	5	30.1 J
ADB-01	0	32

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ADB-01	5	36
ROW-04	0	41
DA-T2	0	60
ROW-04	5	240
BDB-09	5	498 J
BDB-09	0	817 J
BDB-11	0	1500 J

The distribution of chromium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-7 and C-8, respectively.

2.7.5 Iron

Iron was detected in all three of the Site soil samples in which it was analyzed (one surface and two subsurface sample; Table B-1). None of the detections were higher than the 54,800 mg/kg BCL_{RS}. However, all three detections were higher than the 7.56 mg/kg $LBCL_{DAF1}$ as well as the 19,700 mg/kg maximum background detection. The three background exceedances are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
SC-1	5	20000
SC-1	10	20000
SC-1	0	22000

2.7.6 Lead

Lead was detected in all 32 of the Site soil samples in which it was analyzed (15 surface and 17 subsurface samples; Table B-1). Three of these detections were higher than the 400 mg/kg BCL_{RS} and the maximum background concentration for lead (35.1 mg/kg); a $LBCL_{DAF1}$ has not been established for this constituent. These three exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-04	5	640
BDB-09	0	2600 J
BDB-11	0	3920 J

The distribution of lead for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-9 and C-10, respectively.

2.7.7 Magnesium

Magnesium was detected in all three of the Site soil samples in which it was analyzed (two surface and one subsurface samples; Table B-1). None of the detections were higher than the 100,000 mg/kg BCL_{RS}. However, all of the detections were higher than the 649 mg/kg $LBCL_{DAF1}$. All of the detections were lower than the 17,500 mg/kg maximum background detection.

2.7.8 Manganese

Manganese was detected in all three of the Site soil samples in which it was analyzed (two surface and one subsurface samples; Table B-1). No detections were higher than the 1,080 mg/kg $BCL_{RS.}$ All three detections were higher than the 3.26 mg/kg $LBCL_{DAF1}$. However, all of the detections were lower than the 1,090 mg/kg maximum background detection.

2.7.9 Mercury

Of the 32 Site soil samples in which mercury was analyzed (15 surface and 17 subsurface samples; Table B-1), it was detected in 7 samples. No detection was higher than the 12.5 mg/kg BCL_{RS}, but all seven results exceeded the 0.105 mg/kg $LBCL_{DAF1}$. Six of these detections were higher than the 0.11 mg/kg maximum background detection. These 6 mercury exceedances higher than background are associated with the following locations:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-11	5	0.14 J+
DA-T2	0	0.17
BDB-09	5	0.2 J+
ROW-04	5	0.2
BDB-09	0	1.1 J+
BDB-11	0	1.9 J+

The reporting limits for non-detections were all lower than BCL_{RS}, and most were sufficiently low such that concentrations in excess of the $LBCL_{DAF1}$, if present, would have been reported. The distribution of mercury for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-11 and C-12, respectively

2.7.10 Silver

Of the 32 Site soil samples in which it was analyzed (15 surface and 17 subsurface samples; Table B-1), silver was reported in only three. None of the detections were higher than the 391 mg/kg BCL_{RS}; however, all three of the detections were higher than the 2 mg/kg $LBCL_{DAF1}$. These exceedances were also higher than the 0.2609 mg/kg maximum background concentration for silver. The three exceedances are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-09	5	3.4 J+
BDB-09	0	4 J+
BDB-11	0	17.2 J+

The reporting limits for non-detections were all lower than BCL_{RS}, and most were sufficiently low such that concentrations in excess of the $LBCL_{DAF1}$, if present, would have been reported. The distribution of silver for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-13 and C-14, respectively.

2.7.11 Vanadium

Vanadium was detected in all twelve of the Site soil samples in which it was analyzed (5 surface and 7 subsurface samples; Table B-1). Three of these detections were higher than the 391 mg/kg BCL_{RS} and the 300 mg/kg $LBCL_{DAF1}$. These exceedances were also higher than the 59.1 mg/kg maximum background detection, and are associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-09	5	698 J
BDB-09	0	1680 J
BDB-11	0	2950 J

The distribution of vanadium for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-15 and C-16, respectively.

2.7.12 Other Inorganics

As seen in Table 11A 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. None of these additional inorganic constituents were detected at concentrations in excess of either the BCL_{RS} or the $LBCL_{DAF1}$. The reporting limits for these additional inorganic constituents were sufficiently low such that concentrations in excess of the BCL_{RS} or $LBCL_{DAF1}$, if present, would have been reported.

2.7.13 Organochlorine Pesticides

A total of 33 Site soil samples were analyzed for organochlorine pesticides (16 surface and 17 subsurface samples; Table B-2). The most commonly detected analytes were: 4,4-DDE, 4,4-DDT, and beta-BHC; these three constituents were detected in more than 30 percent of the samples in which they were analyzed. 2,4-DDD and 2,4-DDE were detected in 50 percent and 100 percent, respectively, of the samples in which they were analyzed, but were only included in the analyses for two samples. The few detections that exceeded the BCL_{RS} and/or $LBCL_{DAF1}$ comparison levels are discussed below:

- 4,4-DDD was detected in only one of the 33 Site soil samples in which was analyzed (16 surface and 17 subsurface samples; Table B-1), at a concentration of 4.1 mg/kg (5 foot bgs sample from ROW-04). The detection was in excess of both the 2.44 mg/kg BCL_{RS} and the 0.8 mg/kg $LBCL_{DAF1.}$

- 4,4-DDE was detected in 18 soil samples. Five of these detections were higher than the 1.72 mg/kg BCL_{RS} and the 3 mg/kg $LBCL_{DAF1}$. These five exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-04	5	6.5
WC-BD01	0	16
BDB-11	0	26
BDB-09	5	96
BDB-09	0	98

- 4,4-DDT was detected in 20 soil samples. Five of these detections were higher than the 1.72 mg/kg BCL_{RS} and the 2 mg/kg $LBCL_{DAF1}$. These five exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
WC-BD01	0	3.1
ROW-04	5	7
BDB-11	0	17
BDB-09	0	52
BDB-09	5	82

- alpha-BHC was detected in three soil samples. Two of these detections were higher than the 0.0902 mg/kg BCL_{RS}. Three detections were higher than the 0.00003 mg/kg $LBCL_{DAF1}$. These exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
BDB-11	5	0.0015
BDB-11	0	0.98
BDB-09	0	1.7

- beta-BHC was detected in 12 soil samples. None of these detections were higher than the 0.316 mg/kg BCL_{RS}; However, all 12 detections were higher than the 0.0001 mg/kg $LBCL_{DAF1}$. Those 12 $LBCL_{DAF1}$ exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ADB-01	5	0.0009
ADB-01	0	0.0013
WC-AD01	0	0.0021
DA-T2	5	0.007
ROW-02	3	0.0072
ROW-02	0	0.009

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-01	0	0.0176
BDB-08	0	0.018
ROW-04	0	0.02
DA-T2	0	0.022
DA-T3	0	0.033
ROW-04	5	0.22

- Dieldrin was detected in two soil samples: 0.28 mg/kg in a surface soil sample from WC-BD01 and 0.0072 mg/kg in a 3 ft bgs soil sample from ROW-02. The WC-BD01 detection was in excess of the 0.0304 mg/kg BCL_{RS}. Both detections were higher than the 0.0002 mg/kg $LBCL_{DAF1}$.

- Endosulfan I was detected in eight soil samples. None of these detections were higher than the 367 mg/kg BCL_{RS}. However, three detections were higher than the 0.9 mg/kg $LBCL_{DAF1}$. These three exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
ROW-04	5	2.8
BDB-11	0	24
BDB-09	5	69

With the exception of alpha-BHC, beta-BHC, dieldrin, and lindane, the reporting limits for organochlorine pesticides were generally sufficiently low such that concentrations in excess of the comparison levels, if present, would be reported. For these four exceptions, the reporting limits were routinely higher than the $LBCL_{DAF1}$, and it is unknown whether these constituents are also present in additional Site samples at concentrations in excess of those comparison levels. The distribution of 4,4-DDE for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-17 and C-18, respectively.

2.7.14 Volatile Organic Compounds

Twenty-six Site soil samples were analyzed for several VOCs (14 surface and 12 subsurface samples; Table B-3). As seen in Table 1 and Table B-3, the following seven VOCs were detected in at least one sample:

- 1,2,4-Trichlorobenzene
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Chloroform
- Methyl ethyl ketone
- Trichloroethylene

These detections were relatively low; the few detections that exceeded the BCL_{RS} and/or $LBCL_{DAF1}$ comparison levels are discussed below.

- Of the 25 Site soil samples analyzed, 1,2,4-Trichlorobenzene was detected in three soil samples. None of these detections were in excess of the 143 mg/kg BCL_{RS}, but two detections were higher than the 0.3 mg/kg $LBCL_{DAF1.}$ Those two $LBCL_{DAF1}$ exceedances were associated with surface soil samples from BDB-09 and BDB-11 (3.5 mg/kg and 1.5 mg/kg, respectively). The distribution of 1,2,4-~~-~~trichlorobenzene for soil samples collected in the interval from 0 to 2 feet bgs is shown on Figure C-19.

- Trichloroethylene was detected in one soil sample (0.0069 mg/kg in a surface soil sample from WC-BD01). The detection was not in excess of the 1.06 mg/kg BCL_{RS}, but was higher than the 0.003 mg/kg $LBCL_{DAF1}$.

For VOCs, the standard reporting limits were lower than the BCL_{RS}, and concentrations in excess of the BCL_{RS}, if present, would have been reported in most cases. However, in some cases the standard reporting limits employed during the historical sampling events are higher than the $LBCL_{DAF1}$, and it is unknown whether these constituents are present in samples at concentrations in excess of the $LBCL_{DAF1.}$ These analytes with reporting limits routinely higher than the $LBCL_{DAF1}$ are as follows:

- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethylene
- 1,2,4-Trichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,3- Dichloropropane
- 1,4-Dichlorobenzene
- Benzene
- Carbon tetrachloride
- Dichloromethane
- Tetrachloroethylene
- Trans-1,3-Dichloropropylene
- Trichloroethylene
- Vinyl chloride

Otherwise, the reporting limits for VOCs were sufficiently low such that concentrations in excess of the $LBCL_{DAF1}$, if present, would be reported.

2.7.15 Semi-Volatile Organic Compounds

Twenty-one Site soil samples were analyzed for SVOCs (13 surface and 8 subsurface samples; Table B-4). As seen in Table 1 and Table B-4, the following five SVOCs were detected in at least one sample: 1,2,4,5-tetrachlorobenzene, bis(2-ethylhexyl)phthalate, flouranthene,

hexachlorobenzene, and pentachlorobenzene. Hexachlorobenzene was detected the most frequently, in 19 percent of the samples. 1,2,4,5-Tetrachlorobenzene and pentachlorobenzene were detected in 50 percent of the samples in which they were analyzed, but they were only included in the analyses for two samples. With the exception of hexachlorobenzene, all the SVOC detections were lower than the BCL_{RS} and the $LBCL_{DAF1}$. Hexachlorobenzene was detected in 4 samples; all four of the hexachlorobenzene detections exceeded the 0.304 mg/kg BCL_{RS} as well as the 0.1 mg/kg $LBCL_{DAF1.}$ These screening level exceedances were associated with the following samples:

Sample ID	Depth (ft bgs)	Concentration (mg/kg)
WC-BD01	0	1.1
BDB-09	5	3.5
BDB-11	0	7.9
BDB-09	0	9.7

The distribution of hexachlorobenzene for soil samples collected in the intervals from 0 to 2 feet bgs and 3 to 10 feet bgs at the Site is shown on Figures C-20 and C-21, respectively.

For SVOC non-detects, the standard reporting limits were lower than the BCL_{RS} in all cases except for 3,3'-dichlorobenzidine, bis(2-chloroethyl)ether, hexachlorobenzene, n-nitroso-diethylamine and n-nitrosodi-n-propylamine, which routinely had reporting limits higher than the BCL_{RS}. With the exception of these fivefour compounds, concentrations in excess of the BCL_{RS}, if present, would have been reported for SVOCs in most cases. For these and several other SVOCs the reporting limits employed during the historical sampling events are higher than the $LBCL_{DAF1}$, and it is unknown whether these constituents are present in those samples at concentrations in excess of the $LBCL_{DAF1}$ The additional analytes with reporting limits routinely higher than the $LBCL_{DAF1}$ are as follows:

- 2,4,6-Trichlorophenol
- 2,4-Dichlorophenol
- 2,4-Dimethylphenol
- 2,4-Dinitrophenol
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- 2-Chlorophenol
- Carbazole
- Hexachloro-1,3-butadiene
- Hexachloroethane
- Isophorone
- Nitrobenzene
- n-Nitrosodiphenylamine
- p-Chloroaniline
- Pentachlorophenol

2.7.16 Dioxins and Furans

Two surface soil samples collected at the Site were analyzed for selected dioxins and furans (Table B-5). All of the individual dioxins and furans congeners analyzed were reported as detections in both samples (WC-AD01 and WC-BD01). 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) comparison value of 50 parts per trillion (ppt). None of the samples analyzed had calculated TEQ values in excess of this comparison level. $LBCL_{DAF1}$ 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 levels.

2.7.17 Chlorinated Herbicides

Two surface soil samples collected at the Site were analyzed for chlorinated herbicides (WC-AD01 and WC-BD01, Table B-6); there were no detections reported in these samples. The standard reporting limits were lower than the BCL_{RS}; thus concentrations in excess of the BCL_{RS}, if present, would have been reported. $LBCL_{DAF1}$ values have not been established for these compounds.

2.7.18 Organophosphorus Pesticides

Two surface soil samples collected at the Site were analyzed for organophosphorus pesticides (WC-AD01 and WC-BD01; Table B-7). Organophosphorus pesticides were not detected in either sample. The reporting limits were lower than the BCL_{RS}; thus concentrations in excess of the BCL_{RS}, if present, would have been reported. $LBCL_{DAF1}$ values have not been established for these compounds.

2.7.19 Polychlorinated Biphenyls

Thirty-one Site soil samples were analyzed for PCBs (Aroclors only) (14 surface, 17 subsurface; Table B-8). Aroclors 1254 and 1260 were the only compounds detected in any of these samples; the detections were each associated with a single sample (0.04 mg/kg for Aroclor 1254 in the 3 ft bgs sample from DA-T1, and 0.2 mg/kg for Aroclor 1260 in the ADB-01 surface soil sample). Both detections were lower than the 0.222 mg/kg BCL_{RS}. The reporting limits for other PCBs analyzed were lower than the $BCL_{RS,}$ thus concentrations in excess of the BCL_{RS}, if present,

would have been reported for PCBs. $LBCL_{DAF1}$ values have not been established for these compounds. It is noted that lack of PCB congener data is a data gap for the Site; congener analysis will be performed as part of this SAP to fill this data gap.

2.7.20 Radionuclides

As seen in Table B-9, radionuclides were only included in the analyses for samples collected during the IRM. Because those samples were over-excavated, no radionuclide data exist for current Site conditions.

2.7.21 Polynuclear Aromatic Hydrocarbons

Twenty-one Site soil samples were analyzed for PAHs (13 surface, 8 subsurface; Table B-10). The only detections were of benzo(a)anthracene, chrysene, phenanthrene, and pyrene; these detections were associated with surface soil samples collected at WC-AD01 and WC-BD01. The maximum detection was 0.19 J mg/kg of phenanthrene (WC-BD01). The analyses performed were standard USEPA Method 8270, and standard ~~PAH~~ reporting limits for PAHs using that method were often higher than the BCL_{RS} and the $LBCL_{DAF1}$; thus concentrations in excess of these comparison levels, if present, would not necessarily have been identified. The practice for current and future sampling events is to use selective ion mode (SIM) analysis for PAHs, which should avoid this problem.

2.7.22 Summary of Soil Exceedances

As summarized above and in the associated data tables (Table 1 and Appendix B), sampling of Site soils has been limited, and the analyte list is incomplete. Based on the limited historical data, the BCL_{RS} and $LBCL_{DAF1}$ exceedances noted below were observed.

The following constituents were reported at concentrations higher than the BCL_{RS} and the maximum background concentration (where applicable):

- Arsenic
- Barium
- Chromium (Total)
- Lead
- Vanadium
- 4,4-DDD
- 4,4-DDE
- 4,4-DDT
- alpha-BHC
- Dieldrin
- Hexachlorobenzene

The following constituents were reported at concentrations higher than the $LBCL_{DAF1}$ and the maximum background concentration (where applicable):

- Arsenic
- Barium
- Cadmium
- Chromium (Total)
- Iron
- Mercury Magnesium
- Manganese
- SilverMercury
- VanadiumSilver
- 4,4-DDDVanadium
- 4,4-DDEDDD
- 4,4-DDTDDE
- alpha-BHC 4,4-DDT
- alpha-BHC
- beta-BHC
- Dieldrin
- Endosulfan I
- Hexachlorobenzene
- 1,2,4-Trichlorobenzene
- Trichloroethylene

2.8 CHEMICAL DISTRIBUTION WITHIN GROUNDWATER

For evaluating Shallow Zone groundwater quality at the Site, the following on-site wells were used: DM-01 and POU3 (Figure 2). The data associated with these wells from the most recent groundwater monitoring event (September/October 2009) are presented in Table 2. Data validation results are presented in the DVSR for dataset 58 (ERM 2010; approved by NDEP on January 16, 2010). 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 residential water BCL (BCL_W).

Exceedances of these comparison levels are summarized below.

Organic Compounds. The few organic compound detections during this groundwater monitoring event that were higher than the comparison levels are as follows:

- Bromodichloromethane was detected in the sample from POU3 at a reported concentration of 26 µg/L. The detection was higher than the VI SL and BCL_W (2.1 µg/L and 1.1 µg/L, respectively), but was lower than the MCL (80 µg/L).

- Bromoform was detected in the sample from POU3 at a reported concentration of 12 µg/L. The detection was higher than the VI SL and BCL_W (0.0083 µg/L and 8.5 µg/L, respectively), but was lower than the MCL (80 µg/L).

- Carbon tetrachloride was detected in the sample from POU3 at a reported concentration of 25 µg/L. The detection was higher than the VI SL, MCL, and BCL_W (5 µg/L for all three comparison levels).

- Chloroform was detected in the samples from both wells at concentrations above the comparison levels. The 2.9 µg/L detection in DM-1 was higher than the BCL_W (1.6 µg/L), but was lower than the VI SL and MCL (80 µg/L). The 440 µg/L detection in POU3 was higher than all three comparison levels.

- Dichloromethane was detected in the sample from POU3 at a reported concentration of 5.4 µg/L. The detection was higher than the MCL and BCL_W (5 µg/L for both comparison levels), but was lower than the 58 µg/L VI SL.

- Tetrachloroethylene was detected in both samples (0.16 µg/L in DM-1 and 9 µg/L in POU3). The DM-1 detection was lower than the MCL, BCL_W, and the VI SL (5 µg/L for each); the POU3 detection was higher than the three comparison levels.

- Total trihalomethanes were detected in both samples (3.1 µg/L in DM-1 and 478.1 µg/L in POU3). The DM-1 detection was lower than the 80 µg/L MCL; the POU3 detection was higher than this comparison level. BCL_W and VI SL values have not been established for this constituent.

The remaining detections of organic chemicals were lower than the applicable comparison levels. The standard 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[18]
Aldrin	0.01 µg/L	0.004 µg/L BCL_W adequately low for VI SL; no MCL
Dieldrin	0.01 µg/L	0.0042 µg/L BCL_W adequately low for VI SL; no MCL
1,2,3-Trichloropropane	0.23 µg/L	0.034 µg/L BCL_W adequately low for VI SL; no MCL

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

Constituent	Reporting Limit	Comparison Level of Concern[18]
2-Nitropropane	1.1 µg/L	0.0063 µg/L BCL_W 0.18 µg/L VI SL; no MCL

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 and BCL_W[19] as summarized below:

- Chlorine is higher than the 4 mg/L MCL and BCL_W in samples collected from both wells. The maximum reported concentration was 5,060 mg/L (POU3).
- Nitrate is higher than the 10 mg/L MCL and BCL_W in samples collected from both wells. The maximum reported concentration was 19.1 mg/L (DM-1).
- Perchlorate is higher than the USEPA Drinking Water Equivalent Level and BCL_W[20] (24.5 µg/L and 18 µg/L, respectively) in samples collected from both wells; the maximum detection was 27,000 µg/L (POU3).
- Arsenic is higher than the MCL and BCL_W (10 µg/L for both) in both samples; the highest concentration is associated with POU3 (84.6 µg/L).
- Chromium (total) is higher than the MCL and BCL_W (100 µg/L for both) in the POU3 sample (462 µg/L). The DM-1 result was lower than these comparison levels.
- Chromium (VI) is higher than the MCL and BCL_W (100 µg/L for both) in the POU3 sample (420 µg/L). The DM-1 result was lower than these comparison levels.
- Lithium is higher than the 73 µg/L BCL_W in both samples; the highest concentration is associated with POU3 (207 µg/L).
- Magnesium is higher than the 207,000 µg/L BCL_W in the POU3 sample (378,000 µg/L). The DM-1 result is lower than this comparison level.

[19] VI SLs have not been established for inorganic constituents.
[20] An MCL has not been established for this constituent.

- Total Dissolved Solids (TDS) is higher than the 500 mg/L MCL in both samples; the maximum reported concentration was 7,600 mg/L (POU3).

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 Sitesite 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 and CAMU areas 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 7 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 7-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 75.4 acre Site includes former unlined disposal ponds and ditches associated with historical BMI Complex operations and features associated with remediation activities (Section 2.1). In addition, impacted materials from other portions of the Eastside property were temporarily stored on the Site, in and along the Beta Ditch, pending their ultimate disposal in the CAMU. 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, residentialResidential (low, medium and high density), retail/commercial, and urban core land uses with roads, parks and trails interspersed, is currently planned for the Staging sub-area. (Figure 43). Consequently, receptors that are considered for this problem include construction workers, residents (adult and child), 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 that acceptable human health risks have been attained. The risk assessments performed for Site closure will primarily use the data collected as part of this SAP, which has been designed to produce data representative of the conditions to which current (non-remediation workers) or future users would be exposed. The need for additional remediation will be primarily based on the SAP sampling results. The final Site site conditions will include regrading 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 54.

Although the primary focus is human health risk assessment for residential and commercial use scenarios, secondary issues that will be addressed include contamination of deeper soils and groundwater beneath the Site. BRC will also discuss the issue of off-siteSite 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 residential standards, risks to off-site receptors are expected to be minimal.

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, Sitesite 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 residential housing developments.

As noted in Section 3.1.1, risk assessments performed for Site closure will primarily use data collected as part of this SAP (*i.e.*, after remediation has been substantively performed). For the purposes of Site closure, it is these post-remediation/pre-development conditions that are most appropriate to evaluate in terms of potential exposures and risks to then-current (non-remediation workers) or future users.

Surface and shallow soil data will be used to evaluate both the 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 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.

As noted in Section 1.0, the decontamination areas and haul roads within the Site will be remediated and sampled after all other activities have been completed for the project in general. Sampling in these areas will occur after the remediation is complete.

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 Sitesite, and on the impact of Sitesite 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. 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 in the risk assessment will comprise only those data collected in accordance with this SAP,[21] 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 *BRC Quality Assurance Project Plan* (QAPP; BRC and ERM 2009). Based on this QA/QC review, only those data determined 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 conditions[22] 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-

[21] 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.

[22] "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.

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 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 inputinputs parameters consistent with current NDEP guidance (BCL_{RS}, NDEP 2009b).
- 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 data[23] collected according to this SAP.
- Identified locations/depth intervals, including elevations to adjust for use of fill material and regrading.
- Characterization data for imported fill if such fill is considered for use at the Site. At this point, it is not known whether imported fill materials will be used on Site.

[23] 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)

- 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
- 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 residential 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 timeframe 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 Sitesite 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 then-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 and SESOIL). 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 collected 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 residential housing. Other potential development interests in

addition to residential housing retail/commercial, and urban core land uses with roads, parks and trails interspersed (see Figure 43). 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 residential exposure scenario, the most protective scenario, will be consistent with a typical residential lot size, which is 1/8th acre. 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 an 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, the removal of materials from the TIMET Ponds sub-area that have been temporarily placed within the Site, and the removal of remediation construction support structures/activities, 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 (final and interim), soil vapor flux sampling,[24] 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 in 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. 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

[24] A study comparing soil gas sampling and surface flux sampling is currently underway for the project. The outcome of that study will determine whether soil flux data will continue to be collected for the project, or whether this data will be supplemented and/or replaced by soil gas data. The sampling for the Site will be revised accordingly. The sampling method does not affect the sample locations, number of samples, or the laboratory analysis in this SAP.

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 interest, including but not limited to former ditches, ponds, pond berms, the borrow pit/buried debris area, the TIMET Ponds construction support area, and the area used for temporary storage of materials from the TIMET Ponds. 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.

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:

Land Use	Number of Locations
Former Pond	2120
Pond Berm	5
Ditches	2528
Debris/Features/Unused Land	2523

Figure 9 and accompanying Table 3 show the random and biased discrete sampling locations that are proposed to be collected within the Site.[25] In addition to the biased sampling locations noted above and on Figure 9, if currently unknown impacted areas are identified during on-going remediation, BRC will: 1) inform NDEP regarding the presence of these areas; 2) evaluate the need for additional biased sampling points to address those areas; and 3) modify the sampling program as needed, with NDEP concurrence.

At each selected location, multi-depth soil samples will be collected and analyzed for the project SRC list as follows. Proposed sample depths are 0 (surface) and 10 ft bgs at each sampling location. In addition, sample locations with grading greater than two ft bgs will also be sampled at the anticipated post-grading soil surface. Additionally, at three sample locations, soil physical

[25] As noted in Section 1.0, the decontamination areas and haul roads within the Site will be remediated and sampled after all other activities have been completed for the project in general. Therefore, these areas will be remediated and sampled at a later date from the other portions of the Site.

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 ft bgs) and 10 ft bgs for sample locations in relatively flat (un-graded) locations;

2. Existing surface (0 ft bgs), post-grading surface, and post-grade 10 ft bgs for sample locations with substantial grading (that is, cut depths greater than two feet[26]) and the uppermost sampled soil is expected to be used as surface fill;

3. Existing surface (0 ft bgs) and 10 ft bgs for sample locations with minimal grading (that is, cut depths less than two feet) and the uppermost sampled soil is expected to be used as surface fill; and

4. Existing surface (0 ft bgs) and 10 ft bgs for sample locations in an area expected to be covered by fill material.

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

- **Rule 1: IF** the sample is collected in a relatively flat (un-graded) 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 (0-2 ft 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 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 two feet, **THEN** the current surface soil sample will be

[26] 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.

classified as a fill material sample, a final (post-graded) surface sample will be classified as a surface (0-2 ft 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 two feet, **THEN** the current surface soil sample will be classified as both a fill material sample and as a surface (0-2 ft 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 Sitesite grading plan is shown on Figure 5.4. 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 3.

All soil samples will be tagged in the database with numeric designations of their corresponding assigned soil layer grouping based on these rules. Initially, 179 soil samples will be collected from 76 soil boring locations (not including deep samples to be collected for soil physical parameter data). This includes 26 random and 50 biased sample locations; with the following number of samples representing each post-grade type of soil:

Post-Grade Sample Type	Number of Locations[27]
Fill material	38
Surface soil	103
Subsurface soil	76

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

[27] Note that in some cases a soil sample may be considered both a fill sample and a surface sample (as indicated in Table 3). 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.

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 1/10 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 1/10 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 background concentration distributions applicable to the Site. 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.

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 SAP[28] 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 Standard Operating Procedure (SOP) 16 for technical description of sampling and analytical methodology, QA/QC protocols, and project procedural description (see the *BRC Field Sampling and Standard Operating Procedures* [FSSOP]; BRC, ERM and MWH 2009). The sampling procedure for the effort includes the USEPA surface emission isolation flux chamber (flux

[28] 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.

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 have been preferentially selected to coincide with a biased sampling location in a given cell. In cases where a given cell contains no biased samples, the soil vapor flux sampling coincides with the grid-specific random sampling location. This approach results in 30 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 Plan[29] and Table 4, 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);

[29] 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 ppb, which coincides with the standard reporting limit for this analysis;

- USEPA Method 8141A for organophosphorus 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 the two soil samples collected within the Site that were analyzed for these compounds;

- 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 two soil samples collected within the Site. Detection limits are below the BCL_{RS};

- HPLC Method for organic acids (historically conducted using a proprietary method developed by Alpha Analytical) 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;

- USEPA Method 8015B for nonhalogenated organics will not be conducted. There have been only five detections of these compounds in 420 soil sample records (one percent) from throughout the Eastside;

- 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 (one 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; and

- 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 project SRC list may be back-quantitated; however, the main radionuclides listed above will likely provide information sufficient to perform a risk assessment. In addition, if the radionuclide activities 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 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 FSSOP; BRC, ERM and MWH 2009), including radon. This analyte list is provided in Table 5.

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 2009). In accordance with applicable federal regulation (Title 29, Code of Federal Regulations [CFR] 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 2009). 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 BRC QAPP (BRC and ERM 2009) and SOP-40.

Soil cuttings generated during soil sampling and Hollow Stem Auger (HSA) 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 current analyte list as approved by the NDEP is presented in Table 4 of the QAPP. Table 4 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 sampling depth-specific exclusion of a chemical for analysis is provided in Table 4 of this SAP. Section 4.5 contains the rationale for exclusion of various chemical analyses from the SAP program for the Site.

5.2.2 Soil Vapor Flux Analyses

As indicated in Table 5, 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). In addition, the samples will be collected and analyzed for radon. 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 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 and SESOIL). Site-specific soil physical parameters to be measured include pH (USEPA Method 9045C), cation exchange capacity, dry bulk density, soilSoil permeability/saturated hydraulic conductivity, specific gravity, total porosity, volumetric water content, grain size analysis by sieve and hydrometer, and fractional organic carbon content (see Table 4). These soil physical parameters will be measured from each of the subsurface samples collected from the two deep sample locations at the Site (see 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. In addition, samples will be collected from two subsurface sample locations (see Figure 9 and Table 3) for conducting the synthetic precipitation leaching procedure (SPLP; USEPA Method 1312) with the extract analyzed for metals, organochlorine pesticides, SVOCs, radium-226, radium-228, and perchlorate. These analytes are considered those of greatest concern for potential migration and impacts to groundwater.

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 BRC QAPP (BRC and ERM 2009) and SOP-40 (BRC, ERM and MWH 2009). Only those data determined by the QA/QC review to be suitable for use will be considered for the Sitesite 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.

APPENDIX B

ALL HISTORICAL SAMPLING RESULTS COLLECTED FROM THE STAGING SUB-AREA

TABLE B-1
SOIL METALS DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 4)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals												
					Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium (Total)	Chromium (VI)	Cobalt	Copper	Iron	Lead
ADB-01	1a	0	N	04/18/1996	--	--	< 6 UJ	240	--	--	--	32	--	--	--	--	21
ADB-01	1a	5	N	04/18/1996	--	--	6.4 J-	220	--	2.1 J-	--	36	--	--	--	--	19
BDB-08	1a	0	N	04/15/1996	--	--	< 6.2 U	190	--	< 2.1 U	--	< 21 U	--	--	--	--	29
BDB-08	1a	5	N	04/15/1996	--	--	< 6.4 U	190	--	< 2.1 U	--	< 21 U	--	--	--	--	9.4
BDB-09	1a	0	N	04/09/1996	--	--	61.3 J-	8510 J	--	< 0.24 U	--	817 J	--	--	--	--	2600 J
BDB-09	1a	5	N	04/09/1996	--	--	77.5 J-	1490 J	--	< 0.22 U	--	498 J	--	--	--	--	386 J
BDB-10	1a	0	N	04/09/1996	--	--	10.8 J-	649 J	--	< 0.21 U	--	241 J	--	--	--	--	200 J
BDB-10	1a	5	N	04/09/1996	--	--	4.8 J-	205 J	--	0.35	--	11.7 J	--	--	--	--	8.9 J
BDB-11	1a	0	N	04/09/1996	--	--	104 J-	17600 J	--	< 0.23 U	--	1500 J	--	--	--	--	3920 J
BDB-11	1a	5	N	04/09/1996	--	--	6.2 J-	242 J	--	0.92	--	30.1 J	--	--	--	--	12 J
CPS-7	14	0	N	01/05/2001	11000	< 0.52 U	3.8	260	0.55	< 0.52 U	--	11	< 0.42 U	11	19	15000	16
CPS-8	14	0	N	01/05/2001	10000	< 0.53 U	2.5	230	0.51	< 0.53 U	--	11	< 0.42 U	11	18	17000	8.5
CPS-9	14	0	N	01/05/2001	10000	< 0.55 U	2.5	210	0.52	< 0.55 U	--	13	< 0.43 U	11	17	17000	11
CPS-A	14	0	N	12/12/2000	--	--	32	850	--	--	--	100	--	--	--	--	91
CPS-A	14	3	N	12/12/2000	--	--	94	2200	--	--	--	310	--	--	--	--	340
CPS-B	14	0	N	12/12/2000	--	--	460	2800	--	--	--	650	--	--	--	--	3100
CPS-B	14	3	N	12/12/2000	--	--	220	4200	--	--	--	280	--	--	--	--	1300
CSBD-01	14	0	N	01/05/2001	11000	20	190	150	5.2	1.7	--	150	5.2	26	53	27000	73
CSBD-02	14	0	N	01/05/2001	18000	< 0.55 U	79	210	0.58	0.69	--	380	61	18	100	16000	120
CSBD-03	14	0	N	01/05/2001	11000	< 0.55 U	3.1	170	0.51	< 0.55 U	--	11	< 0.44 U	10	19	16000	9.5
CSBD-04	14	0	N	01/05/2001	9700	< 0.54 U	3.3	210	0.49	< 0.54 U	--	10	< 0.43 U	10	16	15000	8.6
CSBD-05	14	0	N	01/05/2001	11000	< 0.55 U	4.4	210	0.52	< 0.55 U	--	13	< 0.44 U	11	19	17000	8.9
DA-T1	2	0	N	04/01/1998	--	--	< 5 U	170	--	< 0.5 U	--	13	--	--	--	--	6.8
DA-T1	2	3	FD	04/01/1998	--	--	< 5 U	180	--	< 0.5 U	--	10	--	--	--	--	6.8
DA-T1	2	3	N	04/01/1998	--	--	< 5 U	210	--	< 0.5 U	--	17	--	--	--	--	73
DA-T2	2	0	FD	04/01/1998	--	--	< 6 U	920	--	< 0.6 U	--	60	--	--	--	--	140
DA-T2	2	0	N	04/01/1998	--	--	< 5 U	170	--	< 0.5 U	--	13	--	--	--	--	9.8
DA-T2	2	5	N	04/01/1998	--	--	< 5 U	220	--	< 0.5 U	--	23	--	--	--	--	18
DA-T3	2	0	N	04/01/1998	--	--	< 5 U	160	--	< 0.5 U	--	14	--	--	--	--	18
DA-T3	2	5	N	04/01/1998	--	--	< 5 U	180	--	< 0.5 U	--	13	--	--	--	--	11
ROW-01	2	0	N	03/31/1998	--	--	< 5.5 U	198	--	< 0.55 U	--	15	--	--	--	--	8.1
ROW-01	2	3	N	03/31/1998	--	--	< 6 U	200	--	< 0.6 U	--	14	--	--	--	--	7.9
ROW-02	2	0	N	03/31/1998	--	--	< 5 U	190	--	< 0.5 U	--	14	--	--	--	--	10
ROW-02	2	3	N	03/31/1998	--	--	< 6 U	250	--	< 0.6 U	--	19	--	--	--	--	20
ROW-03	2	0	N	03/31/1998	--	--	< 5 U	190	--	< 0.5 U	--	14	--	--	--	--	18

TABLE B-1
SOIL METALS DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 2 of 4)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals												
					Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium (Total)	Chromium (VI)	Cobalt	Copper	Iron	Lead
ROW-03	2	3	N	03/31/1998	--	--	< 5 U	200	--	< 0.5 U	--	12	--	--	--	--	9.2
ROW-04	2	0	N	03/31/1998	--	--	19	810	--	< 0.5 U	--	41	--	--	--	--	160
ROW-04	2	5	N	03/31/1998	--	--	7.5	720	--	< 0.5 U	--	240	--	--	--	--	640
ROW-05	2	0	N	04/01/1998	--	--	< 5 U	230	--	< 0.5 U	--	8.9	--	--	--	--	12
ROW-05	2	5	N	04/01/1998	--	--	< 5 U	220	--	< 0.5 U	--	11	--	--	--	--	13
ROW-06	2	0	N	04/01/1998	--	--	< 6.5 U	230	--	< 0.65 U	--	16	--	--	--	--	7.4
ROW-06	2	3	N	04/01/1998	--	--	< 6 U	200	--	< 0.6 U	--	13	--	--	--	--	6.7
SC-1	9	0	N	02/04/2000	--	--	7.3	250	--	< 0.5 U	17000	18	< 0.01 U	--	--	22000	9.1
SC-1	9	5	N	02/04/2000	--	--	6.7	200	--	< 0.5 U	32000	19	< 0.01 U	--	--	20000	7.5
SC-1	9	10	N	02/04/2000	--	--	6.7	240	--	< 0.5 U	22000	16	< 0.01 U	--	--	20000	8
SC-1	9	33	N	02/04/2000	--	--	6.1	180	--	< 0.5 U	31000	16	< 0.01 U	--	--	19000	5.7

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 mg/kg.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-1
SOIL METALS DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 3 of 4)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals											
					Magnesium	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Titanium	Vanadium	Zinc
ADB-01	1a	0	N	04/18/1996	--	--	< 0.089 U	--	--	< 6 U	< 2 U	--	--	--	93	--
ADB-01	1a	5	N	04/18/1996	--	--	< 0.098 U	--	--	< 6.2 U	< 2.1 U	--	--	--	65	--
BDB-08	1a	0	N	04/15/1996	--	--	< 0.1 U	--	--	< 6.2 U	< 2.1 U	--	--	--	49	--
BDB-08	1a	5	N	04/15/1996	--	--	< 0.11 U	--	--	< 6.4 U	< 2.1 U	--	--	--	47	--
BDB-09	1a	0	N	04/09/1996	--	--	1.1 J+	--	--	< 7.2 UJ	4 J+	--	--	--	1680 J	--
BDB-09	1a	5	N	04/09/1996	--	--	0.2 J+	--	--	< 3.3 UJ	3.4 J+	--	--	--	698 J	--
BDB-10	1a	0	N	04/09/1996	--	--	0.31 J+	--	--	< 0.62 UJ	1.3 J+	--	--	--	553 J	--
BDB-10	1a	5	N	04/09/1996	--	--	< 0.11 U	--	--	< 0.66 UJ	< 0.22 U	--	--	--	53.2 J	--
BDB-11	1a	0	N	04/09/1996	--	--	1.9 J+	--	--	< 3.5 UJ	17.2 J+	--	--	--	2950 J	--
BDB-11	1a	5	N	04/09/1996	--	--	0.14 J+	--	--	< 0.62 UJ	< 0.21 U	--	--	--	77.3 J	--
CPS-7	14	0	N	01/05/2001	11000	740	< 0.1 U	< 0.52 U	16	< 5.28 U	< 1.05 U	--	< 0.52 U	650	34	45
CPS-8	14	0	N	01/05/2001	10000	500	< 0.1 U	< 0.53 U	16	< 5.33 U	< 1.06 U	--	< 0.53 U	870	42	41
CPS-9	14	0	N	01/05/2001	9000	500	< 0.11 U	< 0.55 U	16	< 5.52 U	< 1.1 U	--	< 0.55 U	860	37	40
CPS-A	14	0	N	12/12/2000	--	1600	--	--	--	--	--	--	--	--	100	--
CPS-A	14	3	N	12/12/2000	--	2200	--	--	--	--	--	--	--	--	270	--
CPS-B	14	0	N	12/12/2000	--	78000	--	--	--	--	--	--	--	--	940	--
CPS-B	14	3	N	12/12/2000	--	27000	--	--	--	--	--	--	--	--	310	--
CSBD-01	14	0	N	01/05/2001	11000	680	< 0.11 U	< 0.55 U	76	< 5.58 U	< 1.11 U	--	9.5	800	480	280
CSBD-02	14	0	N	01/05/2001	12000	810	< 0.11 U	< 0.55 U	79	< 5.58 U	< 1.11 U	--	3.4	720	49	210
CSBD-03	14	0	N	01/05/2001	11000	450	< 0.11 U	< 0.55 U	16	< 5.54 U	< 1.1 U	--	< 0.55 U	700	38	39
CSBD-04	14	0	N	01/05/2001	9800	440	< 0.1 U	< 0.54 U	14	< 5.43 U	< 1.08 U	--	< 0.54 U	550	34	36
CSBD-05	14	0	N	01/05/2001	12000	670	< 0.11 U	< 0.55 U	18	< 5.54 U	< 1.1 U	--	< 0.55 U	730	49	40
DA-T1	2	0	N	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
DA-T1	2	3	FD	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
DA-T1	2	3	N	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
DA-T2	2	0	FD	04/01/1998	--	--	0.17	--	--	< 6 U	< 1.2 U	--	--	--	--	--
DA-T2	2	0	N	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
DA-T2	2	5	N	04/01/1998	--	--	0.11	--	--	< 5 U	< 1 U	--	--	--	--	--
DA-T3	2	0	N	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
DA-T3	2	5	N	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
ROW-01	2	0	N	03/31/1998	--	--	< 0.11 U	--	--	< 5.5 U	< 1.1 U	--	--	--	--	--
ROW-01	2	3	N	03/31/1998	--	--	< 0.12 U	--	--	< 6 U	< 1.2 U	--	--	--	--	--
ROW-02	2	0	N	03/31/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
ROW-02	2	3	N	03/31/1998	--	--	< 0.12 U	--	--	< 6 U	< 1.2 U	--	--	--	--	--
ROW-03	2	0	N	03/31/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--

TABLE B-1
SOIL METALS DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Metals											
					Magnesium	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Titanium	Vanadium	Zinc
ROW-03	2	3	N	03/31/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
ROW-04	2	0	N	03/31/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
ROW-04	2	5	N	03/31/1998	--	--	0.2	--	--	< 1 U	< 1 U	--	--	--	--	--
ROW-05	2	0	N	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
ROW-05	2	5	N	04/01/1998	--	--	< 0.1 U	--	--	< 5 U	< 1 U	--	--	--	--	--
ROW-06	2	0	N	04/01/1998	--	--	< 0.13 U	--	--	< 6.5 U	< 1.3 U	--	--	--	--	--
ROW-06	2	3	N	04/01/1998	--	--	< 0.12 U	--	--	< 6 U	< 1.2 U	--	--	--	--	--
SC-1	9	0	N	02/04/2000	10000	540	< 0.1 U	--	--	< 5 U	< 1 U	580	--	--	66	--
SC-1	9	5	N	02/04/2000	11000	440	< 0.1 U	--	--	< 5 U	< 1 U	790	--	--	63	--
SC-1	9	10	N	02/04/2000	12000	410	< 0.1 U	--	--	< 5 U	< 1 U	1100	--	--	59	--
SC-1	9	33	N	02/04/2000	9500	370	< 0.1 U	--	--	< 5 U	< 1 U	1100	--	--	57	--

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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 4)

					Organochlorine Pesticides											
Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	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-01	1a	0	N	04/18/1996	--	--	< 0.0034 U	0.1	0.15	< 0.0017 U	< 0.0017 U	< 0.0017 U	0.0013	< 0.041 U	0.0019	< 0.0034 U
ADB-01	1a	5	N	04/18/1996	--	--	< 0.0036 U	0.055	0.028	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.0009	< 0.043 U	< 0.0018 U	< 0.0036 U
BDB-08	1a	0	N	04/15/1996	--	--	< 0.0036 U	0.042	0.032	< 0.0018 U	< 0.0018 U	< 0.0018 U	0.018	< 0.042 U	< 0.0018 U	< 0.0036 U
BDB-08	1a	5	N	04/15/1996	--	--	< 0.0035 U	< 0.0035 U	< 0.0035 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.042 U	< 0.0018 U	< 0.0035 U
BDB-09	1a	0	N	04/09/1996	--	--	< 3.9 U	98	52	< 0.2 U	1.7	< 2 U	< 2 U	< 4.7 U	< 2 U	< 3.9 U
BDB-09	1a	5	N	04/09/1996	--	--	< 5.4 U	96	82	< 0.92 U	< 2.8 U	< 2.8 U	< 2.8 U	< 65 U	< 2.8 U	< 5.4 U
BDB-10	1a	0	N	04/09/1996	--	--	< 0.085 U	32	5.3	< 0.044 U	< 0.044 U	< 0.044 U	< 0.044 U	< 1 U	< 0.044 U	< 0.085 U
BDB-10	1a	5	N	04/09/1996	--	--	< 0.0036 U	0.0015	< 0.0036 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.0019 U	< 0.044 U	< 0.0019 U	< 0.0036 U
BDB-11	1a	0	N	04/09/1996	--	--	< 3.8 U	26	17	< 2 U	0.98	< 2 U	< 2 U	< 47 U	< 2 U	< 3.8 U
BDB-11	1a	5	N	04/09/1996	--	--	< 0.0035 U	0.025	0.031	< 0.0018 U	0.0015	< 0.0018 U	< 0.0018 U	< 0.042 U	< 0.0018 U	< 0.0035 U
CPS-7	14	0	N	01/05/2001	--	--	< 0.0053 U	0.011	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0212 U	< 0.0053 U	< 0.0053 U
CPS-8	14	0	N	01/05/2001	--	--	< 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-
CPS-9	14	0	N	01/05/2001	--	--	< 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-
CPS-A	14	0	N	12/12/2000	--	--	< 0.00525 UJ	< 0.00525 UJ	0.0055 J-	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.021 UJ-	< 0.00525 UJ	< 0.00525 UJ
CPS-A	14	3	N	12/12/2000	--	--	< 0.00525 U	< 0.00525 U	0.0052 J	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.021 U	< 0.00525 U	< 0.00525 U
CPS-B	14	0	N	12/12/2000	--	--	< 0.0054 U	0.11 J+	0.16 J+	< 0.0054 U	< 0.0054 U	< 0.0054 U	0.55 J+	< 0.0216 U	0.045 J+	< 0.0054 U
CPS-B	14	3	N	12/12/2000	--	--	< 0.00525 U	0.055 J+	0.083 J+	< 0.00525 U	< 0.00525 U	< 0.00525 U	0.18 J+	< 0.021 U	0.028 J+	< 0.00525 U
CSBD-01	14	0	N	01/05/2001	--	--	< 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-
CSBD-02	14	0	N	01/05/2001	--	--	< 0.0056 U	0.0064	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0224 U	< 0.0056 U	< 0.0056 U
CSBD-03	14	0	N	01/05/2001	--	--	< 0.00555 U	0.008	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.0222 U	< 0.00555 U	< 0.00555 U
CSBD-04	14	0	N	01/05/2001	--	--	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.0218 U	< 0.00545 U	< 0.00545 U
CSBD-05	14	0	N	01/05/2001	--	--	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.0222 U	< 0.00555 U	< 0.00555 U
DA-T1	2	0	N	04/01/1998	--	--	< 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
DA-T1	2	3	FD	04/01/1998	--	--	< 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
DA-T1	2	3	N	04/01/1998	--	--	< 0.005 U	< 0.005 U	0.017	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	< 0.005 U
DA-T2	2	0	N	04/01/1998	--	--	< 0.005 U	0.011	0.013	< 0.005 U	< 0.005 U	< 0.005 U	0.022	--	< 0.005 U	< 0.005 U
DA-T2	2	5	N	04/01/1998	--	--	< 0.005 U	0.01	0.012	< 0.005 U	< 0.005 U	< 0.005 U	0.007	--	< 0.005 U	< 0.005 U
DA-T3	2	0	N	04/01/1998	--	--	< 0.005 U	0.021	0.024	< 0.005 U	< 0.005 U	< 0.005 U	0.033	--	< 0.005 U	< 0.005 U
DA-T3	2	5	N	04/01/1998	--	--	< 0.005 U	0.006	0.008	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	< 0.005 U
ROW-01	2	0	N	03/31/1998	--	--	< 0.0055 U	< 0.0055 U	0.0099	< 0.0055 U	< 0.0055 U	< 0.0055 U	0.0176	--	< 0.0055 U	< 0.0055 U
ROW-01	2	3	N	03/31/1998	--	--	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	--	< 0.006 U	< 0.006 U
ROW-02	2	0	N	03/31/1998	--	--	< 0.005 U	< 0.005 U	0.009	< 0.005 U	< 0.005 U	< 0.005 U	0.009	--	< 0.005 U	< 0.005 U
ROW-02	2	3	N	03/31/1998	--	--	< 0.006 U	< 0.006 U	0.016	< 0.006 U	< 0.006 U	0.0072	0.0072	--	< 0.006 U	0.0072
ROW-03	2	0	N	03/31/1998	--	--	< 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
ROW-03	2	3	N	03/31/1998	--	--	< 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

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
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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
ROW-04	2	0	N	03/31/1998	--	--	< 0.005 U	0.18 J+	0.1 J+	< 0.005 U	< 0.005 U	0.12 J+	0.02 J+	--	< 0.005 U	< 0.005 U
ROW-04	2	5	N	03/31/1998	--	--	4.1	6.5	7	< 0.1 U	< 0.1 U	< 0.1 U	0.22	< 0.4 U	< 0.1 U	< 0.1 U
ROW-05	2	0	N	04/01/1998	--	--	< 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
ROW-05	2	5	N	04/01/1998	--	--	< 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
ROW-06	2	0	N	04/01/1998	--	--	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	--	< 0.0065 U	< 0.0065 U
ROW-06	2	3	N	04/01/1998	--	--	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	--	< 0.006 U	< 0.006 U
SC-1	9	0	N	02/04/2000	--	--	< 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
SC-1	9	5	N	02/04/2000	--	--	< 0.005 U	0.011	0.0067	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
SC-1	9	10	N	02/04/2000	--	--	< 0.005 U	0.0056	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
SC-1	9	33	N	02/04/2000	--	--	< 0.005 U	0.026	0.0053	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.005 U	< 0.005 U
WC-AD01	39	0	N	08/03/2006	< 0.00072 U	0.01 J+	< 0.000096 U	0.029 J+	0.02 J+	< 0.0001 U	< 0.00063 U	< 0.00012 U	0.0021 J+	--	< 0.00011 U	< 0.00028 U
WC-BD01	39	0	N	08/02/2006	0.38 J	15	< 0.0098 U	16	3.1	< 0.01 U	< 0.064 U	< 0.012 U	< 0.012 U	--	< 0.012 U	0.28 J

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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 3 of 4)

					Organochlorine Pesticides											
Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
ADB-01	1a	0	N	04/18/1996	0.036	< 0.0034 U	< 0.0034 U	< 0.0034 U	< 0.0034 U	--	0.0043	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.017 U	< 0.016 U
ADB-01	1a	5	N	04/18/1996	0.014	< 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	< 0.016 U
BDB-08	1a	0	N	04/15/1996	0.0039	< 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	< 0.016 U
BDB-08	1a	5	N	04/15/1996	< 0.0018 U	< 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
BDB-09	1a	0	N	04/09/1996	< 3.9 U	< 3.9 U	< 3.9 U	< 3.9 U	< 3.9 U	--	3.1	< 2 U	< 2 U	< 2 U	< 20 U	< 0.016 U
BDB-09	1a	5	N	04/09/1996	69	< 5.4 U	< 5.4 U	< 5.4 U	< 5.4 U	--	5	< 2.8 U	< 2.8 U	< 2.8 U	< 28 U	< 0.016 U
BDB-10	1a	0	N	04/09/1996	19	< 0.085 U	< 0.085 U	< 0.085 U	< 0.085 U	--	2	< 0.044 U	< 0.044 U	< 0.044 U	< 0.44 U	< 0.016 U
BDB-10	1a	5	N	04/09/1996	0.0019	< 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-11	1a	0	N	04/09/1996	24	< 3.8 U	< 3.8 U	< 3.8 U	< 3.8 U	--	1.7	< 2 U	< 2 U	< 2 U	< 20 U	< 0.016 U
BDB-11	1a	5	N	04/09/1996	0.045	< 0.0035 U	< 0.0035 U	< 0.0035 U	< 0.0035 U	--	0.003	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.018 U	< 0.016 U
CPS-7	14	0	N	01/05/2001	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0106 U	< 0.0636 U
CPS-8	14	0	N	01/05/2001	< 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-	< 0.01 UJ-	< 0.06 UJ-
CPS-9	14	0	N	01/05/2001	< 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-	< 0.01 UJ-	< 0.06 UJ-
CPS-A	14	0	N	12/12/2000	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.00525 UJ	< 0.0105 UJ-	< 0.063 UJ-
CPS-A	14	3	N	12/12/2000	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.00525 U	< 0.0105 U	< 0.063 U
CPS-B	14	0	N	12/12/2000	< 0.0054 U	0.25 J+	< 0.0054 U	0.099 J+	< 0.0054 U	< 0.0054 U	< 0.0054 U	0.54 J+	< 0.0054 U	< 0.0054 U	< 0.0108 U	< 0.648 U
CPS-B	14	3	N	12/12/2000	< 0.00525 U	0.14 J+	< 0.00525 U	0.046 J+	< 0.00525 U	< 0.00525 U	< 0.00525 U	0.14 J+	< 0.00525 U	< 0.00525 U	< 0.0105 U	< 0.63 U
CSBD-01	14	0	N	01/05/2001	< 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-	< 0.01 UJ-	< 0.06 UJ-
CSBD-02	14	0	N	01/05/2001	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0112 U	< 0.0672 U
CSBD-03	14	0	N	01/05/2001	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.0111 U	< 0.0666 U
CSBD-04	14	0	N	01/05/2001	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.00545 U	< 0.0109 U	< 0.0654 U
CSBD-05	14	0	N	01/05/2001	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.00555 U	< 0.0111 U	< 0.0666 U
DA-T1	2	0	N	04/01/1998	< 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
DA-T1	2	3	FD	04/01/1998	< 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
DA-T1	2	3	N	04/01/1998	< 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
DA-T2	2	0	N	04/01/1998	< 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
DA-T2	2	5	N	04/01/1998	< 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
DA-T3	2	0	N	04/01/1998	< 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
DA-T3	2	5	N	04/01/1998	< 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
ROW-01	2	0	N	03/31/1998	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.022 U	< 0.066 U
ROW-01	2	3	N	03/31/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.024 U	< 0.066 U
ROW-02	2	0	N	03/31/1998	< 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	< 0.066 U
ROW-02	2	3	N	03/31/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	0.006	< 0.006 U	< 0.006 U	< 0.006 U	< 0.024 U	< 0.072 U
ROW-03	2	0	N	03/31/1998	< 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
ROW-03	2	3	N	03/31/1998	< 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

TABLE B-2
SOIL ORGANOCHLORINE PESTICIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
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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
ROW-04	2	0	N	03/31/1998	< 0.005 U	< 0.005 U	< 0.005 U	0.036 J+	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.02 U	< 0.06 U
ROW-04	2	5	N	03/31/1998	2.8	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.4 U	< 1.2 U
ROW-05	2	0	N	04/01/1998	< 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
ROW-05	2	5	N	04/01/1998	< 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
ROW-06	2	0	N	04/01/1998	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.0065 U	< 0.026 U	< 0.078 U
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.024 U	< 0.072 U
SC-1	9	0	N	02/04/2000	< 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
SC-1	9	5	N	02/04/2000	< 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
SC-1	9	10	N	02/04/2000	< 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
SC-1	9	33	N	02/04/2000	< 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
WC-AD01	39	0	N	08/03/2006	< 0.00013 U	< 0.000097 U	< 0.00024 U	< 0.0002 U	< 0.00017 U	--	0.0022 J+	< 0.0001 U	< 0.00014 U	< 0.00026 U	< 0.00018 U	< 0.0068 U
WC-BD01	39	0	N	08/02/2006	< 0.013 U	< 0.0099 U	< 0.024 U	< 0.02 U	< 0.017 U	--	< 0.0093 U	< 0.01 U	< 0.014 U	< 0.026 U	< 0.019 U	< 0.69 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (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
ADB-01	1a	0	N	04/18/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.67 U
ADB-01	1a	5	N	04/18/1996	--	< 0.0011 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.71 U
BDB-08	1a	0	N	04/15/1996	--	< 0.001 U	< 0.001 U	< 0.0021 U	< 0.001 U	< 0.001 U	--	--	--	< 0.69 U
BDB-08	1a	5	N	04/15/1996	--	< 0.001 U	< 0.001 U	< 0.0021 U	< 0.001 U	< 0.001 U	--	--	--	--
BDB-09	1a	0	N	04/09/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	3.5
BDB-09	1a	5	N	04/09/1996	--	< 0.0011 U	< 0.0011 U	< 0.0023 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.71 U
BDB-10	1a	0	N	04/09/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.68 U
BDB-10	1a	5	N	04/09/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.72 U
BDB-11	1a	0	N	04/09/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	1.5
BDB-11	1a	5	N	04/09/1996	--	< 0.0011 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	--	--	--	< 0.7 U
CPS-7	14	0	N	01/05/2001	--	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	--	--	--	< 0.35 U
CPS-8	14	0	N	01/05/2001	--	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	--	--	--	< 0.36 U
CPS-9	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.37 U
CPS-A	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	< 0.3465 U
CPS-A	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	< 0.3465 U
CPS-B	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	< 0.3564 U
CPS-B	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.37 U
CSBD-02	14	0	N	01/05/2001	--	< 0.0057 U	< 0.0057 U	< 0.0057 U	< 0.0057 U	< 0.0057 U	--	--	--	< 0.37 U
CSBD-03	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.37 U
CSBD-04	14	0	N	01/05/2001	--	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	--	--	--	< 0.36 U
CSBD-05	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.37 U
DA-T1	2	0	N	04/01/1998	< 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
DA-T1	2	3	N	04/01/1998	< 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
DA-T2	2	0	N	04/01/1998	< 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
DA-T2	2	5	N	04/01/1998	< 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
DA-T3	2	0	N	04/01/1998	< 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
DA-T3	2	5	N	04/01/1998	< 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
ROW-01	2	0	N	03/31/1998	< 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
ROW-02	2	0	N	03/31/1998	< 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
ROW-03	2	0	N	03/31/1998	< 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
ROW-04	2	3	N	03/31/1998	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
ROW-04	2	5	N	03/31/1998	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U
ROW-05	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	< 0.5 U
ROW-05	2	3	N	04/01/1998	< 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

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (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
ROW-06	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	< 0.65 U
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U
WC-AD01	39	0	N	08/03/2006	< 0.00023 U	< 0.00015 U	< 0.00014 U	< 0.00029 U	< 0.00098 U	< 0.00056 U	--	--	< 0.00057 U	< 0.00075 U
WC-BD01	39	0	N	08/02/2006	< 0.00023 U	< 0.00015 U	< 0.00015 U	< 0.0003 U	< 0.001 U	< 0.00057 U	--	--	< 0.00058 U	0.0034 J

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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 3 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethylene	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane
ADB-01	1a	0	N	04/18/1996	--	--	--	0.021	< 0.0011 U	--	< 0.0011 U	--	0.0013	--
ADB-01	1a	5	N	04/18/1996	--	--	--	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0011 U	--
BDB-08	1a	0	N	04/15/1996	--	--	--	< 0.0052 U	< 0.001 U	--	< 0.001 U	--	< 0.0052 U	--
BDB-08	1a	5	N	04/15/1996	--	--	--	< 0.0052 U	< 0.001 U	--	< 0.001 U	--	< 0.0052 U	--
BDB-09	1a	0	N	04/09/1996	--	--	--	< 0.0053 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0053 U	--
BDB-09	1a	5	N	04/09/1996	--	--	--	< 0.0057 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0057 U	--
BDB-10	1a	0	N	04/09/1996	--	--	--	< 0.0053 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0053 U	--
BDB-10	1a	5	N	04/09/1996	--	--	--	< 0.0053 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0053 U	--
BDB-11	1a	0	N	04/09/1996	--	--	--	< 0.0053 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0053 U	--
BDB-11	1a	5	N	04/09/1996	--	--	--	< 0.0053 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0053 U	--
CPS-7	14	0	N	01/05/2001	--	--	--	< 0.35 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	--	< 0.35 U	--
CPS-8	14	0	N	01/05/2001	--	--	--	< 0.36 U	< 0.0053 U	< 0.0053 U	< 0.0053 U	--	< 0.36 U	--
CPS-9	14	0	N	01/05/2001	--	--	--	< 0.37 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.37 U	--
CPS-A	14	0	N	12/12/2000	--	--	--	< 0.3465 U	--	--	--	--	< 0.3465 U	--
CPS-A	14	3	N	12/12/2000	--	--	--	< 0.3465 U	--	--	--	--	< 0.3465 U	--
CPS-B	14	0	N	12/12/2000	--	--	--	< 0.3564 U	--	--	--	--	< 0.3564 U	--
CPS-B	14	3	N	12/12/2000	--	--	--	< 0.3465 U	--	--	--	--	< 0.3465 U	--
CSBD-01	14	0	N	01/05/2001	--	--	--	< 0.37 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.37 U	--
CSBD-02	14	0	N	01/05/2001	--	--	--	< 0.37 U	< 0.0057 U	< 0.0057 U	< 0.0057 U	--	< 0.37 U	--
CSBD-03	14	0	N	01/05/2001	--	--	--	< 0.37 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.37 U	--
CSBD-04	14	0	N	01/05/2001	--	--	--	< 0.36 U	< 0.0056 U	< 0.0056 U	< 0.0056 U	--	< 0.36 U	--
CSBD-05	14	0	N	01/05/2001	--	--	--	< 0.37 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.37 U	--
DA-T1	2	0	N	04/01/1998	< 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
DA-T1	2	3	N	04/01/1998	< 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
DA-T2	2	0	N	04/01/1998	< 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
DA-T2	2	5	N	04/01/1998	< 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
DA-T3	2	0	N	04/01/1998	< 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
DA-T3	2	5	N	04/01/1998	< 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
ROW-01	2	0	N	03/31/1998	< 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
ROW-02	2	0	N	03/31/1998	< 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
ROW-03	2	0	N	03/31/1998	< 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
ROW-04	2	3	N	03/31/1998	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
ROW-04	2	5	N	03/31/1998	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U
ROW-05	2	0	N	04/01/1998	--	--	--	< 0.5 U	--	--	--	--	< 0.5 U	--
ROW-05	2	3	N	04/01/1998	< 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

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 4 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane (DBCP)	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethylene	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane
ROW-06	2	0	N	04/01/1998	--	--	--	< 0.65 U	--	--	--	--	< 0.65 U	--
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	--	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U
WC-AD01	39	0	N	08/03/2006	--	< 0.00091 U	--	< 0.00015 U	< 0.00045 U	--	< 0.00038 U	--	< 0.00013 U	--
WC-BD01	39	0	N	08/02/2006	--	< 0.00093 U	--	0.0012 J	< 0.00046 U	--	< 0.00039 U	--	< 0.00014 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 5 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Phenylbutane	4-Chlorotoluene	Acetone	Acetonitrile	Benzene	Bromobenzene
ADB-01	1a	0	N	04/18/1996	0.029	--	< 0.0011 U	--	--	--	< 0.0032 U	--	< 0.0011 U	--
ADB-01	1a	5	N	04/18/1996	< 0.0011 U	--	< 0.0011 U	--	--	--	< 0.0033 U	--	< 0.0011 U	--
BDB-08	1a	0	N	04/15/1996	< 0.0052 U	--	< 0.001 U	--	--	--	< 0.01 U	--	< 0.0052 U	--
BDB-08	1a	5	N	04/15/1996	< 0.0052 U	--	< 0.001 U	--	--	--	< 0.01 U	--	< 0.0052 U	--
BDB-09	1a	0	N	04/09/1996	< 0.0053 U	--	< 0.0011 U	--	--	--	< 0.011 U	--	< 0.0053 U	--
BDB-09	1a	5	N	04/09/1996	< 0.0057 U	--	< 0.0011 U	--	--	--	< 0.011 U	--	< 0.0057 U	--
BDB-10	1a	0	N	04/09/1996	< 0.0053 U	--	< 0.0011 U	--	--	--	< 0.011 U	--	< 0.0053 U	--
BDB-10	1a	5	N	04/09/1996	< 0.0053 U	--	< 0.0011 U	--	--	--	< 0.011 U	--	< 0.0053 U	--
BDB-11	1a	0	N	04/09/1996	< 0.0053 U	--	< 0.0011 U	--	--	--	< 0.011 U	--	< 0.0053 U	--
BDB-11	1a	5	N	04/09/1996	< 0.0053 U	--	< 0.0011 U	--	--	--	< 0.011 U	--	< 0.0053 U	--
CPS-7	14	0	N	01/05/2001	< 0.35 U	--	--	--	--	--	< 0.021 U	--	< 0.0053 U	--
CPS-8	14	0	N	01/05/2001	< 0.36 U	--	--	--	--	--	< 0.021 U	--	< 0.0053 U	--
CPS-9	14	0	N	01/05/2001	< 0.37 U	--	--	--	--	--	< 0.022 U	--	< 0.0055 U	--
CPS-A	14	0	N	12/12/2000	< 0.3465 U	--	--	--	--	--	--	--	--	--
CPS-A	14	3	N	12/12/2000	< 0.3465 U	--	--	--	--	--	--	--	--	--
CPS-B	14	0	N	12/12/2000	0.37	--	--	--	--	--	--	--	--	--
CPS-B	14	3	N	12/12/2000	< 0.3465 U	--	--	--	--	--	--	--	--	--
CSBD-01	14	0	N	01/05/2001	< 0.37 U	--	--	--	--	--	< 0.022 U	--	< 0.0055 U	--
CSBD-02	14	0	N	01/05/2001	< 0.37 U	--	--	--	--	--	< 0.023 U	--	< 0.0057 U	--
CSBD-03	14	0	N	01/05/2001	< 0.37 U	--	--	--	--	--	< 0.022 U	--	< 0.0055 U	--
CSBD-04	14	0	N	01/05/2001	< 0.36 U	--	--	--	--	--	< 0.022 U	--	< 0.0056 U	--
CSBD-05	14	0	N	01/05/2001	< 0.37 U	--	--	--	--	--	< 0.022 U	--	< 0.0055 U	--
DA-T1	2	0	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
DA-T1	2	3	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
DA-T2	2	0	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
DA-T2	2	5	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
DA-T3	2	0	N	04/01/1998	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.025 UJ	--	< 0.005 UJ	< 0.005 UJ
DA-T3	2	5	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
ROW-01	2	0	N	03/31/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
ROW-02	2	0	N	03/31/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
ROW-03	2	0	N	03/31/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U
ROW-04	2	3	N	03/31/1998	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.05 U	--	< 0.01 U	< 0.01 U
ROW-04	2	5	N	03/31/1998	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0275 U	--	< 0.0055 U	< 0.0055 U
ROW-05	2	0	N	04/01/1998	< 0.5 U	--	--	--	--	--	--	--	--	--
ROW-05	2	3	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.025 U	--	< 0.005 U	< 0.005 U

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Phenylbutane	4-Chlorotoluene	Acetone	Acetonitrile	Benzene	Bromobenzene
ROW-06	2	0	N	04/01/1998	< 0.65 U	--	--	--	--	--	--	--	--	--
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.03 U	--	< 0.006 U	< 0.006 U
WC-AD01	39	0	N	08/03/2006	< 0.00011 U	--	--	--	--	--	< 0.0039 U	< 0.002 UJ	< 0.00017 U	--
WC-BD01	39	0	N	08/02/2006	0.0017 J	--	--	--	--	--	< 0.004 U	< 0.0021 UJ	< 0.00018 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 7 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					Bromodichloromethane	Bromomethane	Carbon disulfide	Carbon tetrachloride	CFC-11	CFC-12	Chlorinated fluorocarbon (Freon 113)	Chlorobenzene	Chlorobromomethane	Chlorodibromomethane
ADB-01	1a	0	N	04/18/1996	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0011 U	--	< 0.0011 U
ADB-01	1a	5	N	04/18/1996	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	--	--	< 0.0011 U	--	< 0.0011 U
BDB-08	1a	0	N	04/15/1996	< 0.001 U	< 0.0052 U	< 0.001 U	< 0.0052 U	< 0.0052 U	--	--	< 0.0052 U	--	< 0.001 U
BDB-08	1a	5	N	04/15/1996	< 0.001 U	< 0.0052 U	< 0.001 U	< 0.0052 U	< 0.0052 U	--	--	< 0.0052 U	--	< 0.001 U
BDB-09	1a	0	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0053 U	< 0.0053 U	--	--	< 0.0053 U	--	< 0.0011 U
BDB-09	1a	5	N	04/09/1996	< 0.0011 U	< 0.0057 U	< 0.0011 U	< 0.0057 U	< 0.0057 U	--	--	< 0.0057 U	--	< 0.0011 U
BDB-10	1a	0	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0053 U	< 0.0053 U	--	--	< 0.0053 U	--	< 0.0011 U
BDB-10	1a	5	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0053 U	< 0.0053 U	--	--	< 0.0053 U	--	< 0.0011 U
BDB-11	1a	0	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0053 U	< 0.0053 U	--	--	< 0.0053 U	--	< 0.0011 U
BDB-11	1a	5	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0053 U	< 0.0053 U	--	--	< 0.0053 U	--	< 0.0011 U
CPS-7	14	0	N	01/05/2001	< 0.0053 U	< 0.011 U	< 0.0053 U	< 0.0053 U	--	--	--	< 0.0053 U	--	< 0.0053 U
CPS-8	14	0	N	01/05/2001	< 0.0053 U	< 0.011 U	< 0.0053 U	< 0.0053 U	--	--	--	< 0.0053 U	--	< 0.0053 U
CPS-9	14	0	N	01/05/2001	< 0.0055 U	< 0.011 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.0055 U	--	< 0.0055 U
CPS-A	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-A	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CSBD-01	14	0	N	01/05/2001	< 0.0055 U	< 0.011 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.0055 U	--	< 0.0055 U
CSBD-02	14	0	N	01/05/2001	< 0.0057 U	< 0.011 U	< 0.0057 U	< 0.0057 U	--	--	--	< 0.0057 U	--	< 0.0057 U
CSBD-03	14	0	N	01/05/2001	< 0.0055 U	< 0.011 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.0055 U	--	< 0.0055 U
CSBD-04	14	0	N	01/05/2001	< 0.0056 U	< 0.011 U	< 0.0056 U	< 0.0056 U	--	--	--	< 0.0056 U	--	< 0.0056 U
CSBD-05	14	0	N	01/05/2001	< 0.0055 U	< 0.011 U	< 0.0055 U	< 0.0055 U	--	--	--	< 0.0055 U	--	< 0.0055 U
DA-T1	2	0	N	04/01/1998	< 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
DA-T1	2	3	N	04/01/1998	< 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
DA-T2	2	0	N	04/01/1998	< 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
DA-T2	2	5	N	04/01/1998	< 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
DA-T3	2	0	N	04/01/1998	< 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
DA-T3	2	5	N	04/01/1998	< 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
ROW-01	2	0	N	03/31/1998	< 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
ROW-02	2	0	N	03/31/1998	< 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
ROW-03	2	0	N	03/31/1998	< 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
ROW-04	2	3	N	03/31/1998	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	--	< 0.01 U	< 0.01 U	< 0.01 U
ROW-04	2	5	N	03/31/1998	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U	< 0.0055 U
ROW-05	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-05	2	3	N	04/01/1998	< 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

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					Bromodichloromethane	Bromomethane	Carbon disulfide	Carbon tetrachloride	CFC-11	CFC-12	Chlorinated fluorocarbon (Freon 113)	Chlorobenzene	Chlorobromomethane	Chlorodibromomethane
ROW-06	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	--	< 0.006 U	< 0.006 U	< 0.006 U
WC-AD01	39	0	N	08/03/2006	< 0.00034 U	< 0.00032 U	< 0.00057 U	< 0.00093 U	< 0.00052 U	< 0.00038 UJ	< 0.00055 U	< 0.00013 U	--	< 0.0003 U
WC-BD01	39	0	N	08/02/2006	< 0.00035 U	< 0.00033 U	< 0.00058 U	< 0.00095 U	< 0.00053 U	< 0.00039 UJ	< 0.00056 U	< 0.00013 U	--	< 0.0003 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 9 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethylene	cis-1,3-Dichloro-propylene	Cymene	Dibromomethane	Dichloromethane	Ethylbenzene	Isopropylbenzene
ADB-01	1a	0	N	04/18/1996	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0021 U	--	--	< 0.0011 U	< 0.0011 U	--
ADB-01	1a	5	N	04/18/1996	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0022 U	--	--	< 0.0011 U	< 0.0011 U	--
BDB-08	1a	0	N	04/15/1996	< 0.001 U	< 0.0052 U	< 0.001 U	< 0.001 U	< 0.0021 U	--	--	< 0.0052 U	< 0.001 U	--
BDB-08	1a	5	N	04/15/1996	< 0.001 U	< 0.0052 U	< 0.001 U	< 0.001 U	< 0.0021 U	--	--	< 0.0052 U	< 0.001 U	--
BDB-09	1a	0	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U	< 0.0021 U	--	--	< 0.0053 U	< 0.0011 U	--
BDB-09	1a	5	N	04/09/1996	< 0.0011 U	< 0.0057 U	< 0.0011 U	< 0.0011 U	< 0.0023 U	--	--	< 0.0057 U	< 0.0011 U	--
BDB-10	1a	0	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U	< 0.0021 U	--	--	< 0.0053 U	< 0.0011 U	--
BDB-10	1a	5	N	04/09/1996	< 0.0011 U	0.0015	< 0.0011 U	< 0.0011 U	< 0.0021 U	--	--	< 0.0053 U	< 0.0011 U	--
BDB-11	1a	0	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U	< 0.0021 U	--	--	< 0.0053 U	< 0.0011 U	--
BDB-11	1a	5	N	04/09/1996	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U	< 0.0021 U	--	--	< 0.0053 U	< 0.0011 U	--
CPS-7	14	0	N	01/05/2001	< 0.011 U	< 0.0053 U	< 0.011 U	--	< 0.0053 U	--	--	0.0065	< 0.0053 U	--
CPS-8	14	0	N	01/05/2001	< 0.011 U	< 0.0053 U	< 0.011 U	--	< 0.0053 U	--	--	0.006	< 0.0053 U	--
CPS-9	14	0	N	01/05/2001	< 0.011 U	< 0.0055 U	< 0.011 U	--	< 0.0055 U	--	--	0.0056	< 0.0055 U	--
CPS-A	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-A	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CSBD-01	14	0	N	01/05/2001	< 0.011 U	< 0.0055 U	< 0.011 U	--	< 0.0055 U	--	--	< 0.0055 U	< 0.0055 U	--
CSBD-02	14	0	N	01/05/2001	< 0.011 U	< 0.0057 U	< 0.011 U	--	< 0.0057 U	--	--	< 0.0057 U	< 0.0057 U	--
CSBD-03	14	0	N	01/05/2001	< 0.011 U	< 0.0055 U	< 0.011 U	--	< 0.0055 U	--	--	< 0.0055 U	< 0.0055 U	--
CSBD-04	14	0	N	01/05/2001	< 0.011 U	< 0.0056 U	< 0.011 U	--	< 0.0056 U	--	--	< 0.0056 U	< 0.0056 U	--
CSBD-05	14	0	N	01/05/2001	< 0.011 U	< 0.0055 U	< 0.011 U	--	< 0.0055 U	--	--	< 0.0055 U	< 0.0055 U	--
DA-T1	2	0	N	04/01/1998	< 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
DA-T1	2	3	N	04/01/1998	< 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
DA-T2	2	0	N	04/01/1998	< 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
DA-T2	2	5	N	04/01/1998	< 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
DA-T3	2	0	N	04/01/1998	< 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
DA-T3	2	5	N	04/01/1998	< 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
ROW-01	2	0	N	03/31/1998	< 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
ROW-02	2	0	N	03/31/1998	< 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
ROW-03	2	0	N	03/31/1998	< 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
ROW-04	2	3	N	03/31/1998	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
ROW-04	2	5	N	03/31/1998	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U
ROW-05	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-05	2	3	N	04/01/1998	< 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

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 10 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethylene	cis-1,3-Dichloro-propylene	Cymene	Dibromomethane	Dichloromethane	Ethylbenzene	Isopropylbenzene
ROW-06	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U
WC-AD01	39	0	N	08/03/2006	< 0.00036 U	< 0.00015 U	< 0.00046 U	--	< 0.00075 U	--	< 0.00036 U	< 0.0026 U	< 0.00019 U	--
WC-BD01	39	0	N	08/02/2006	< 0.00037 U	< 0.00015 U	< 0.00046 U	--	< 0.00076 U	--	< 0.00037 U	< 0.0026 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.

All units in mg/kg.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 11 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					m,p-Xylene	Methyl ethyl ketone	Methyl iodide	Methyl isobutyl ketone	Methyl n-butyl ketone	MTBE (Methyl tert-butyl ether)	n-Butyl benzene	n-Propyl benzene	o-Xylene	Styrene (monomer)
ADB-01	1a	0	N	04/18/1996	< 0.0021 U	< 0.0021 U	--	< 0.0053 U	< 0.0032 U	--	--	--	< 0.0011 U	< 0.0011 U
ADB-01	1a	5	N	04/18/1996	< 0.0022 U	< 0.0022 U	--	< 0.0055 U	< 0.0033 U	--	--	--	< 0.0011 U	< 0.0011 U
BDB-08	1a	0	N	04/15/1996	< 0.0021 U	< 0.01 U	--	< 0.0052 U	< 0.0031 U	--	--	--	< 0.001 U	< 0.001 U
BDB-08	1a	5	N	04/15/1996	< 0.0021 U	< 0.01 U	--	< 0.0052 U	< 0.0031 U	--	--	--	< 0.001 U	< 0.001 U
BDB-09	1a	0	N	04/09/1996	< 0.0021 U	< 0.011 U	--	< 0.0053 U	< 0.0032 U	--	--	--	< 0.0011 U	< 0.0011 U
BDB-09	1a	5	N	04/09/1996	< 0.0023 U	< 0.011 U	--	< 0.0057 U	< 0.0034 U	--	--	--	< 0.0011 U	< 0.0011 U
BDB-10	1a	0	N	04/09/1996	< 0.0021 U	< 0.011 U	--	< 0.0053 U	< 0.0032 U	--	--	--	< 0.0011 U	< 0.0011 U
BDB-10	1a	5	N	04/09/1996	< 0.0021 U	< 0.011 U	--	< 0.0053 U	< 0.0032 U	--	--	--	< 0.0011 U	< 0.0011 U
BDB-11	1a	0	N	04/09/1996	< 0.0021 U	< 0.011 U	--	< 0.0053 U	< 0.0032 U	--	--	--	< 0.0011 U	< 0.0011 U
BDB-11	1a	5	N	04/09/1996	< 0.0021 U	< 0.011 U	--	< 0.0053 U	< 0.0032 U	--	--	--	< 0.0011 U	< 0.0011 U
CPS-7	14	0	N	01/05/2001	--	< 0.021 U	--	< 0.021 U	< 0.021 U	--	--	--	--	< 0.0053 U
CPS-8	14	0	N	01/05/2001	--	< 0.021 U	--	< 0.021 U	< 0.021 U	--	--	--	--	< 0.0053 U
CPS-9	14	0	N	01/05/2001	--	< 0.022 U	--	< 0.022 U	< 0.022 U	--	--	--	--	< 0.0055 U
CPS-A	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-A	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CSBD-01	14	0	N	01/05/2001	--	< 0.022 U	--	< 0.022 U	< 0.022 U	--	--	--	--	< 0.0055 U
CSBD-02	14	0	N	01/05/2001	--	< 0.023 U	--	< 0.023 U	< 0.023 U	--	--	--	--	< 0.0057 U
CSBD-03	14	0	N	01/05/2001	--	< 0.022 U	--	< 0.022 U	< 0.022 U	--	--	--	--	< 0.0055 U
CSBD-04	14	0	N	01/05/2001	--	< 0.022 U	--	< 0.022 U	< 0.022 U	--	--	--	--	< 0.0056 U
CSBD-05	14	0	N	01/05/2001	--	< 0.022 U	--	< 0.022 U	< 0.022 U	--	--	--	--	< 0.0055 U
DA-T1	2	0	N	04/01/1998	< 0.005 U	< 0.025 U	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
DA-T1	2	3	N	04/01/1998	< 0.005 U	< 0.025 U	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
DA-T2	2	0	N	04/01/1998	< 0.005 U	< 0.025 U	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
DA-T2	2	5	N	04/01/1998	< 0.005 U	0.029	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
DA-T3	2	0	N	04/01/1998	< 0.005 UJ	< 0.025 UJ	< 0.005 UJ	< 0.025 UJ	< 0.025 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ
DA-T3	2	5	N	04/01/1998	< 0.005 U	0.03	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
ROW-01	2	0	N	03/31/1998	< 0.005 U	< 0.025 U	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
ROW-02	2	0	N	03/31/1998	< 0.005 U	< 0.025 U	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
ROW-03	2	0	N	03/31/1998	< 0.005 U	< 0.025 U	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U
ROW-04	2	3	N	03/31/1998	< 0.01 U	< 0.05 U	< 0.01 U	< 0.05 U	< 0.05 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
ROW-04	2	5	N	03/31/1998	< 0.0055 U	< 0.0275 U	< 0.0055 U	< 0.0275 U	< 0.0275 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U
ROW-05	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-05	2	3	N	04/01/1998	< 0.005 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.025 U	< 0.025 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 12 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					m,p-Xylene	Methyl ethyl ketone	Methyl iodide	Methyl isobutyl ketone	Methyl n-butyl ketone	MTBE (Methyl tert-butyl ether)	n-Butyl benzene	n-Propyl benzene	o-Xylene	Styrene (monomer)
ROW-06	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.03 U	< 0.006 U	< 0.03 U	< 0.03 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U
WC-AD01	39	0	N	08/03/2006	--	< 0.0014 U	< 0.00026 U	< 0.0017 U	--	--	--	--	--	--
WC-BD01	39	0	N	08/02/2006	--	< 0.0014 U	< 0.00027 U	< 0.0017 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 13 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					tert-Butyl benzene	Tetrachloroethylene	Toluene	trans-1,2-Dichloro-ethylene	trans-1,3-Dichloro-propylene	Tribromomethane	Trichloroethylene	Vinyl acetate	Vinyl chloride	Xylenes (total)
ADB-01	1a	0	N	04/18/1996	--	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0021 U	--
ADB-01	1a	5	N	04/18/1996	--	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0022 U	--
BDB-08	1a	0	N	04/15/1996	--	< 0.0052 U	< 0.0052 U	< 0.001 U	< 0.0021 U	< 0.001 U	< 0.0052 U	< 0.001 U	< 0.0021 U	--
BDB-08	1a	5	N	04/15/1996	--	< 0.0052 U	< 0.0052 U	< 0.001 U	< 0.0021 U	< 0.001 U	< 0.0052 U	< 0.001 U	< 0.0021 U	--
BDB-09	1a	0	N	04/09/1996	--	< 0.0053 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	--
BDB-09	1a	5	N	04/09/1996	--	< 0.0057 U	< 0.0057 U	< 0.0011 U	< 0.0023 U	< 0.0011 U	< 0.0057 U	< 0.0011 U	< 0.0023 U	--
BDB-10	1a	0	N	04/09/1996	--	< 0.0053 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	--
BDB-10	1a	5	N	04/09/1996	--	< 0.0053 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	--
BDB-11	1a	0	N	04/09/1996	--	< 0.0053 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	--
BDB-11	1a	5	N	04/09/1996	--	< 0.0053 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0021 U	--
CPS-7	14	0	N	01/05/2001	--	< 0.0053 U	< 0.0053 U	--	< 0.0053 U	< 0.0053 U	< 0.0053 U	--	< 0.0053 U	< 0.0053 U
CPS-8	14	0	N	01/05/2001	--	< 0.0053 U	< 0.0053 U	--	< 0.0053 U	< 0.0053 U	< 0.0053 U	--	< 0.0053 U	< 0.0053 U
CPS-9	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U
CPS-A	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-A	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	0	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CPS-B	14	3	N	12/12/2000	--	--	--	--	--	--	--	--	--	--
CSBD-01	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U
CSBD-02	14	0	N	01/05/2001	--	< 0.0057 U	< 0.0057 U	--	< 0.0057 U	< 0.0057 U	< 0.0057 U	--	< 0.0057 U	< 0.0057 U
CSBD-03	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U
CSBD-04	14	0	N	01/05/2001	--	< 0.0056 U	< 0.0056 U	--	< 0.0056 U	< 0.0056 U	< 0.0056 U	--	< 0.0056 U	< 0.0056 U
CSBD-05	14	0	N	01/05/2001	--	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	< 0.0055 U
DA-T1	2	0	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
DA-T1	2	3	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
DA-T2	2	0	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
DA-T2	2	5	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
DA-T3	2	0	N	04/01/1998	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	--	< 0.005 UJ	--
DA-T3	2	5	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
ROW-01	2	0	N	03/31/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
ROW-02	2	0	N	03/31/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
ROW-03	2	0	N	03/31/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--
ROW-04	2	3	N	03/31/1998	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	--	< 0.01 U	--
ROW-04	2	5	N	03/31/1998	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	--	< 0.0055 U	--
ROW-05	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-05	2	3	N	04/01/1998	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	--	< 0.005 U	--

TABLE B-3
SOIL VOLATILE ORGANIC COMPOUNDS (VOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 14 of 14)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Volatile Organic Compounds (VOCs)									
					tert-Butyl benzene	Tetrachloroethylene	Toluene	trans-1,2-Dichloro-ethylene	trans-1,3-Dichloro-propylene	Tribromomethane	Trichloroethylene	Vinyl acetate	Vinyl chloride	Xylenes (total)
ROW-06	2	0	N	04/01/1998	--	--	--	--	--	--	--	--	--	--
ROW-06	2	3	N	04/01/1998	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U	--	< 0.006 U	--
WC-AD01	39	0	N	08/03/2006	--	< 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-BD01	39	0	N	08/02/2006	--	< 0.00029 U	< 0.00014 U	< 0.00023 U	< 0.00021 U	< 0.00026 U	0.0069	--	< 0.00025 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
					1,2,4,5-Tetrachloro-benzene	1,4-Dioxane	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
ADB-01	1a	0	N	04/18/1996	--	--	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 3.4 U	< 0.67 U	< 0.67 U	< 0.67 U
ADB-01	1a	5	N	04/18/1996	--	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.6 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-08	1a	0	N	04/15/1996	--	--	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 3.5 U	< 0.69 U	< 0.69 U	< 0.69 U
BDB-09	1a	0	N	04/09/1996	--	--	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 7.8 U	< 1.6 U	< 1.6 U	< 1.6 U
BDB-09	1a	5	N	04/09/1996	--	--	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 3.6 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-10	1a	0	N	04/09/1996	--	--	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 3.4 U	< 0.68 U	< 0.68 U	< 0.68 U
BDB-10	1a	5	N	04/09/1996	--	--	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 3.6 U	< 0.72 U	< 0.72 U	< 0.72 U
BDB-11	1a	0	N	04/09/1996	--	--	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 7.7 U	< 1.5 U	< 1.5 U	< 1.5 U
BDB-11	1a	5	N	04/09/1996	--	--	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 3.5 U	< 0.7 U	< 0.7 U	< 0.7 U
CPS-7	14	0	N	01/05/2001	--	--	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 0.35 U	< 0.35 U
CPS-8	14	0	N	01/05/2001	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 0.36 U	< 0.36 U
CPS-9	14	0	N	01/05/2001	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U
CPS-A	14	0	N	12/12/2000	--	--	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-A	14	3	N	12/12/2000	--	--	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-B	14	0	N	12/12/2000	--	--	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U
CPS-B	14	3	N	12/12/2000	--	--	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U
CSBD-02	14	0	N	01/05/2001	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U
CSBD-03	14	0	N	01/05/2001	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U
CSBD-04	14	0	N	01/05/2001	--	--	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 0.36 U	< 0.36 U
CSBD-05	14	0	N	01/05/2001	--	--	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U
DA-T1	2	0	N	04/01/1998	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T1	2	3	FD	04/01/1998	--	--	< 5 U	< 5 U	< 5 U	< 5 U	< 25 U	< 5 U	< 5 U	< 5 U
DA-T1	2	3	N	04/01/1998	--	--	< 5 U	< 5 U	< 5 U	< 5 U	< 25 U	< 5 U	< 5 U	< 5 U
DA-T2	2	0	FD	04/01/1998	--	--	< 6 U	< 6 U	< 6 U	< 6 U	< 30 U	< 6 U	< 6 U	< 6 U
DA-T2	2	0	N	04/01/1998	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T2	2	5	N	04/01/1998	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T3	2	0	N	04/01/1998	--	--	< 5 U	< 5 U	< 5 U	< 5 U	< 25 U	< 5 U	< 5 U	< 5 U
DA-T3	2	5	N	04/01/1998	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-04	2	0	N	03/31/1998	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-05	2	0	N	04/01/1998	--	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-06	2	0	N	04/01/1998	--	--	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 3.25 U	< 0.65 U	< 0.65 U	< 0.65 U
WC-AD01	39	0	N	08/03/2006	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	< 0.34 U	< 0.034 U	< 0.034 U	< 0.034 U
WC-BD01	39	0	N	08/02/2006	0.068 J	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	< 0.35 U	< 0.035 U	< 0.035 U	< 0.035 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.
Shaded results indicate soil has been excavated and removed.
-- = no sample data.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 2 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
					2-Chlorophenol	2-Methylnaphthalene	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Methylphenol & 4-Methylphenol	3-Nitroaniline	4,6-Dinitro-o-cresol	4-Bromophenyl phenyl ether	4-Chloro-3-methyl phenol
ADB-01	1a	0	N	04/18/1996	< 0.67 U	< 0.67 U	< 3.4 U	< 0.67 U	< 1.3 U	--	< 3.4 U	< 3.4 U	< 0.67 U	< 1.3 U
ADB-01	1a	5	N	04/18/1996	< 0.71 U	< 0.71 U	< 3.6 U	< 0.71 U	< 1.4 U	--	< 3.6 U	< 3.6 U	< 0.71 U	< 1.4 U
BDB-08	1a	0	N	04/15/1996	< 0.69 U	< 0.69 U	< 3.5 U	< 0.69 U	< 1.4 U	--	< 3.5 U	< 3.5 U	< 0.69 U	< 1.4 U
BDB-09	1a	0	N	04/09/1996	< 1.6 U	< 1.6 U	< 7.8 U	< 1.6 U	< 3.1 U	--	< 7.8 U	< 7.8 U	< 1.6 U	< 3.1 U
BDB-09	1a	5	N	04/09/1996	< 0.71 U	< 0.71 U	< 3.6 U	< 0.71 U	< 1.4 U	--	< 3.6 U	< 3.6 U	< 0.71 U	< 1.4 U
BDB-10	1a	0	N	04/09/1996	< 0.68 U	< 0.68 U	< 3.4 U	< 0.68 U	< 1.3 U	--	< 3.4 U	< 3.4 U	< 0.68 U	< 1.3 U
BDB-10	1a	5	N	04/09/1996	< 0.72 U	< 0.72 U	< 3.6 U	< 0.72 U	< 1.4 U	--	< 3.6 U	< 3.6 U	< 0.72 U	< 1.4 U
BDB-11	1a	0	N	04/09/1996	< 1.5 U	< 1.5 U	< 7.7 U	< 1.5 U	< 3 U	--	< 7.7 U	< 7.7 U	< 1.5 U	< 3 U
BDB-11	1a	5	N	04/09/1996	< 0.7 U	< 0.7 U	< 3.5 U	< 0.7 U	< 1.4 U	--	< 3.5 U	< 3.5 U	< 0.7 U	< 1.4 U
CPS-7	14	0	N	01/05/2001	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 1.7 U	--	< 1.7 U	< 1.7 U	< 0.35 U	< 0.35 U
CPS-8	14	0	N	01/05/2001	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 1.7 U	--	< 1.7 U	< 1.7 U	< 0.36 U	< 0.36 U
CPS-9	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U	< 0.37 U	< 0.37 U
CPS-A	14	0	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-A	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-B	14	0	N	12/12/2000	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U
CPS-B	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U	< 0.37 U	< 0.37 U
CSBD-02	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U	< 0.37 U	< 0.37 U
CSBD-03	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U	< 0.37 U	< 0.37 U
CSBD-04	14	0	N	01/05/2001	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 1.7 U	--	< 1.7 U	< 1.7 U	< 0.36 U	< 0.36 U
CSBD-05	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 1.8 U	--	< 1.8 U	< 1.8 U	< 0.37 U	< 0.37 U
DA-T1	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 1 U	--	< 2.5 U	< 2.5 U	< 0.5 U	< 1 U
DA-T1	2	3	FD	04/01/1998	< 5 U	< 5 U	< 25 U	< 5 U	< 10 U	--	< 25 U	< 25 U	< 5 U	< 10 U
DA-T1	2	3	N	04/01/1998	< 5 U	< 5 U	< 25 U	< 5 U	< 10 U	--	< 25 U	< 25 U	< 5 U	< 10 U
DA-T2	2	0	FD	04/01/1998	< 6 U	< 6 U	< 30 U	< 6 U	< 12 U	--	< 30 U	< 30 U	< 6 U	< 12 U
DA-T2	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 1 U	--	< 2.5 U	< 2.5 U	< 0.5 U	< 1 U
DA-T2	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 1 U	--	< 2.5 U	< 2.5 U	< 0.5 U	< 1 U
DA-T3	2	0	N	04/01/1998	< 5 U	< 5 U	< 25 U	< 5 U	< 10 U	--	< 25 U	< 25 U	< 5 U	< 10 U
DA-T3	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 1 U	--	< 2.5 U	< 2.5 U	< 0.5 U	< 1 U
ROW-04	2	0	N	03/31/1998	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 1 U	--	< 2.5 U	< 2.5 U	< 0.5 U	< 1 U
ROW-05	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 2.5 U	< 0.5 U	< 1 U	--	< 2.5 U	< 2.5 U	< 0.5 U	< 1 U
ROW-06	2	0	N	04/01/1998	< 0.65 U	< 0.65 U	< 3.25 U	< 0.65 U	< 1.3 U	--	< 3.25 U	< 3.25 U	< 0.65 U	< 1.3 U
WC-AD01	39	0	N	08/03/2006	< 0.034 U	--	< 0.034 U	< 0.034 U	--	< 0.068 U	--	--	< 0.034 U	< 0.034 U
WC-BD01	39	0	N	08/02/2006	< 0.035 U	--	< 0.035 U	< 0.035 U	--	< 0.07 U	--	--	< 0.035 U	< 0.035 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.
Shaded results indicate soil has been excavated and removed.
-- = no sample data.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
					4-Chlorophenyl phenyl ether	4-Nitrophenol	Acetophenone	Aniline	Azobenzene	Benzoic acid	Benzyl alcohol	Benzyl butyl phthalate	bis(2-Chloroethoxy) methane	bis(2-Chloroethyl) ether
ADB-01	1a	0	N	04/18/1996	< 0.67 U	< 3.4 U	--	--	--	< 3.4 U	< 1.3 U	< 0.67 U	< 0.67 U	< 0.67 U
ADB-01	1a	5	N	04/18/1996	< 0.71 U	< 3.6 U	--	--	--	< 3.6 U	< 1.4 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-08	1a	0	N	04/15/1996	< 0.69 U	< 3.5 U	--	--	--	< 3.5 U	< 1.4 U	< 0.69 U	< 0.69 U	< 0.69 U
BDB-09	1a	0	N	04/09/1996	< 1.6 U	< 7.8 U	--	--	--	< 7.8 U	< 3.1 U	< 1.6 U	< 1.6 U	< 1.6 U
BDB-09	1a	5	N	04/09/1996	< 0.71 U	< 3.6 U	--	--	--	< 3.6 U	< 1.4 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-10	1a	0	N	04/09/1996	< 0.68 U	< 3.4 U	--	--	--	< 3.4 U	< 1.3 U	< 0.68 U	< 0.68 U	< 0.68 U
BDB-10	1a	5	N	04/09/1996	< 0.72 U	< 3.6 U	--	--	--	< 3.6 U	< 1.4 U	< 0.72 U	< 0.72 U	< 0.72 U
BDB-11	1a	0	N	04/09/1996	< 1.5 U	< 7.7 U	--	--	--	< 7.7 U	< 3 U	< 1.5 U	< 1.5 U	< 1.5 U
BDB-11	1a	5	N	04/09/1996	< 0.7 U	< 3.5 U	--	--	--	< 3.5 U	< 1.4 U	< 0.7 U	< 0.7 U	< 0.7 U
CPS-7	14	0	N	01/05/2001	< 0.35 U	< 1.7 U	--	--	--	--	--	< 0.35 U	< 0.35 U	< 0.35 U
CPS-8	14	0	N	01/05/2001	< 0.36 U	< 1.7 U	--	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U
CPS-9	14	0	N	01/05/2001	< 0.37 U	< 1.8 U	--	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U
CPS-A	14	0	N	12/12/2000	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U	< 0.3465 UJ-	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-A	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U	< 0.3465 UJ-	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-B	14	0	N	12/12/2000	< 0.3564 U	< 0.3564 U	--	< 0.3564 U	< 0.3564 U	< 0.3564 UJ-	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U
CPS-B	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U	< 0.3465 UJ-	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	< 0.37 U	< 1.8 U	--	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U
CSBD-02	14	0	N	01/05/2001	< 0.37 U	< 1.8 U	--	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U
CSBD-03	14	0	N	01/05/2001	< 0.37 U	< 1.8 U	--	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U
CSBD-04	14	0	N	01/05/2001	< 0.36 U	< 1.7 U	--	--	--	--	--	< 0.36 U	< 0.36 U	< 0.36 U
CSBD-05	14	0	N	01/05/2001	< 0.37 U	< 1.8 U	--	--	--	--	--	< 0.37 U	< 0.37 U	< 0.37 U
DA-T1	2	0	N	04/01/1998	< 0.5 U	< 2.5 U	--	--	--	< 2.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T1	2	3	FD	04/01/1998	< 5 U	< 25 U	--	--	--	< 25 U	< 10 U	< 5 U	< 5 U	< 5 U
DA-T1	2	3	N	04/01/1998	< 5 U	< 25 U	--	--	--	< 25 U	< 10 U	< 5 U	< 5 U	< 5 U
DA-T2	2	0	FD	04/01/1998	< 6 U	< 30 U	--	--	--	< 30 U	< 12 U	< 6 U	< 6 U	< 6 U
DA-T2	2	0	N	04/01/1998	< 0.5 U	< 2.5 U	--	--	--	< 2.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T2	2	5	N	04/01/1998	< 0.5 U	< 2.5 U	--	--	--	< 2.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T3	2	0	N	04/01/1998	< 5 U	< 25 U	--	--	--	< 25 U	< 10 U	< 5 U	< 5 U	< 5 U
DA-T3	2	5	N	04/01/1998	< 0.5 U	< 2.5 U	--	--	--	< 2.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-04	2	0	N	03/31/1998	< 0.5 U	< 2.5 U	--	--	--	< 2.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-05	2	0	N	04/01/1998	< 0.5 U	< 2.5 U	--	--	--	< 2.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-06	2	0	N	04/01/1998	< 0.65 U	< 3.25 U	--	--	--	< 3.25 U	< 1.3 U	< 0.65 U	< 0.65 U	< 0.65 U
WC-AD01	39	0	N	08/03/2006	--	< 0.34 U	< 0.034 U	< 0.034 U	< 0.034 U	--	--	< 0.034 U	< 0.034 U	< 0.034 U
WC-BD01	39	0	N	08/02/2006	--	< 0.35 U	< 0.035 U	< 0.035 U	--	--	--	< 0.035 U	< 0.035 U	< 0.035 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.
Shaded results indicate soil has been excavated and removed.
-- = no sample data.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH

					Semi-Volatile Organic Compounds (SVOCs)									
Sample ID	**Dataset**	**Depth (ft bgs)**	**Sample Type**	**Sample Date**	bis(2-Chloroiso-propyl) ether	bis(2-Ethylhexyl) phthalate	Carbazole	Dibenzofuran	Dibutyl phthalate	Diethyl phthalate	Dimethyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene
ADB-01	1a	0	N	04/18/1996	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U
ADB-01	1a	5	N	04/18/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-08	1a	0	N	04/15/1996	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U
BDB-09	1a	0	N	04/09/1996	< 1.6 U	0.75	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U
BDB-09	1a	5	N	04/09/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-10	1a	0	N	04/09/1996	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U
BDB-10	1a	5	N	04/09/1996	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U
BDB-11	1a	0	N	04/09/1996	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	0.45	< 1.5 U
BDB-11	1a	5	N	04/09/1996	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U
CPS-7	14	0	N	01/05/2001	< 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
CPS-8	14	0	N	01/05/2001	< 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
CPS-9	14	0	N	01/05/2001	< 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
CPS-A	14	0	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-A	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-B	14	0	N	12/12/2000	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U
CPS-B	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	< 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
CSBD-02	14	0	N	01/05/2001	< 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
CSBD-03	14	0	N	01/05/2001	< 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
CSBD-04	14	0	N	01/05/2001	< 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
CSBD-05	14	0	N	01/05/2001	< 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
DA-T1	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T1	2	3	FD	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
DA-T1	2	3	N	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
DA-T2	2	0	FD	04/01/1998	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U
DA-T2	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T2	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T3	2	0	N	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
DA-T3	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-04	2	0	N	03/31/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-05	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-06	2	0	N	04/01/1998	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.5 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U
WC-AD01	39	0	N	08/03/2006	< 0.034 U	--	--	--	< 0.034 U	< 0.034 U	< 0.034 U	< 0.015 U	0.065 J	< 0.034 U
WC-BD01	39	0	N	08/02/2006	< 0.035 U	--	--	--	< 0.035 U	< 0.035 U	< 0.035 U	< 0.015 U	0.18 J	< 0.035 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.
Shaded results indicate soil has been excavated and removed.
-- = no sample data.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 5 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
					Hexachloro-1,3-butadiene	Hexachlorobenzene	Hexachloro-cyclopentadiene	Hexachloroethane	Isophorone	Naphthalene	Nitrobenzene	N-nitrosodiethylamine	N-Nitrosodimethylamine	N-nitrosodi-n-propyl-amine
ADB-01	1a	0	N	04/18/1996	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	--	--	< 0.67 U
ADB-01	1a	5	N	04/18/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	--	--	< 0.71 U
BDB-08	1a	0	N	04/15/1996	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	--	--	< 0.69 U
BDB-09	1a	0	N	04/09/1996	< 1.6 U	9.7	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	--	--	< 1.6 U
BDB-09	1a	5	N	04/09/1996	< 0.71 U	3.5	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	--	--	< 0.71 U
BDB-10	1a	0	N	04/09/1996	< 0.68 U	0.63	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	--	--	< 0.68 U
BDB-10	1a	5	N	04/09/1996	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	--	--	< 0.72 U
BDB-11	1a	0	N	04/09/1996	< 1.5 U	7.9	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	--	--	< 1.5 U
BDB-11	1a	5	N	04/09/1996	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	--	--	< 0.7 U
CPS-7	14	0	N	01/05/2001	< 0.35 U	< 0.35 U	< 1.7 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	--	--	< 0.35 U
CPS-8	14	0	N	01/05/2001	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	--	< 0.36 U
CPS-9	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	--	< 0.37 U
CPS-A	14	0	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U
CPS-A	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U
CPS-B	14	0	N	12/12/2000	< 0.3564 U	17	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	--	< 0.3564 U	< 0.3564 U
CPS-B	14	3	N	12/12/2000	< 0.3465 U	3.6	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	--	< 0.37 U
CSBD-02	14	0	N	01/05/2001	< 0.37 U	0.16 J	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	--	< 0.37 U
CSBD-03	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	--	< 0.37 U
CSBD-04	14	0	N	01/05/2001	< 0.36 U	< 0.36 U	< 1.7 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	--	< 0.36 U
CSBD-05	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 1.8 U	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	--	< 0.37 U
DA-T1	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	< 0.5 U
DA-T1	2	3	FD	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	--	< 5 U
DA-T1	2	3	N	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	--	< 5 U
DA-T2	2	0	FD	04/01/1998	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	--	< 6 U
DA-T2	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	< 0.5 U
DA-T2	2	5	N	04/01/1998	< 0.005 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.005 U	< 0.5 U	< 0.5 U	--	< 0.5 U
DA-T3	2	0	N	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	--	< 5 U
DA-T3	2	5	N	04/01/1998	< 0.005 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.005 U	< 0.5 U	< 0.5 U	--	< 0.5 U
ROW-04	2	0	N	03/31/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	< 0.5 U
ROW-05	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	< 0.5 U
ROW-06	2	0	N	04/01/1998	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	--	< 0.65 U
WC-AD01	39	0	N	08/03/2006	< 0.034 U	< 0.034 U	< 0.34 U	< 0.034 U	--	< 0.034 U	< 0.034 U	--	--	< 0.034 U
WC-BD01	39	0	N	08/02/2006	< 0.035 U	1.1	< 0.35 U	< 0.035 U	--	< 0.035 U	< 0.035 U	--	--	< 0.035 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.
Shaded results indicate soil has been excavated and removed.
-- = no sample data.

TABLE B-4
SOIL SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 6 of 6)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Semi-Volatile Organic Compounds (SVOCs)									
					N-nitrosodiphenylamine	o-Cresol	p-Chloroaniline	p-Cresol	Pentachlorobenzene	Pentachlorophenol	Phenol	Phthalic acid	p-Nitroaniline	Pyridine
ADB-01	1a	0	N	04/18/1996	< 0.67 U	< 0.67 U	< 1.3 U	< 0.67 U	--	< 3.4 U	< 0.67 U	--	< 3.4 U	--
ADB-01	1a	5	N	04/18/1996	< 0.71 U	< 0.71 U	< 1.4 U	< 0.71 U	--	< 3.6 U	< 0.71 U	--	< 3.6 U	--
BDB-08	1a	0	N	04/15/1996	< 0.69 U	< 0.69 U	< 1.4 U	< 0.69 U	--	< 3.5 U	< 0.69 U	--	< 3.5 U	--
BDB-09	1a	0	N	04/09/1996	< 1.6 U	< 1.6 U	< 3.1 U	< 1.6 U	--	< 7.8 U	< 1.6 U	--	< 7.8 U	--
BDB-09	1a	5	N	04/09/1996	< 0.71 U	< 0.71 U	< 1.4 U	< 0.71 U	--	< 3.6 U	< 0.71 U	--	< 3.6 U	--
BDB-10	1a	0	N	04/09/1996	< 0.68 U	< 0.68 U	< 1.3 U	< 0.68 U	--	< 3.4 U	< 0.68 U	--	< 3.4 U	--
BDB-10	1a	5	N	04/09/1996	< 0.72 U	< 0.72 U	< 1.4 U	< 0.72 U	--	< 3.6 U	< 0.72 U	--	< 3.6 U	--
BDB-11	1a	0	N	04/09/1996	< 1.5 U	< 1.5 U	< 3 U	< 1.5 U	--	< 7.7 U	< 1.5 U	--	< 7.7 U	--
BDB-11	1a	5	N	04/09/1996	< 0.7 U	< 0.7 U	< 1.4 U	< 0.7 U	--	< 3.5 U	< 0.7 U	--	< 3.5 U	--
CPS-7	14	0	N	01/05/2001	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	--	< 1.7 U	< 0.35 U	--	< 1.7 U	--
CPS-8	14	0	N	01/05/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	< 1.7 U	< 0.36 U	--	< 1.7 U	--
CPS-9	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	< 1.8 U	< 0.37 U	--	< 1.8 U	--
CPS-A	14	0	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	--	--	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U
CPS-A	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	--	--	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U
CPS-B	14	0	N	12/12/2000	< 0.3564 U	< 0.3564 U	< 0.3564 U	--	--	< 0.3564 U	< 0.3564 U	--	< 0.3564 U	< 0.3564 U
CPS-B	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	--	--	< 0.3465 U	< 0.3465 U	--	< 0.3465 U	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	< 1.8 U	< 0.37 U	--	< 1.8 U	--
CSBD-02	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	< 1.8 U	< 0.37 U	--	< 1.8 U	--
CSBD-03	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	< 1.8 U	< 0.37 U	--	< 1.8 U	--
CSBD-04	14	0	N	01/05/2001	< 0.36 U	< 0.36 U	< 0.36 U	< 0.36 U	--	< 1.7 U	< 0.36 U	--	< 1.7 U	--
CSBD-05	14	0	N	01/05/2001	< 0.37 U	< 0.37 U	< 0.37 U	< 0.37 U	--	< 1.8 U	< 0.37 U	--	< 1.8 U	--
DA-T1	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	--	< 2.5 U	< 0.5 U	--	< 1 U	--
DA-T1	2	3	FD	04/01/1998	< 5 U	< 5 U	< 10 U	< 5 U	--	< 25 U	< 5 U	--	< 10 U	--
DA-T1	2	3	N	04/01/1998	< 5 U	< 5 U	< 10 U	< 5 U	--	< 25 U	< 5 U	--	< 10 U	--
DA-T2	2	0	FD	04/01/1998	< 6 U	< 6 U	< 12 U	< 6 U	--	< 30 U	< 6 U	--	< 12 U	--
DA-T2	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	--	< 2.5 U	< 0.5 U	--	< 1 U	--
DA-T2	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	--	< 2.5 U	< 0.5 U	--	< 1 U	--
DA-T3	2	0	N	04/01/1998	< 5 U	< 5 U	< 10 U	< 5 U	--	< 25 U	< 5 U	--	< 10 U	--
DA-T3	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	--	< 2.5 U	< 0.5 U	--	< 1 U	--
ROW-04	2	0	N	03/31/1998	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	--	< 2.5 U	< 0.5 U	--	< 1 U	--
ROW-05	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	--	< 2.5 U	< 0.5 U	--	< 1 U	--
ROW-06	2	0	N	04/01/1998	< 0.65 U	< 0.65 U	< 1.3 U	< 0.65 U	--	< 3.25 U	< 0.65 U	--	< 1.3 U	--
WC-AD01	39	0	N	08/03/2006	< 0.034 U	< 0.12 U	< 0.034 UJ	--	< 0.034 U	< 0.34 U	< 0.034 U	< 0.26 U	< 0.34 U	< 0.034 U
WC-BD01	39	0	N	08/02/2006	< 0.035 U	< 0.035 U	< 0.035 UJ	--	0.15 J	< 0.35 U	< 0.035 U	< 0.26 U	< 0.35 U	< 0.35 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.
Shaded results indicate soil has been excavated and removed.
-- = no sample data.

TABLE B-5
SOIL DIOXINS/FURANS DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(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
CSBD-01	14	0	N	01/05/2001	3.7	< 2.1 U	< 2 U	< 2 U	< 0.16 U	< 1.7 U	< 1.7 U	< 0.51 U	< 2.5 U
WC-AD01	39	0	N	08/03/2006	200	34	78	--	--	--	--	--	--
WC-BD01	39	0	N	08/02/2006	2000	720	880	--	--	--	--	--	--

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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-5
SOIL DIOXINS/FURANS DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(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
CSBD-01	14	0	N	01/05/2001	< 2.1 U	< 0.41 U	< 1.1 U	< 2.7 U	5400	13	< 5.4 U	7.5	554.5
WC-AD01	39	0	N	08/03/2006	--	--	--	--	--	--	170	1400	3.3
WC-BD01	39	0	N	08/02/2006	--	--	--	--	--	--	16000	14000	39.0

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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-6
SOIL GENERAL CHEMISTRY AND CHLORINATED HERBICIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 1)

					General Chemistry / Ions										Chlorinated Herbicides			
Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Alkalinity	Bicarbonate alkalinity	Carbonate alkalinity	Chlorate	Chloride	Cyanide (Total)	Hydroxide alkalinity	Nitrite (as N)	Perchlorate	Sulfate	2,4,5-T	2,4,5-TP	2,4-D	Dinitrobutyl phenol
ADB-01	1a	0	N	04/18/1996	--	--	--	3.6	--	< 1 U	--	--	--	--	--	--	--	--
ADB-01	1a	5	N	04/18/1996	--	--	--	4.4	--	< 1.1 U	--	--	--	--	--	--	--	--
BDB-08	1a	0	N	04/15/1996	--	--	--	0.0073	--	< 1 U	--	--	--	--	--	--	--	--
BDB-08	1a	5	N	04/15/1996	--	--	--	0.016	--	< 1.1 U	--	--	--	--	--	--	--	--
BDB-09	1a	0	N	04/09/1996	--	--	--	0.54	--	< 1.2 U	--	--	--	--	--	--	--	--
BDB-09	1a	5	N	04/09/1996	--	--	--	10	--	< 1.1 U	--	--	--	--	--	--	--	--
BDB-10	1a	0	N	04/09/1996	--	--	--	0.43	--	< 1 U	--	--	--	--	--	--	--	--
BDB-10	1a	5	N	04/09/1996	--	--	--	6.6	--	< 1.1 U	--	--	--	--	--	--	--	--
BDB-11	1a	0	N	04/09/1996	--	--	--	0.035	--	0.99	--	--	--	--	--	--	--	--
BDB-11	1a	5	N	04/09/1996	--	--	--	< 0.053 U	--	< 1.1 U	--	--	--	--	--	--	--	--
CPS-7	14	0	N	01/05/2001	--	--	--	--	--	< 0.53 U	--	--	0.91	--	--	--	--	--
CPS-8	14	0	N	01/05/2001	--	--	--	--	--	< 0.54 U	--	--	1.7	--	--	--	--	--
CPS-9	14	0	N	01/05/2001	--	--	--	--	--	< 0.56 U	--	--	1.3	--	--	--	--	--
CSBD-01	14	0	N	01/05/2001	--	--	--	--	--	< 0.56 U	--	--	2.2	--	--	--	--	--
CSBD-02	14	0	N	01/05/2001	--	--	--	--	--	1.4	--	--	0.2	--	--	--	--	--
CSBD-03	14	0	N	01/05/2001	--	--	--	--	--	< 0.56 U	--	--	6	--	--	--	--	--
CSBD-04	14	0	N	01/05/2001	--	--	--	--	--	< 0.54 U	--	--	3.7	--	--	--	--	--
CSBD-05	14	0	N	01/05/2001	--	--	--	--	--	< 0.56 U	--	--	3.8	--	--	--	--	--
SC-1	9	0	N	02/04/2000	170	150	17	--	27	--	< 25 U	2.1	--	20	--	--	--	--
SC-1	9	5	N	02/04/2000	97	86	11	--	100	--	< 25 U	6.6	--	510	--	--	--	--
SC-1	9	10	N	02/04/2000	170	140	28	--	32	--	< 25 U	2.4	--	240	--	--	--	--
SC-1	9	33	N	02/04/2000	220	190	35	--	58	--	< 25 U	< 1 U	--	310	--	--	--	--
WC-AD01	39	0	N	08/03/2006	--	--	--	--	--	< 0.12 U	--	--	--	--	< 0.0051 U	< 0.0033 U	< 0.03 U	< 0.0061 U
WC-BD01	39	0	N	08/02/2006	--	--	--	--	--	< 0.13 U	--	--	--	--	< 0.0052 U	< 0.0034 U	< 0.031 U	< 0.0062 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-7
SOIL ORGANOPHOSPHORUS PESTICIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 1)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Organophosphorus Pesticides									
					Azinphos-methyl	Demeton	Diazinon	Disulfoton	Ethion	Famphur	Malathion	Methyl parathion	Parathion	Phorate
CPS-7	14	0	N	01/05/2001	< 0.0742 U	< 0.1378 U	< 0.0742 U	< 0.0742 U	< 0.0371 U	--	< 0.0742 U	< 0.0371 U	< 0.0371 U	--
CPS-8	14	0	N	01/05/2001	< 0.0749 U	< 0.1391 U	< 0.0749 U	< 0.0749 U	< 0.03745 U	--	< 0.0749 U	< 0.03745 U	< 0.03745 U	--
CPS-9	14	0	N	01/05/2001	< 0.077 U	< 0.143 U	< 0.077 U	< 0.077 U	< 0.0385 U	--	< 0.077 U	< 0.0385 U	< 0.0385 U	--
CSBD-01	14	0	N	01/05/2001	< 0.0784 U	< 0.1456 U	< 0.0784 U	< 0.0784 U	< 0.0392 U	--	< 0.0784 U	< 0.0392 U	< 0.0392 U	--
CSBD-02	14	0	N	01/05/2001	< 0.0784 U	< 0.1456 U	< 0.0784 U	< 0.0784 U	< 0.0392 U	--	< 0.0784 U	< 0.0392 U	< 0.0392 U	--
CSBD-03	14	0	N	01/05/2001	< 0.0777 U	< 0.1443 U	< 0.0777 U	< 0.0777 U	< 0.03885 U	--	< 0.0777 U	< 0.03885 U	< 0.03885 U	--
CSBD-04	14	0	N	01/05/2001	< 0.0763 U	< 0.1417 U	< 0.0763 U	< 0.0763 U	< 0.03815 U	--	< 0.0763 U	< 0.03815 U	< 0.03815 U	--
CSBD-05	14	0	N	01/05/2001	< 0.0777 U	< 0.1443 U	< 0.0777 U	< 0.0777 U	< 0.03885 U	--	< 0.0777 U	< 0.03885 U	< 0.03885 U	--
WC-AD01	39	0	N	08/03/2006	--	--	--	< 0.0079 U	--	< 0.0033 U	--	< 0.0065 U	< 0.0054 U	< 0.0059 U
WC-BD01	39	0	N	08/02/2006	--	--	--	< 0.0081 U	--	< 0.0034 U	--	< 0.0067 U	< 0.0055 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-8
SOIL POLYCHLORINATED BIPHENYLS (PCBs) DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 1)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Polychlorinated Biphenyls (PCBs)						
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
ADB-01	1a	0	N	04/18/1996	< 0.013 U	< 0.013 U	< 0.013 U	< 0.013 U	< 0.013 U	< 0.013 U	0.2
ADB-01	1a	5	N	04/18/1996	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U
BDB-08	1a	0	N	04/15/1996	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U
BDB-08	1a	5	N	04/15/1996	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U
BDB-09	1a	0	N	04/09/1996	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
BDB-09	1a	5	N	04/09/1996	< 7 U	< 7 U	< 7 U	< 7 U	< 7 U	< 7 U	< 7 U
BDB-10	1a	0	N	04/09/1996	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U	< 0.33 U
BDB-10	1a	5	N	04/09/1996	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U
BDB-11	1a	0	N	04/09/1996	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U
BDB-11	1a	5	N	04/09/1996	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U	< 0.014 U
CPS-7	14	0	N	01/05/2001	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U
CPS-8	14	0	N	01/05/2001	< 0.0214 U	< 0.0214 U	< 0.0214 U	< 0.0214 U	< 0.0214 U	< 0.0214 U	< 0.0214 U
CPS-9	14	0	N	01/05/2001	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U
CSBD-01	14	0	N	01/05/2001	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U
CSBD-02	14	0	N	01/05/2001	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U	< 0.0224 U
CSBD-03	14	0	N	01/05/2001	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U
CSBD-04	14	0	N	01/05/2001	< 0.0218 U	< 0.0218 U	< 0.0218 U	< 0.0218 U	< 0.0218 U	< 0.0218 U	< 0.0218 U
CSBD-05	14	0	N	01/05/2001	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U	< 0.0222 U
DA-T1	2	0	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
DA-T1	2	3	FD	04/01/1998	< 0.02 UJ	< 0.02 UJ	< 0.02 UJ	< 0.02 U	< 0.02 UJ	< 0.02 UJ	< 0.02 UJ
DA-T1	2	3	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	0.04	< 0.02 U
DA-T2	2	0	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
DA-T2	2	5	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
DA-T3	2	0	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
DA-T3	2	5	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
ROW-01	2	0	N	03/31/1998	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U	< 0.022 U
ROW-01	2	3	N	03/31/1998	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
ROW-02	2	0	N	03/31/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
ROW-02	2	3	N	03/31/1998	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
ROW-03	2	0	N	03/31/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
ROW-03	2	3	N	03/31/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
ROW-04	2	0	N	03/31/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
ROW-04	2	5	N	03/31/1998	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
ROW-05	2	0	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
ROW-05	2	5	N	04/01/1998	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
ROW-06	2	0	N	04/01/1998	< 0.026 U	< 0.026 U	< 0.026 U	< 0.026 U	< 0.026 U	< 0.026 U	< 0.026 U
ROW-06	2	3	N	04/01/1998	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U	< 0.024 U
SC-1	9	0	N	02/04/2000	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
SC-1	9	5	N	02/04/2000	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
SC-1	9	10	N	02/04/2000	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
SC-1	9	33	N	02/04/2000	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-9
SOIL RADIONUCLIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Radionuclides								
					Actinium-228	Bismuth-212	Bismuth-214	Lead-210	Lead-212	Lead-214	Potassium-40	Radium-224	Radium-226
CPS-7	14	0	N	01/05/2001	1.41	1.14 U	0.77	1.1 U	1.17	0.78	20.8	10.7	0.7
CPS-8	14	0	N	01/05/2001	1.6	1.8 U	0.55	1.9	1.55	0.88	26.2	2.8	0.54
CPS-9	14	0	N	01/05/2001	1.58	1.7 U	0.99	1.8	1.9	0.78	29.3	5.3	0.86
CSBD-01	14	0	N	01/05/2001	2.01	2.4	0.83	1.9	1.8	0.85	25.3	6.5	0.82
CSBD-02	14	0	N	01/05/2001	1.03	2.1 U	1.28	2	2.3	0.91	25	6.3	0.9
CSBD-03	14	0	N	01/05/2001	1.37	2.5	0.6	1.4 U	1.58	0.79	26.5	3.4	0.59
CSBD-04	14	0	N	01/05/2001	1.7	1.4 U	0.81	1.6 U	1.55	0.77	24.3	2.9	0.77
CSBD-05	14	0	N	01/05/2001	1.66	2.4	1.02	1.5	2.09	0.96	24.6	5	0.99

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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

TABLE B-9
SOIL RADIONUCLIDES DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 2 of 2)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Radionuclides								
					Radium-228	Thallium-208	Thorium-228	Thorium-230	Thorium-232	Thorium-234	Uranium-233/234	Uranium-235/236	Uranium-238
CPS-7	14	0	N	01/05/2001	1.41	0.46	1.05	1.18	1.17	1.18	1.07	0.06 U	1.02
CPS-8	14	0	N	01/05/2001	1.6	0.37	1.4	0.85	1.38	0.25 U	0.84	0.06 U	1.13
CPS-9	14	0	N	01/05/2001	1.77	0.55	1.46	1.12	1.64	1.1 U	0.98	0.06 U	0.96
CSBD-01	14	0	N	01/05/2001	2.01	0.71	1.93	1.7	2.01	1.69	208	0.08 U	2.05
CSBD-02	14	0	N	01/05/2001	1.03	0.59	1.59	1.4	2.3	1.45	1.23	--	1.05
CSBD-03	14	0	N	01/05/2001	1.37	0.48	1.44	0.81	1.06	1.28 U	0.81	0.02 U	0.75
CSBD-04	14	0	N	01/05/2001	1.7	0.49	1.48	1.1	1.43	0.54 U	0.77	0.04 U	0.58
CSBD-05	14	0	N	01/05/2001	1.66	0.55	1.29	0.93	1.52	0.91 U	0.91	0.03 U	1.11

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.

Shaded results indicate soil has been excavated and removed.

-- = no sample data.

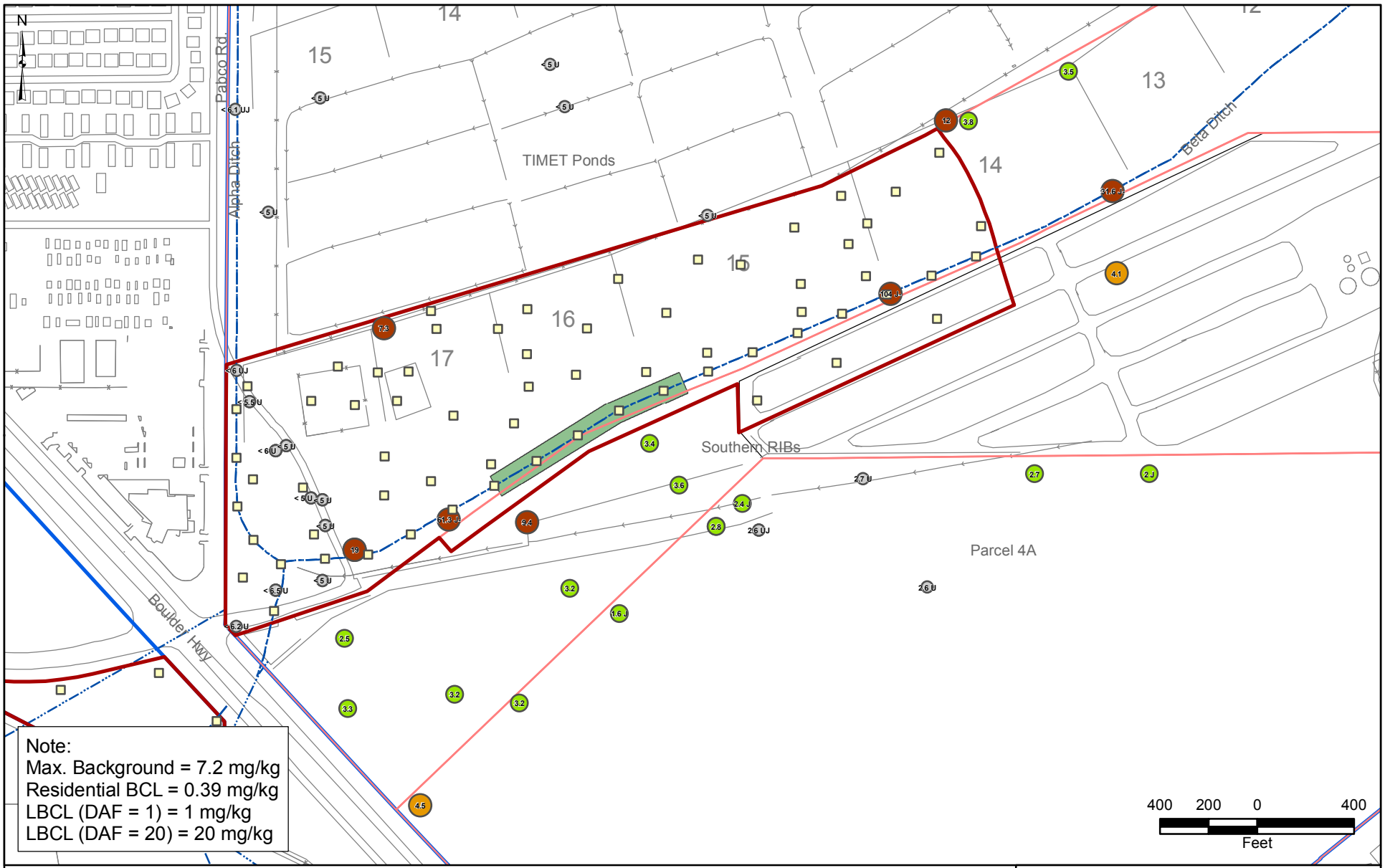
TABLE B-10
SOIL POLYAROMATIC HYDROCARBON DATA
STAGING SUB-AREA AND PARCEL 9 SOUTH
(Page 1 of 1)

Sample ID	Dataset	Depth (ft bgs)	Sample Type	Sample Date	Polynuclear Aromatic Hydrocarbons (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-01	1a	0	N	04/18/1996	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U	< 0.67 U
ADB-01	1a	5	N	04/18/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-08	1a	0	N	04/15/1996	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U	< 0.69 U
BDB-09	1a	0	N	04/09/1996	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U
BDB-09	1a	5	N	04/09/1996	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U
BDB-10	1a	0	N	04/09/1996	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U	< 0.68 U
BDB-10	1a	5	N	04/09/1996	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U	< 0.72 U
BDB-11	1a	0	N	04/09/1996	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
BDB-11	1a	5	N	04/09/1996	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U	< 0.7 U
CPS-7	14	0	N	01/05/2001	< 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
CPS-8	14	0	N	01/05/2001	< 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
CPS-9	14	0	N	01/05/2001	< 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
CPS-A	14	0	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-A	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CPS-B	14	0	N	12/12/2000	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	< 0.3564 U	0.53	0.45
CPS-B	14	3	N	12/12/2000	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U	< 0.3465 U
CSBD-01	14	0	N	01/05/2001	< 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
CSBD-02	14	0	N	01/05/2001	< 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
CSBD-03	14	0	N	01/05/2001	< 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
CSBD-04	14	0	N	01/05/2001	< 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
CSBD-05	14	0	N	01/05/2001	< 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
DA-T1	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T1	2	3	FD	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
DA-T1	2	3	N	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
DA-T2	2	0	FD	04/01/1998	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U	< 6 U
DA-T2	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T2	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
DA-T3	2	0	N	04/01/1998	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
DA-T3	2	5	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-04	2	0	N	03/31/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-05	2	0	N	04/01/1998	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ROW-06	2	0	N	04/01/1998	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U	< 0.65 U
WC-AD01	39	0	N	08/03/2006	< 0.034 U	< 0.034 U	< 0.034 U	0.035 J	< 0.034 U	< 0.034 U	< 0.034 U	< 0.034 U	0.035 J	< 0.034 U	< 0.034 U	0.064 J	0.061 J
WC-BD01	39	0	N	08/02/2006	< 0.035 U	< 0.035 U	< 0.035 U	0.05 J	< 0.035 U	< 0.035 U	< 0.035 U	< 0.035 U	0.14 J	< 0.035 U	< 0.035 U	0.19 J	0.074 J

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.
Shaded results indicate soil has been excavated and removed.
-- = no sample data.

APPENDIX C

SOIL CONCENTRATION DISTRIBUTION FIGURES



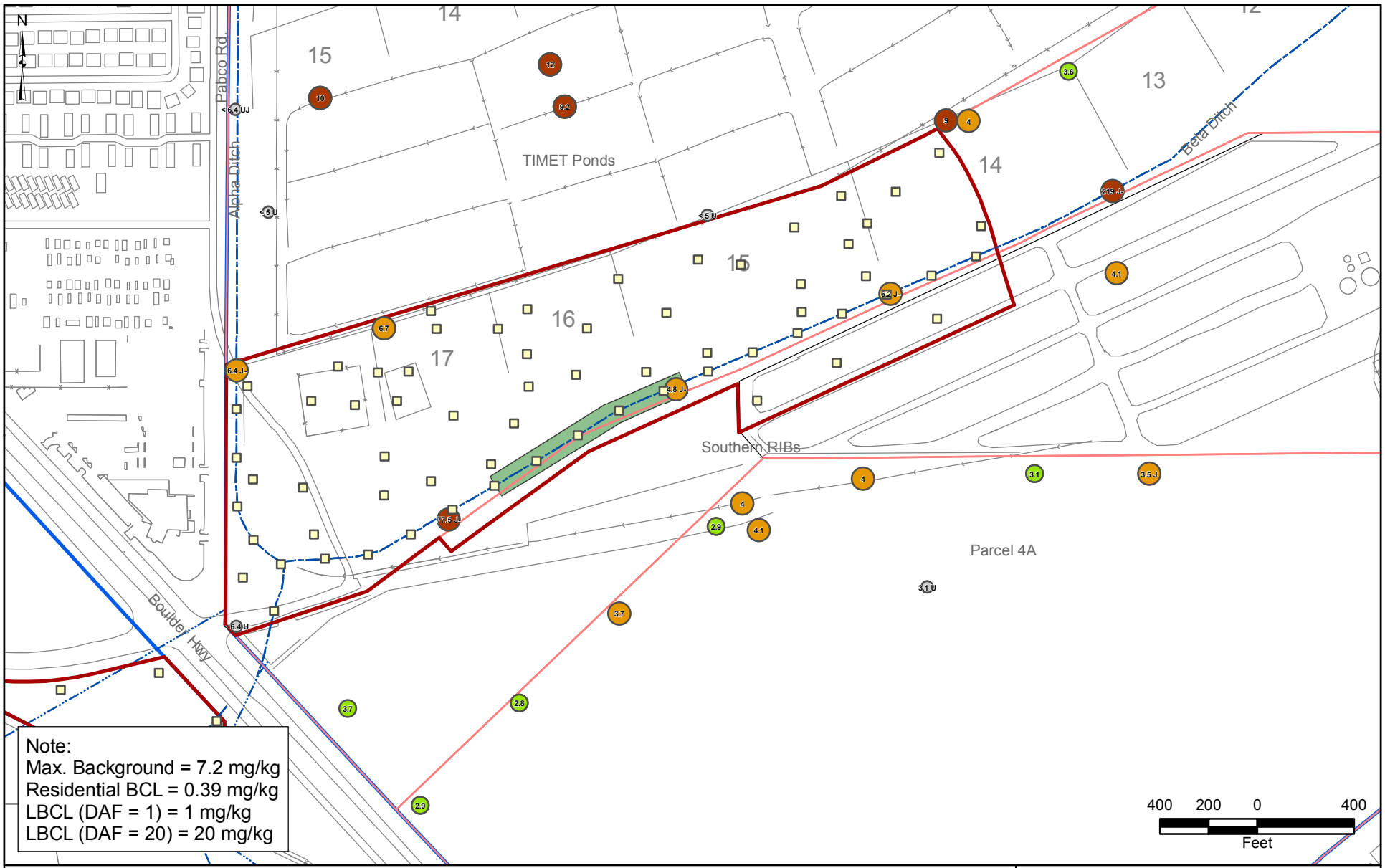
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-1

ARSENIC RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



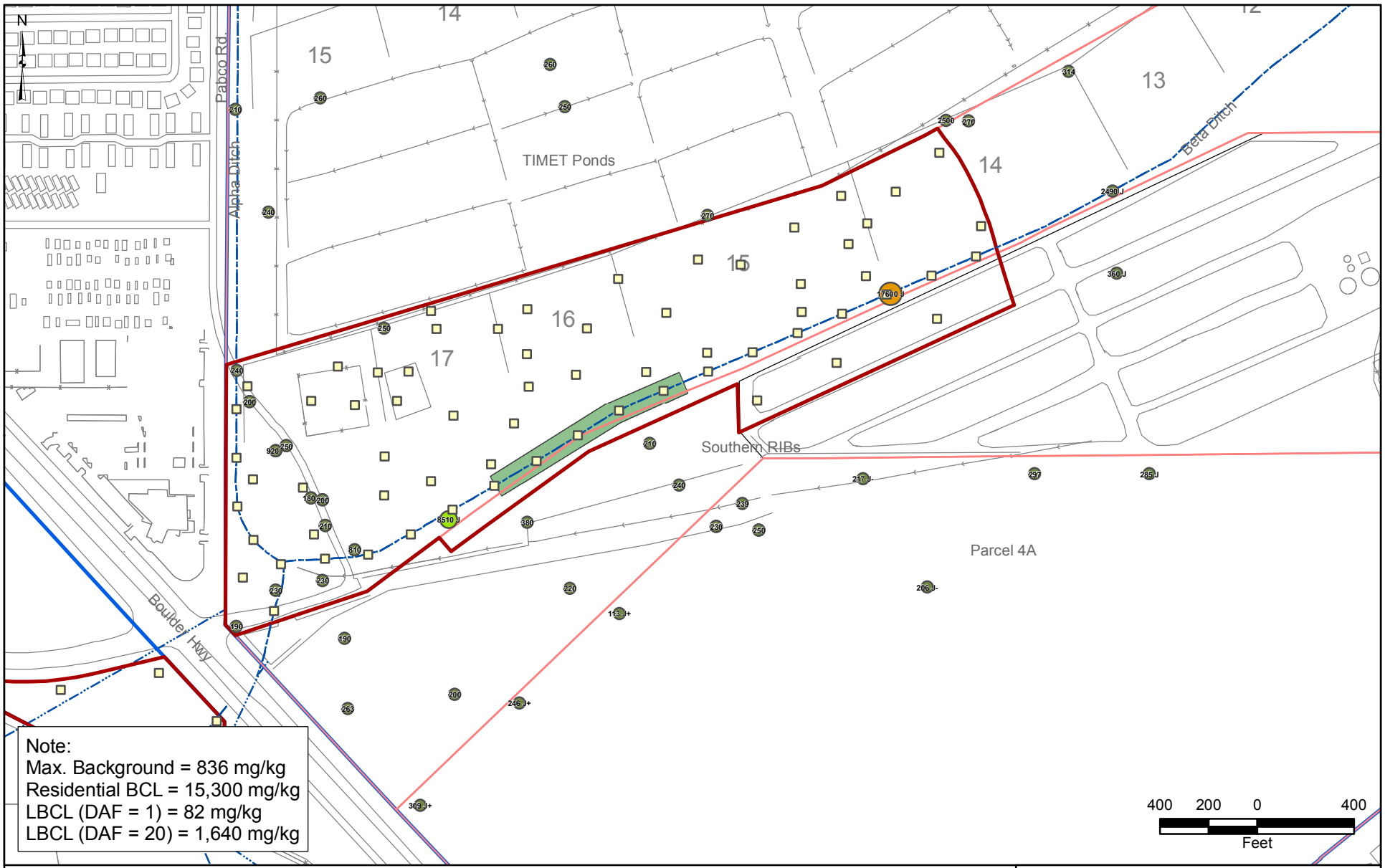
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-2

ARSENIC RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation Company

Prepared by MKJ (ERM) | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



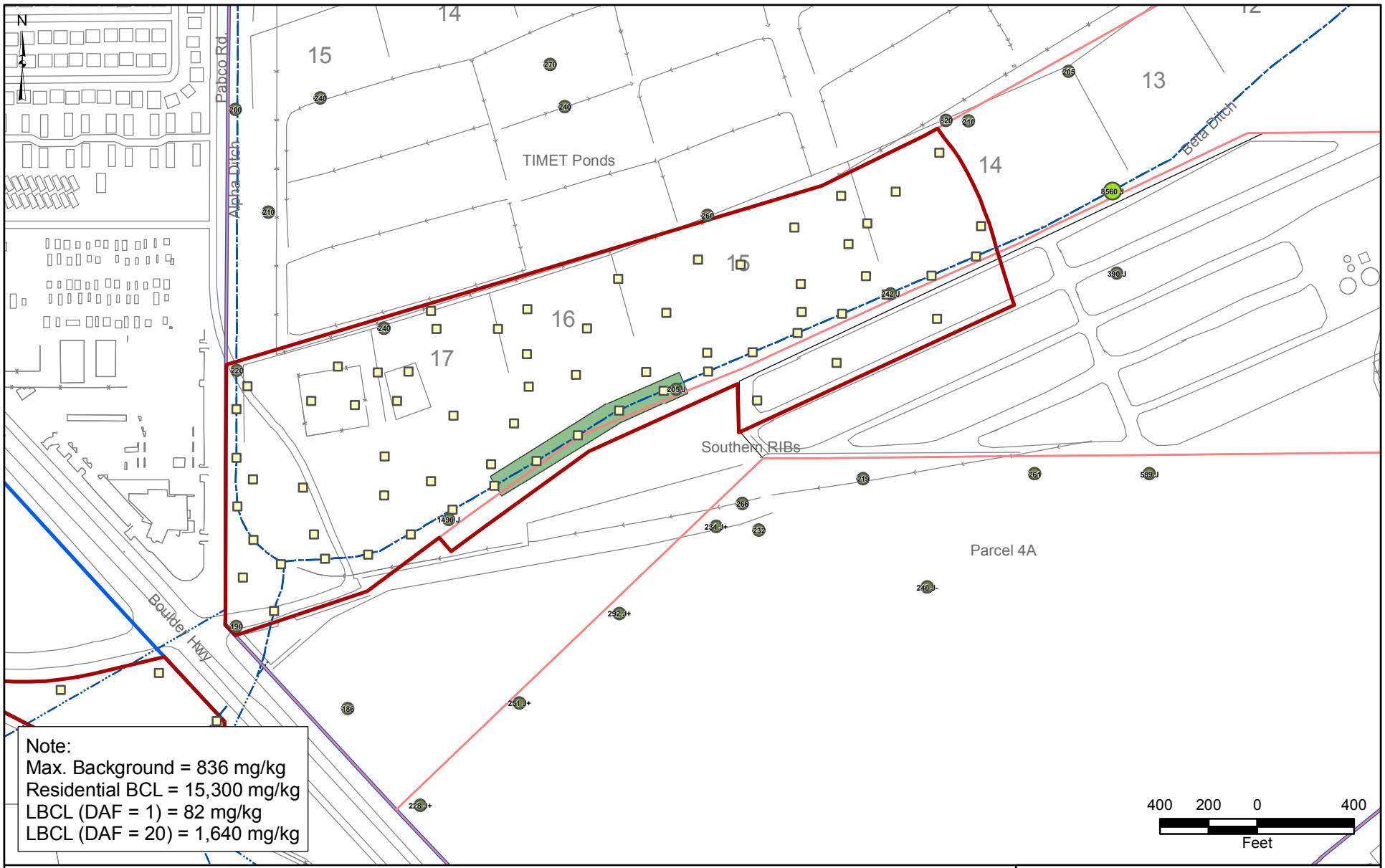
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-3

BARIUM RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



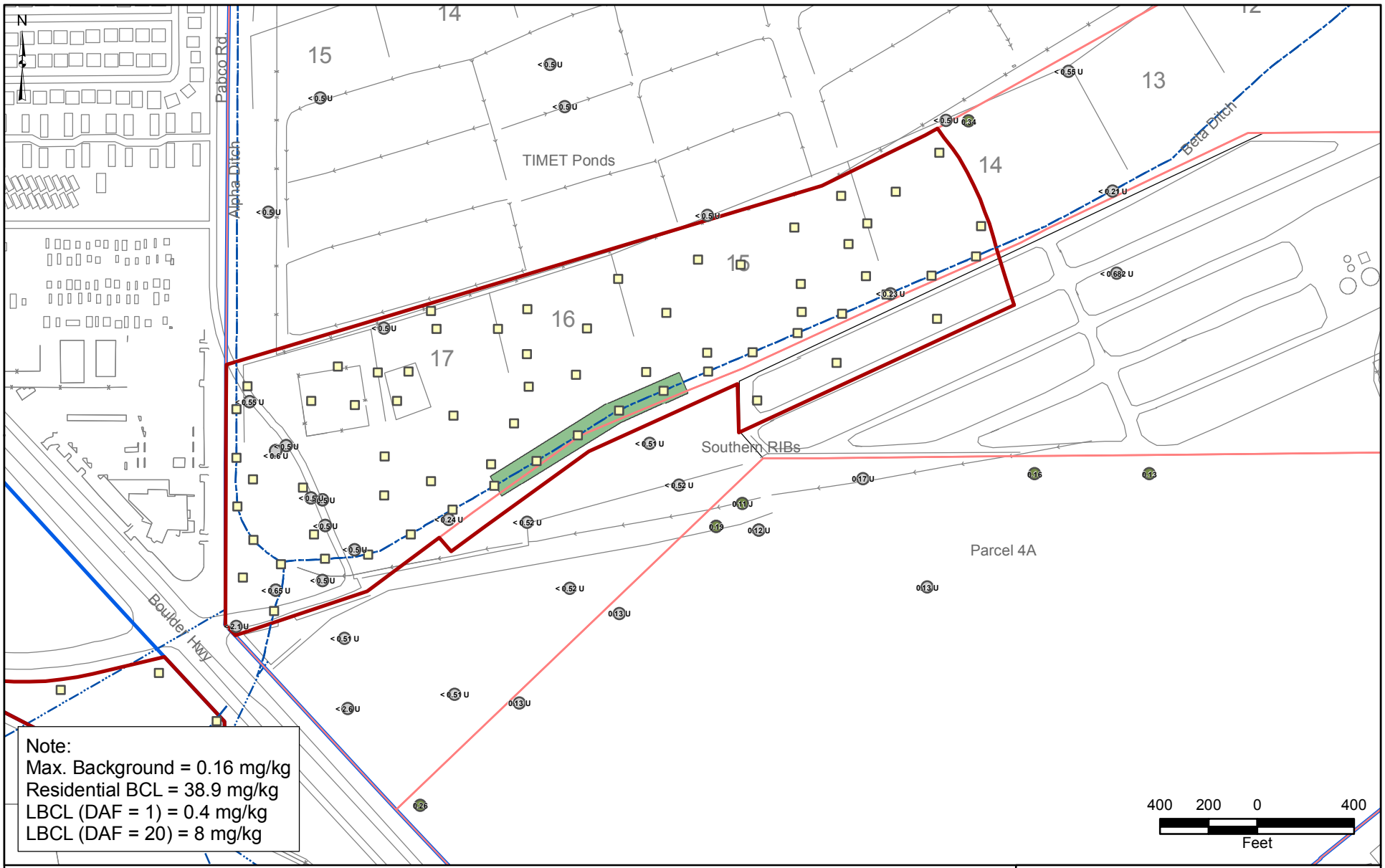
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-4

BARIUM RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



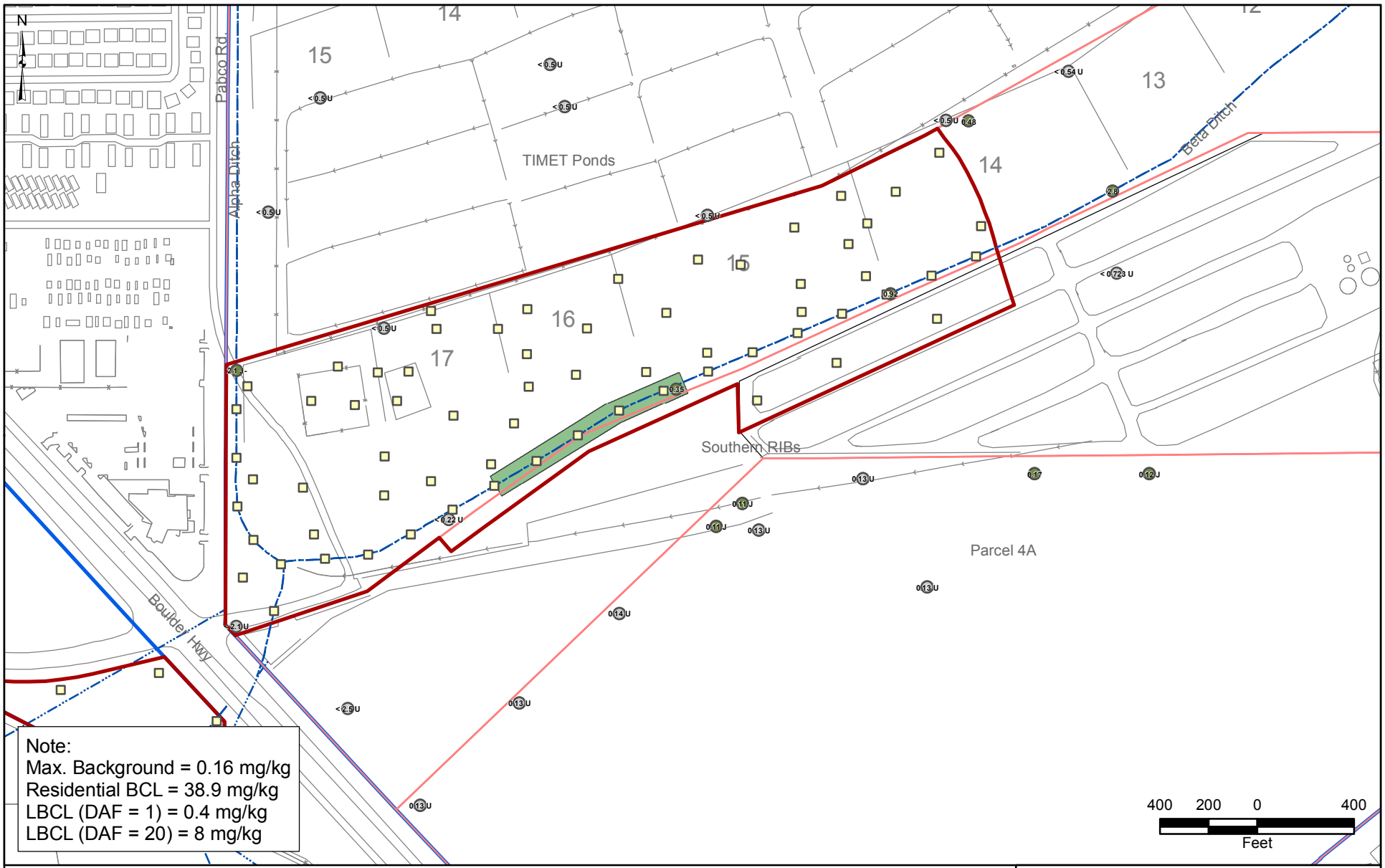
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-5

CADMIUM RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



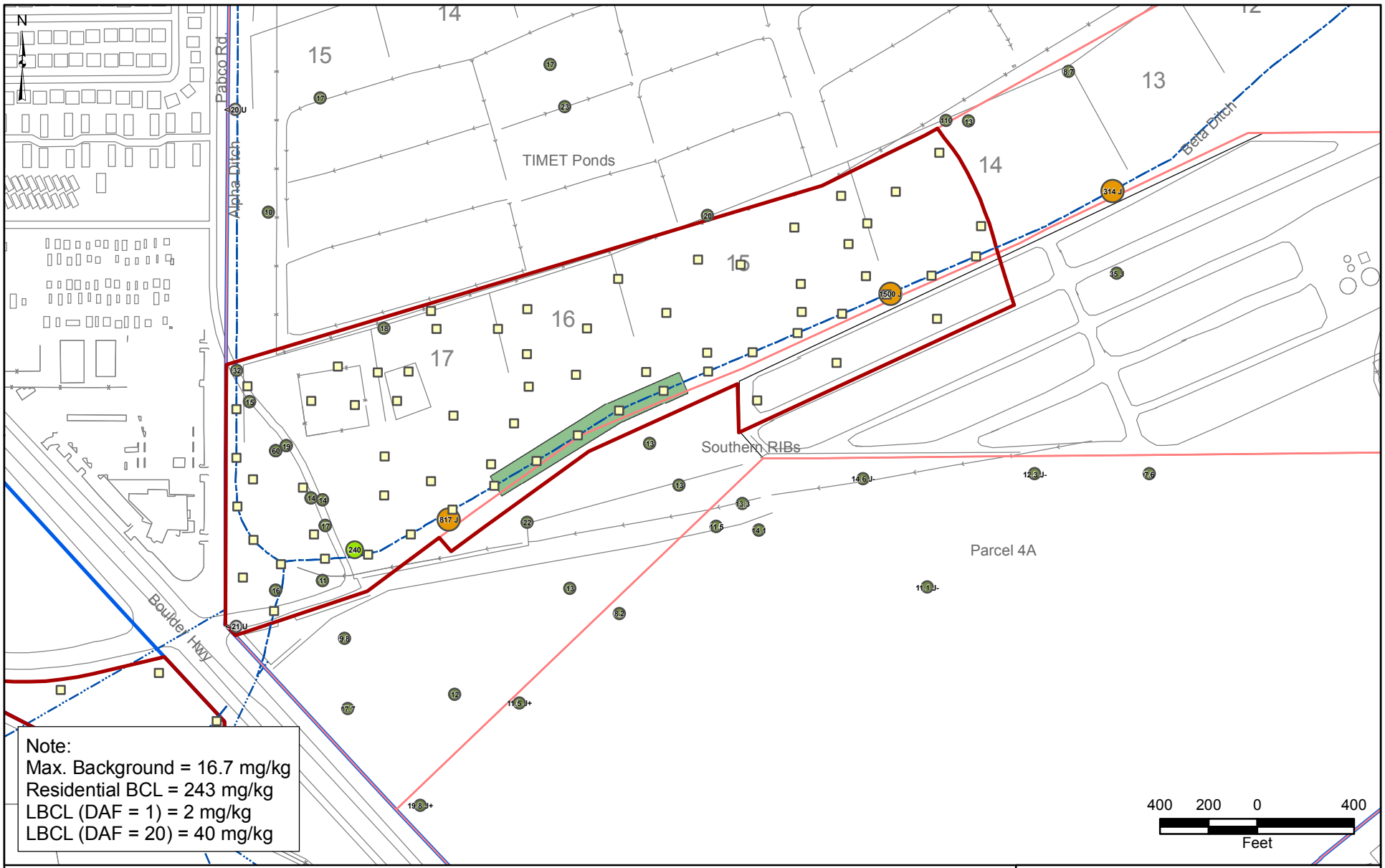
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-6

CADMIUM RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation Company

Prepared by MKJ (ERM) | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



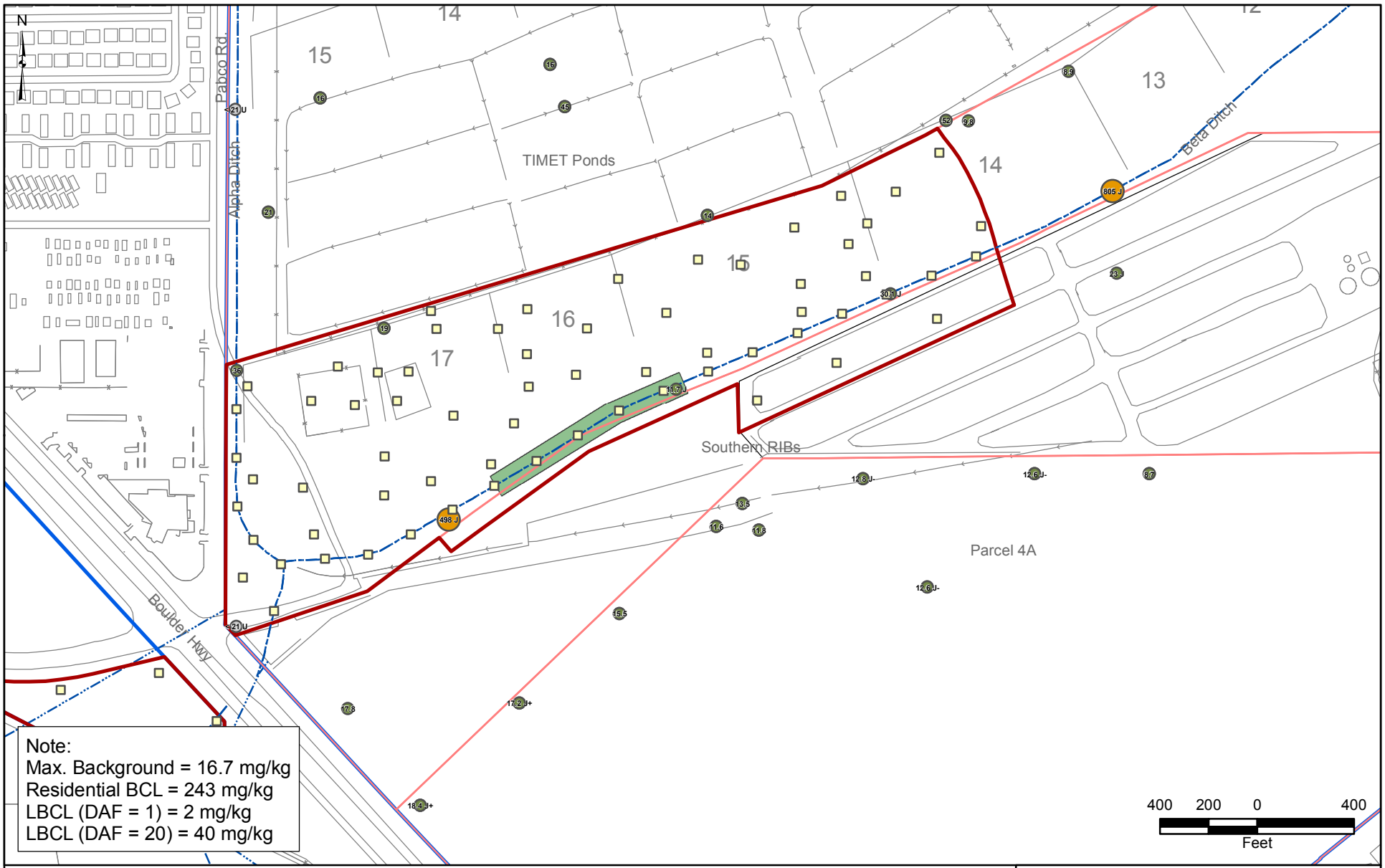
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-7

CHROMIIUM (TOTAL) RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT - 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



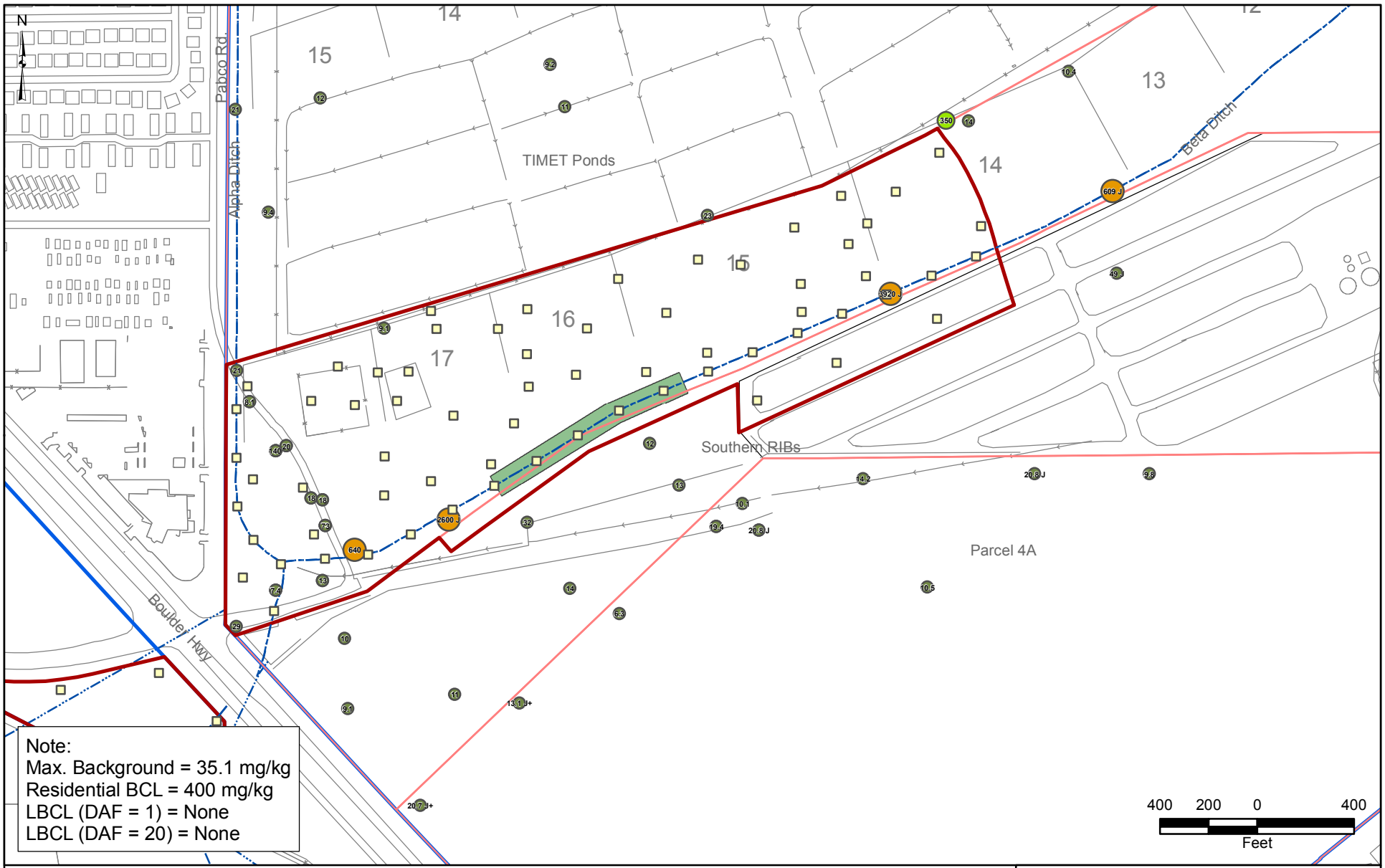
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-8

CHROMIIUM (TOTAL) RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT - 3 to 10 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



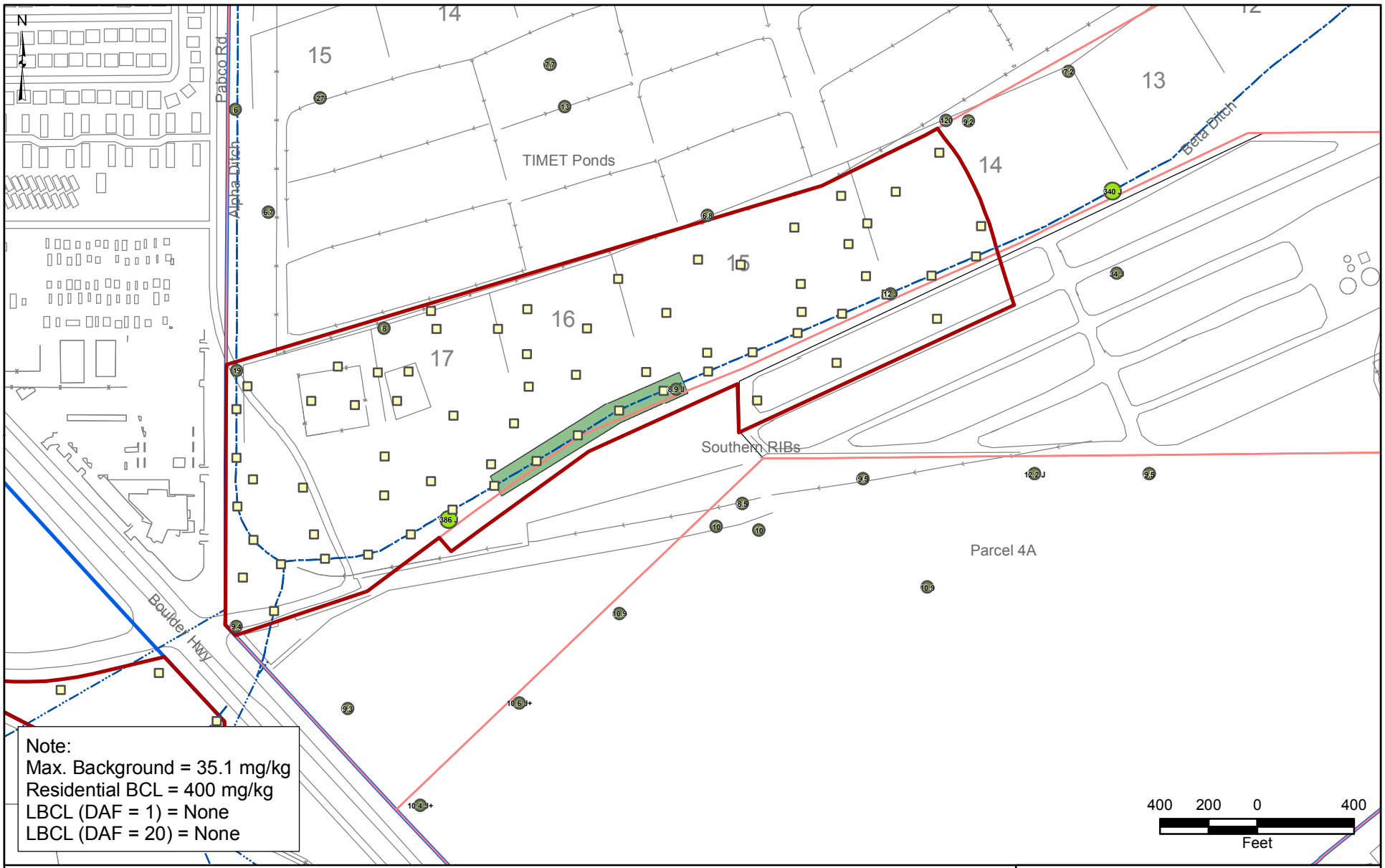
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-9

LEAD RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



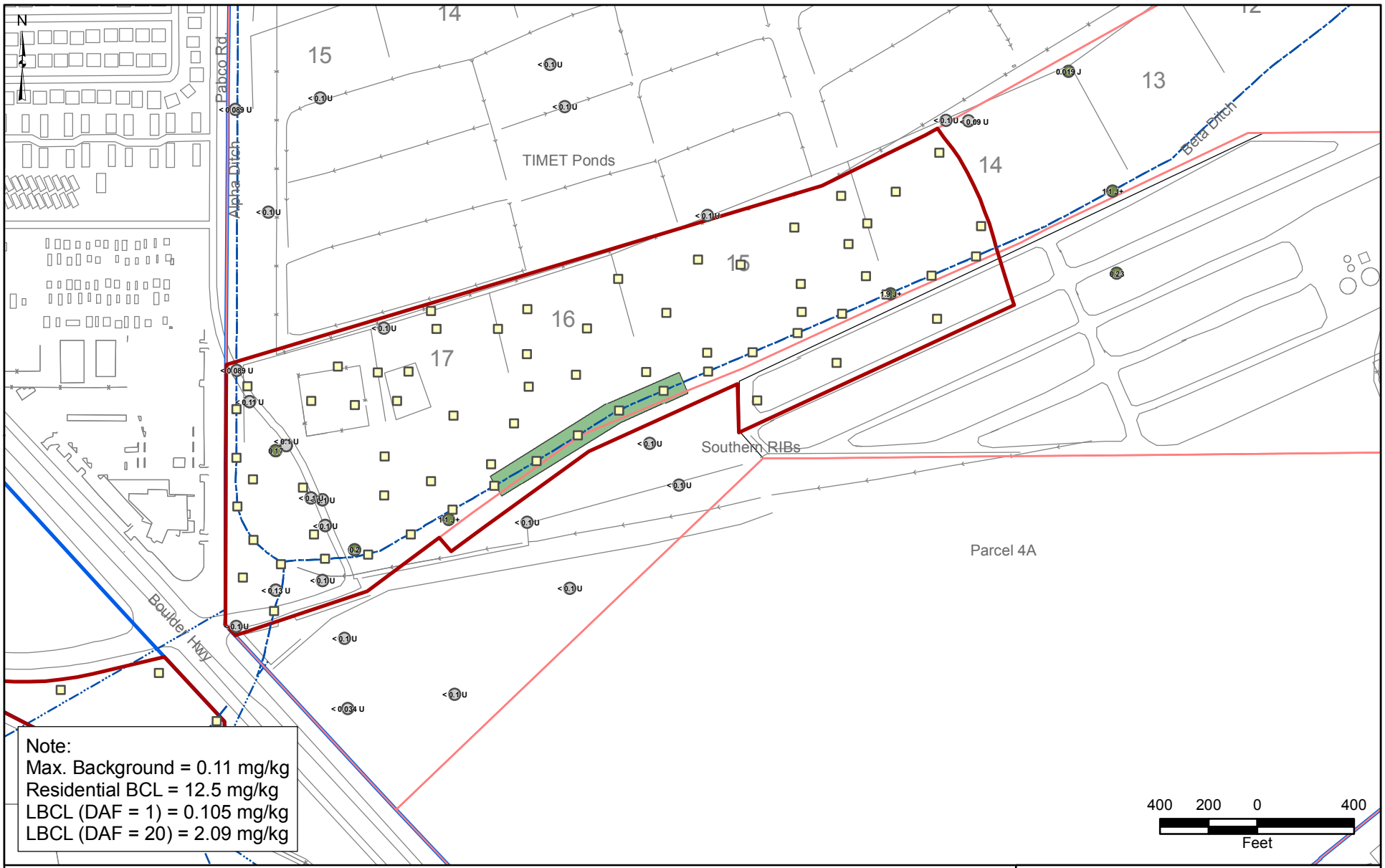
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-10

LEAD RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



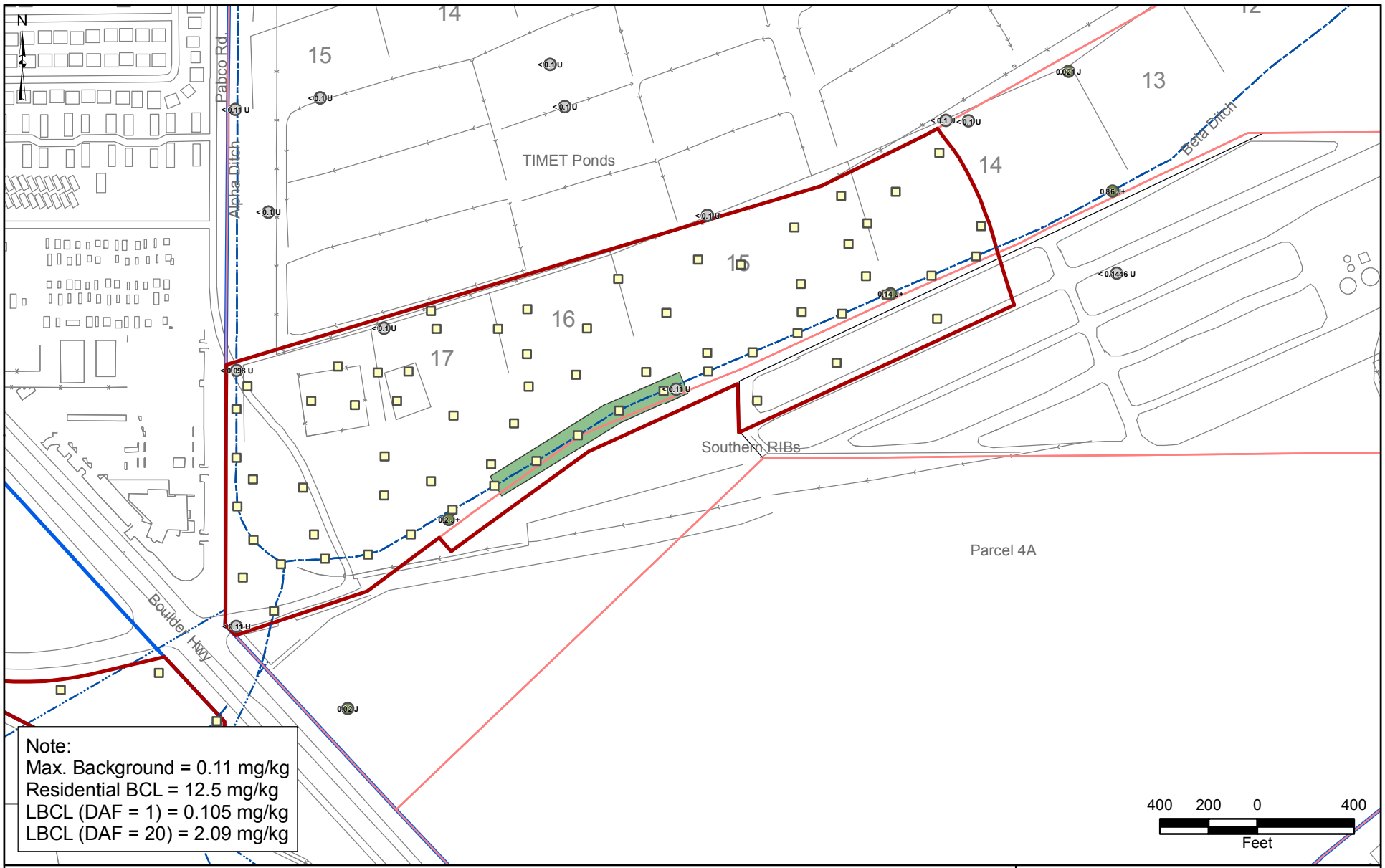
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-11

MERCURY RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



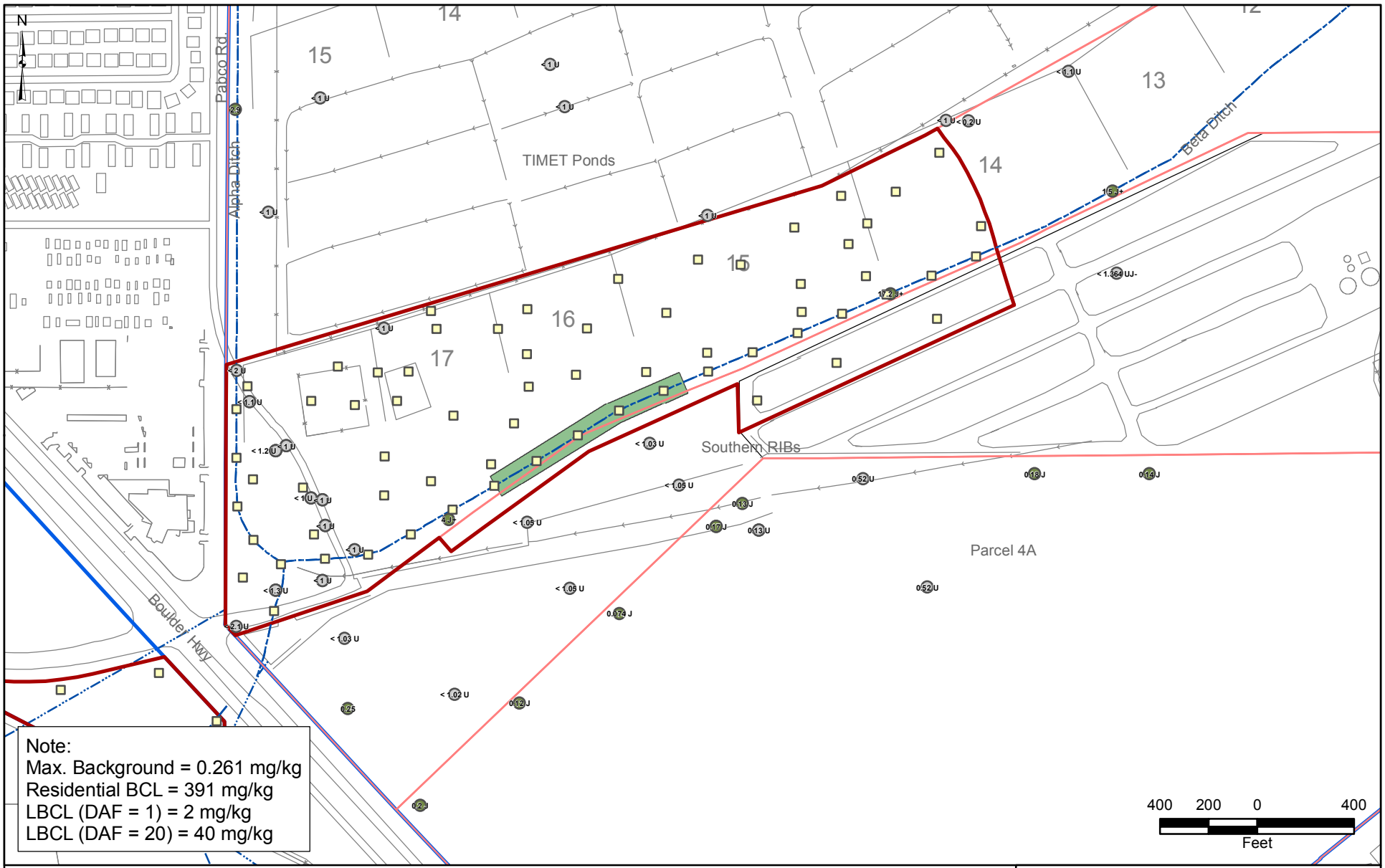
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-12

MERCURY RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



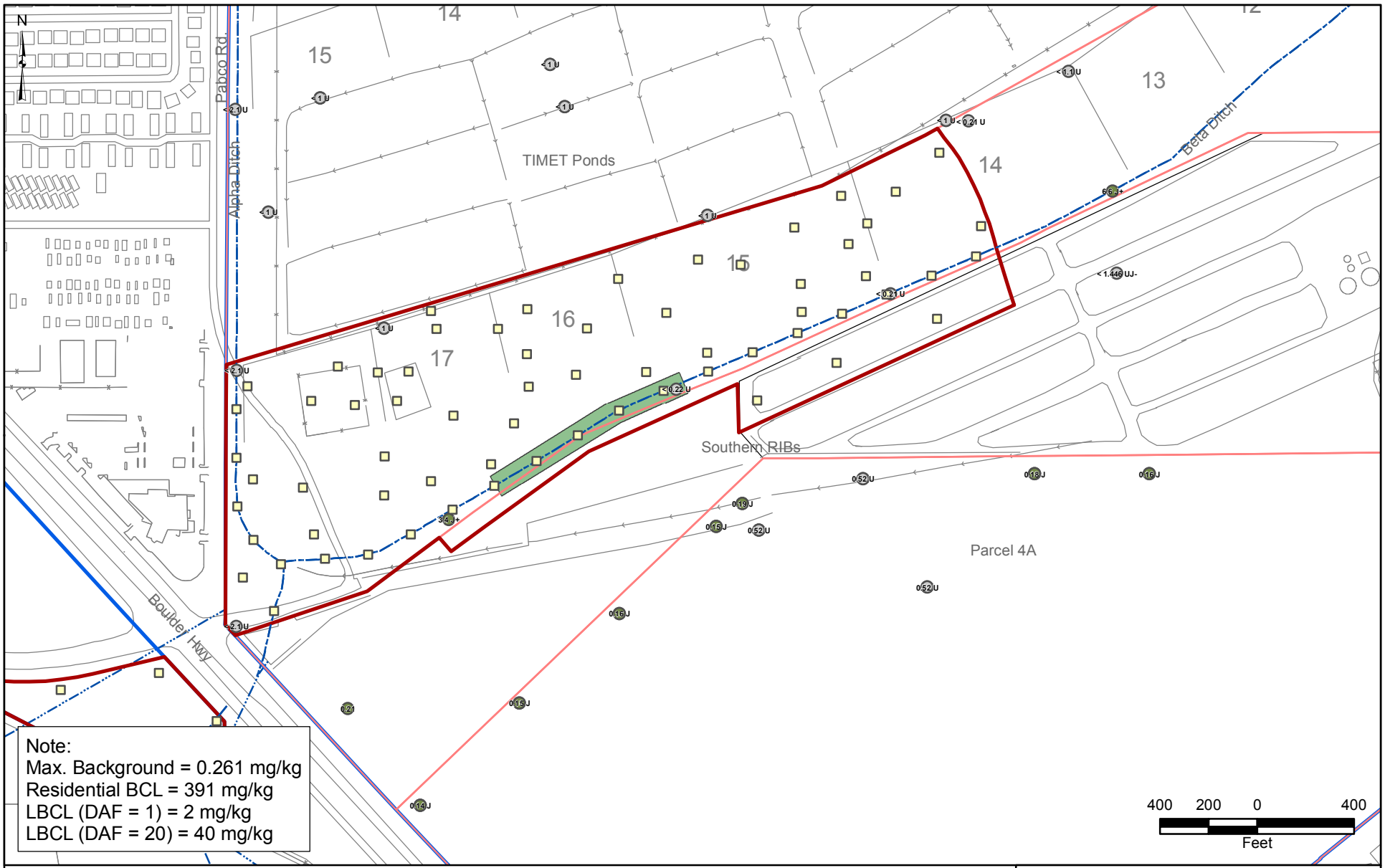
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-13

SILVER RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



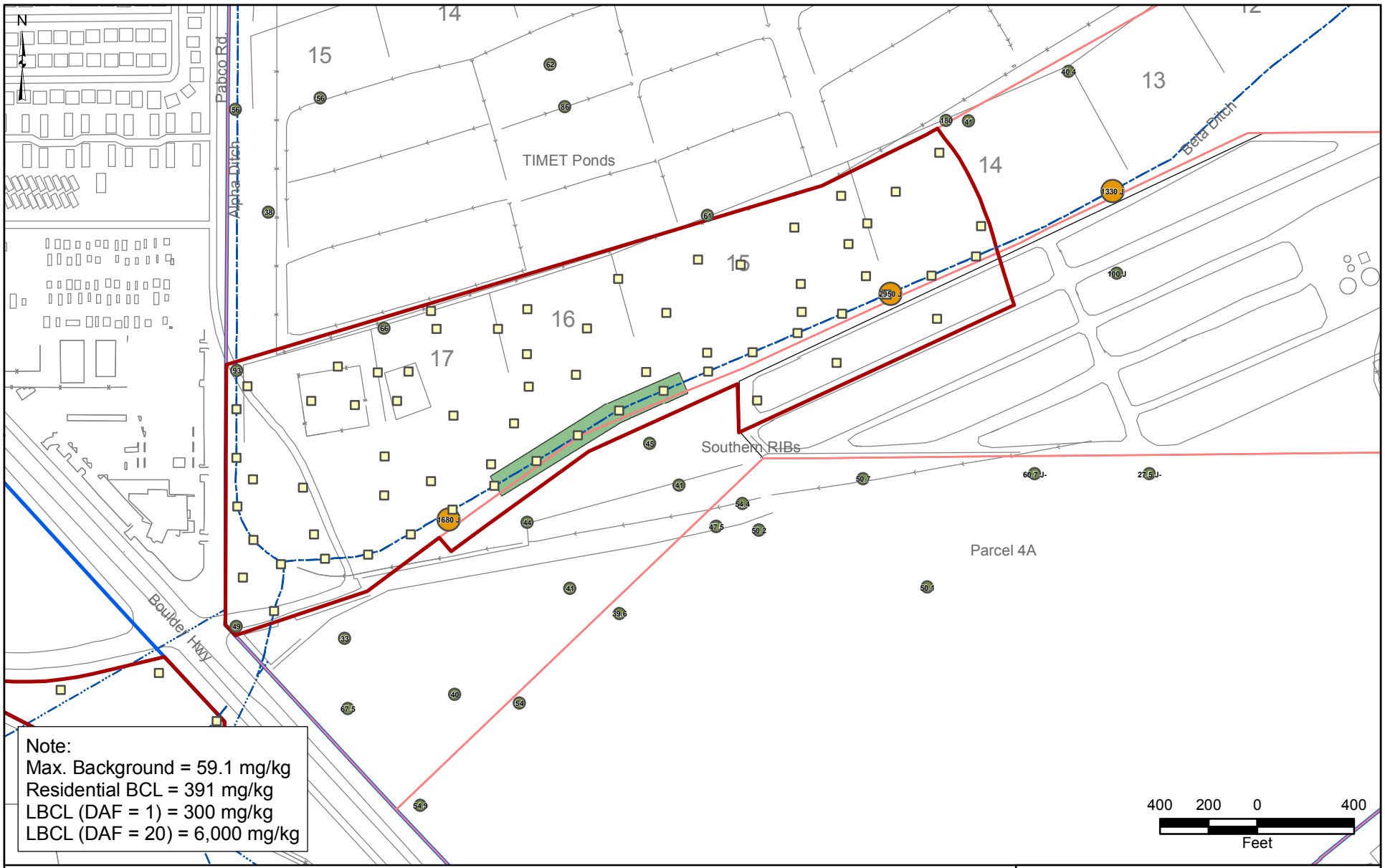
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-14

SILVER RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation Company

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



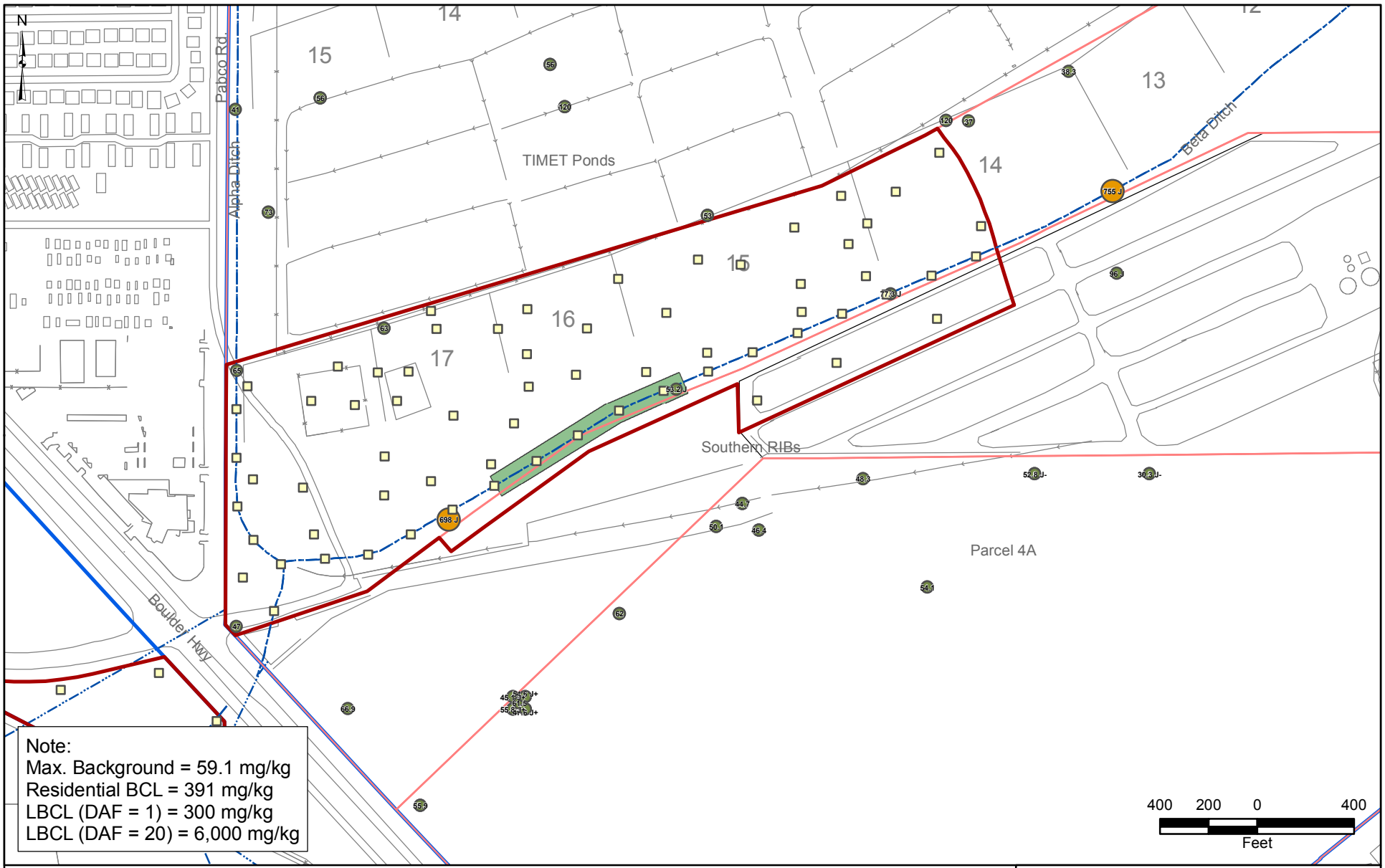
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-15

VANADIUM RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



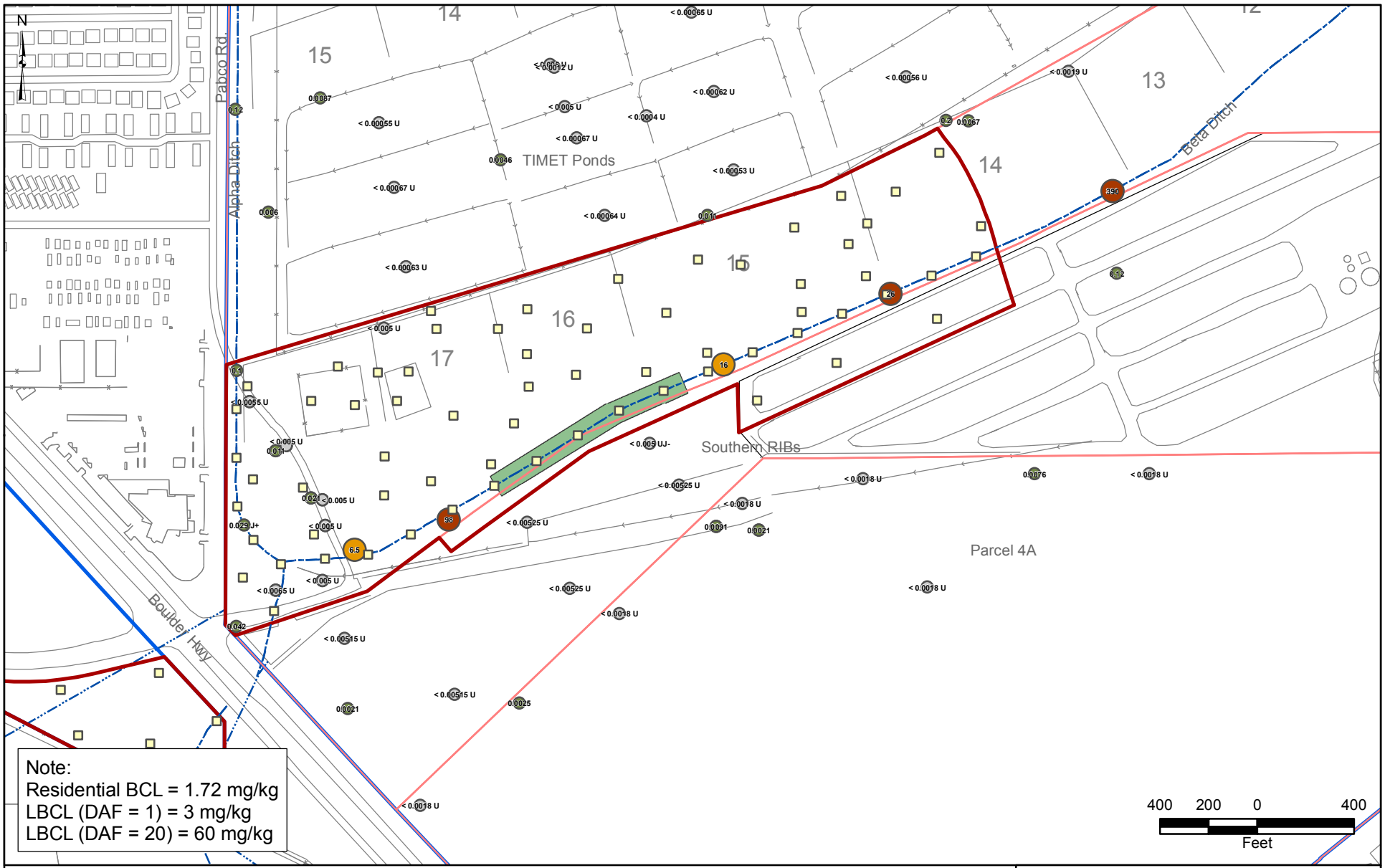
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-16

VANADIUM RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation COMPANY

Prepared by		Date	JOB No. 0064276
MKJ (ERM)	ERM	04/06/10	FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



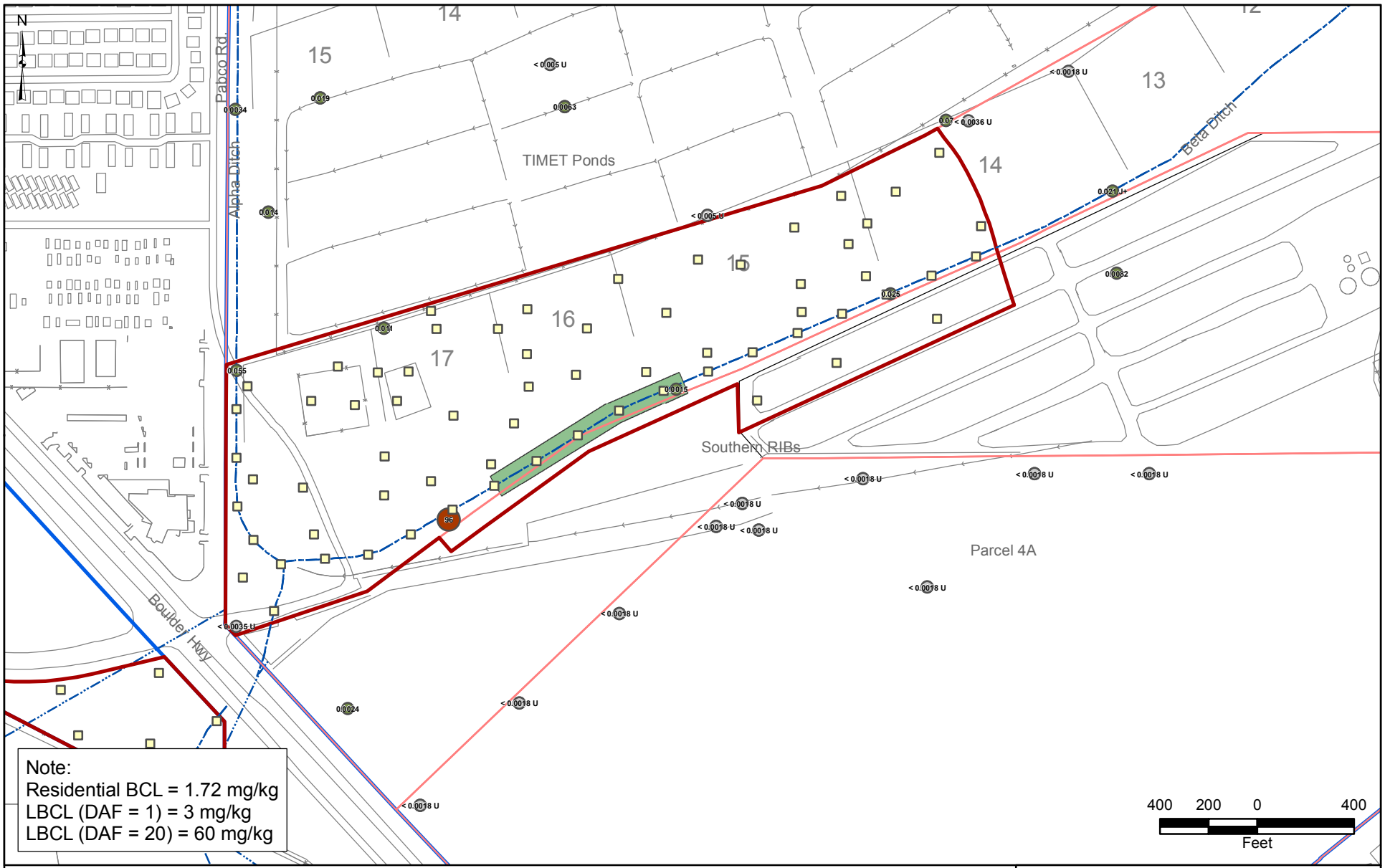
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-17

4,4'-DDE RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



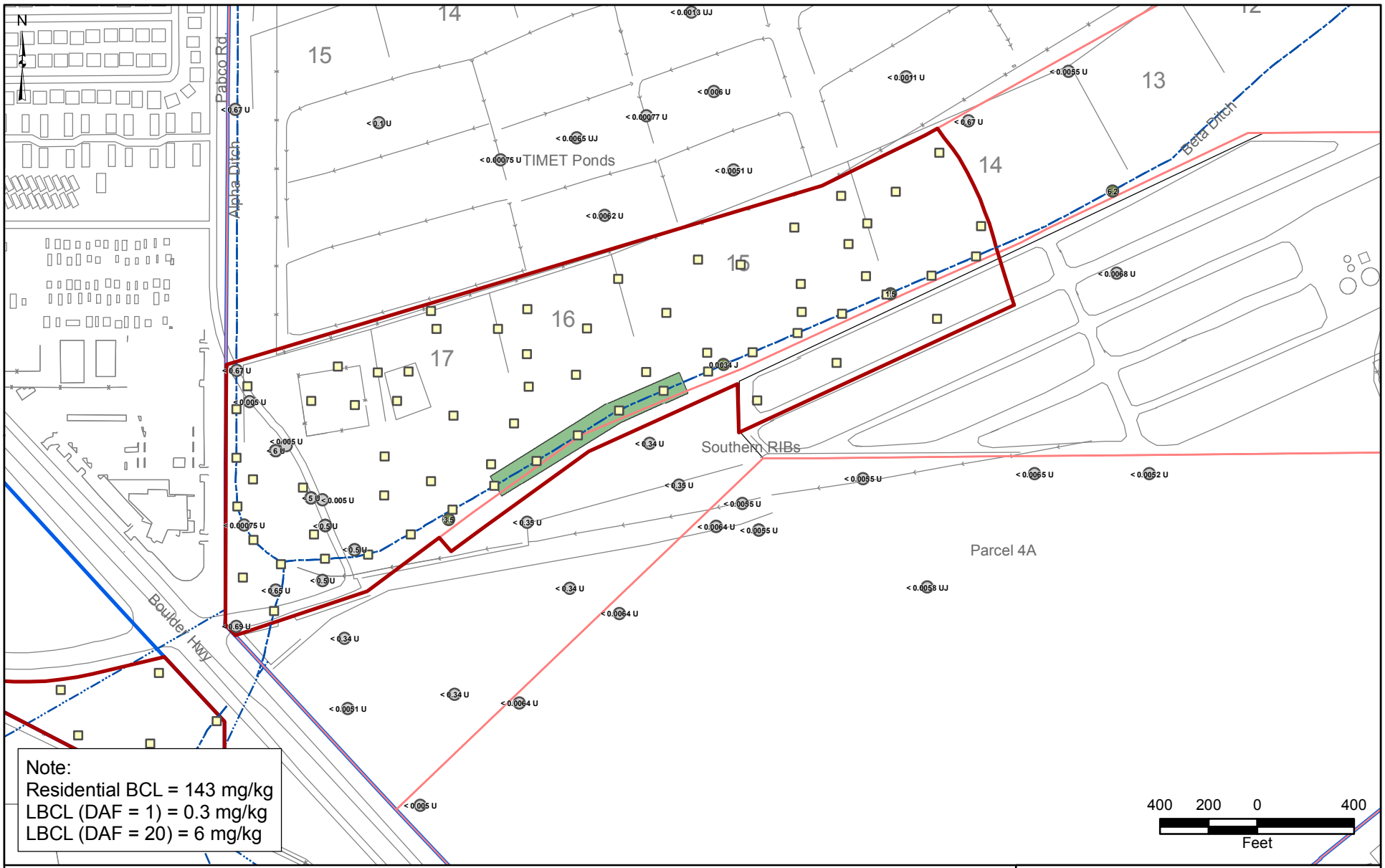
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-18

4,4'-DDE RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT 3 to 10 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



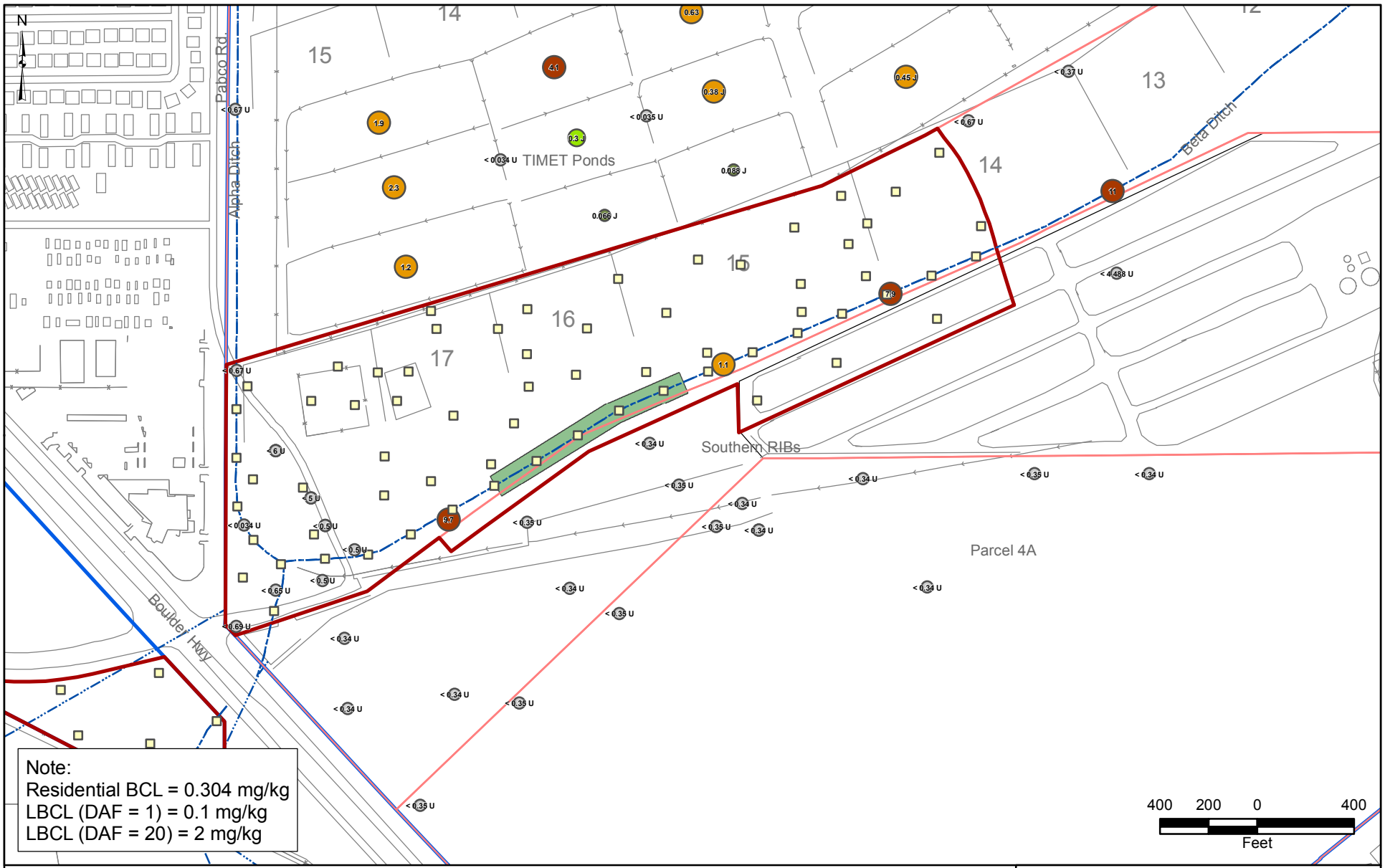
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-19

1,2,4-TRICHLOROBENZENE RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT - 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



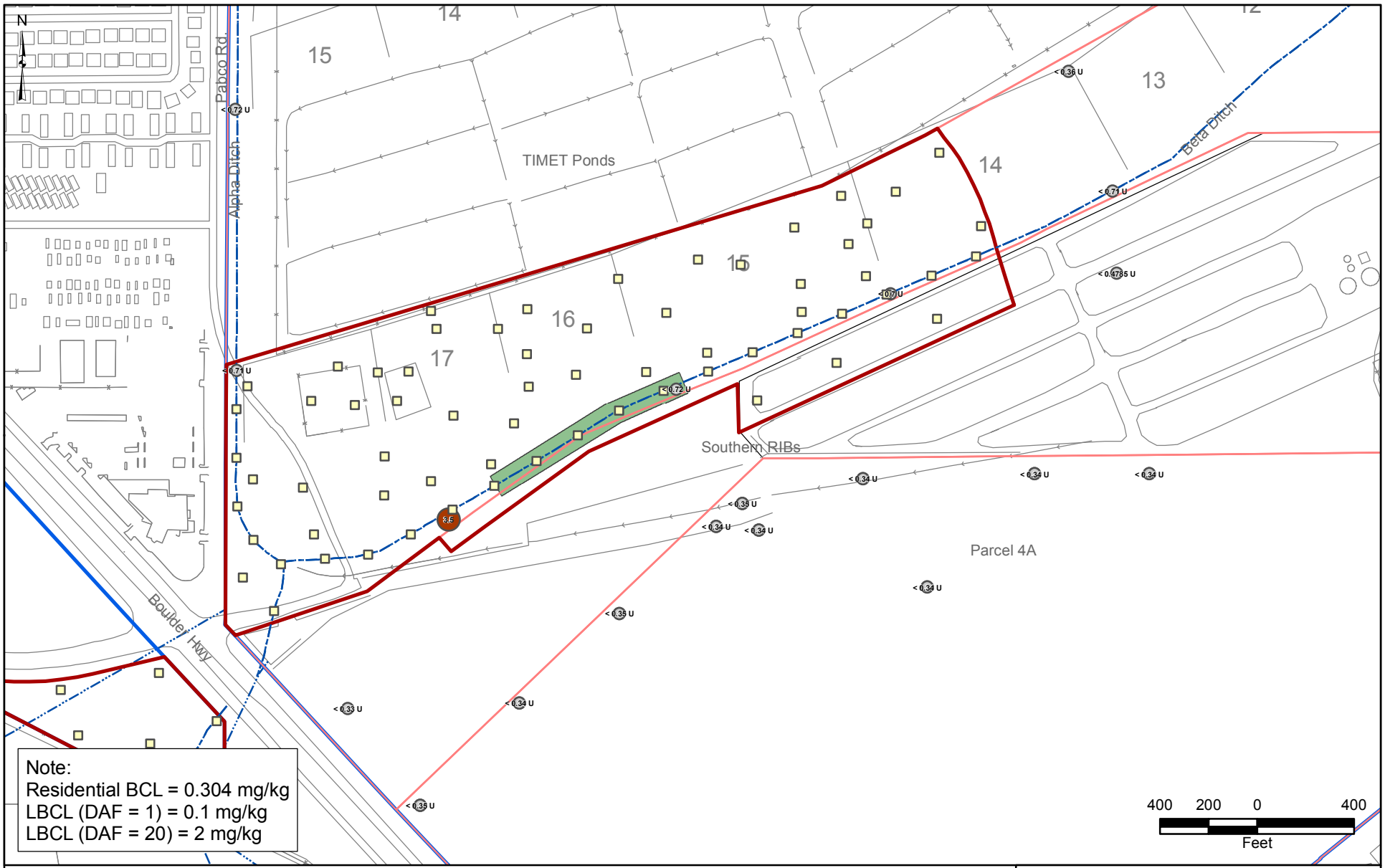
BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-20

HEXACHLOROBENZENE RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT - 0 to 2 FT BGS

Basic Remediation COMPANY

Prepared by MKJ (ERM) | ERM | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD



BMI Common Areas (Eastside)
Clark County, Nevada

FIGURE C-21

HEXACHLOROBENZENE RESULTS IN STAGING SUB-AREA AND ADJACENT 1,000 FT - 3 to 10 FT BGS

Basic Remediation Company

Prepared by MKJ (ERM) | Date 04/06/10 | JOB No. 0064276 | FILE: GIS/BRC/STAGING_SAP/APPENDIX_C.MXD